

2-2015

2014 Maine State Energy Profile

Maine Governor's Energy Office

Follow this and additional works at: http://digitalmaine.com/energy_docs

Recommended Citation

Maine Governor's Energy Office, "2014 Maine State Energy Profile" (2015). *Governor's Energy Office Documents*. 32.
http://digitalmaine.com/energy_docs/32

This Text is brought to you for free and open access by the Governor at Maine State Documents. It has been accepted for inclusion in Governor's Energy Office Documents by an authorized administrator of Maine State Documents. For more information, please contact statedocs@maine.gov.

2014 Maine State Energy Profile



Governor's Energy Office



MaineDOT



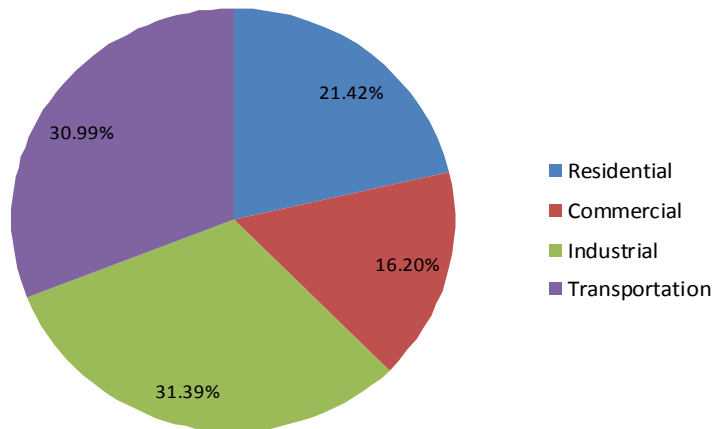
Table of Contents

Total Energy	3
Residential Sector	8
Commercial Sector	15
Industrial Sector	20
Transportation Sector	25
Electric Power Sector	30
Renewable Energy	36
Delivered Fuels	44



Economy and Demography	Maine	U.S. Rank
Population (2012 Estimate):	1,329,302	41
Gross Domestic Product (2012 Estimate):	\$53.656 Billion	44
GDP Per Capita	\$40,087	30
Vehicle Miles Traveled	14,199 million miles	40
Land in Farms	1.5 million acres	41
% of Population Living in Rural Areas	61.3%	1

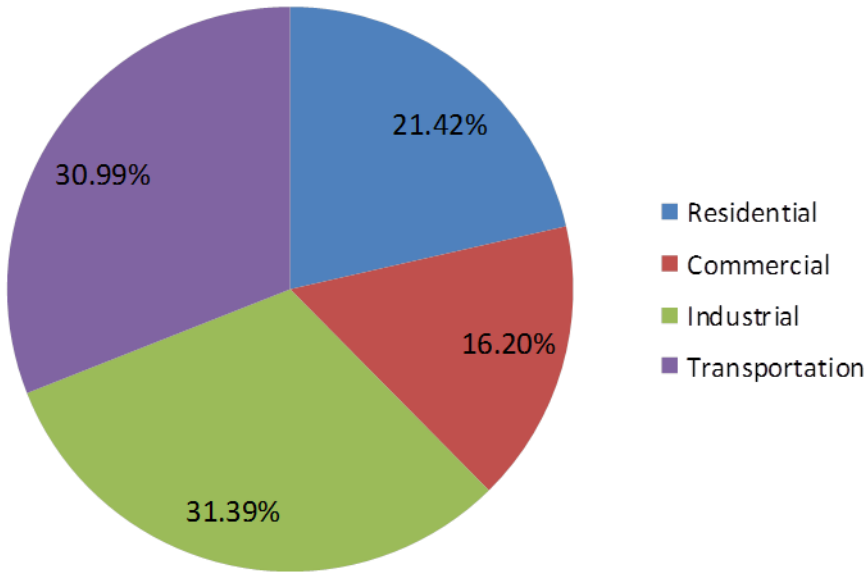
Maine Energy Consumption % by Sector, 2012



Prices-Natural Gas	Maine	U.S. Average	Period (most current)
City Gate	\$10.28 /thousand cu ft	\$6.31 /thousand cu ft	Feb-14
Residential	\$16.28 /thousand cu ft	\$9.76 /thousand cu ft	Feb-14
Prices-Electricity	Maine	U.S. Average	Period (most current)
Residential	14.62 cents/kWh	11.88 cents/kWh	Feb-14
Commercial	14.24 cents/kWh	10.70 cents/kWh	Feb-14
Industrial	12.46 cents/kWh	7.12 cents/kWh	Feb-14
Consumption	Maine	Share of U.S.	Period (most current)
Residential	81,200 billion Btu	0.4%	2012
Commercial	61,400 billion Btu	0.4%	2012
Industrial	119,000 billion Btu	0.4%	2012
Transportation	117,500 billion Btu	0.4%	2012
Total	379.1 billion Btu	0.4%	2012
Expenditures	Maine	U.S. Rank	Period (most current)
Residential	\$1,657.5 million	35	2012
Commercial	\$1,003.4 million	39	2012
Industrial	\$942.8 million	43	2012
Transportation	3,397.2 million	42	2012
Total	7,000.9 million	43	2012

Maine Total Energy Consumption, 2012

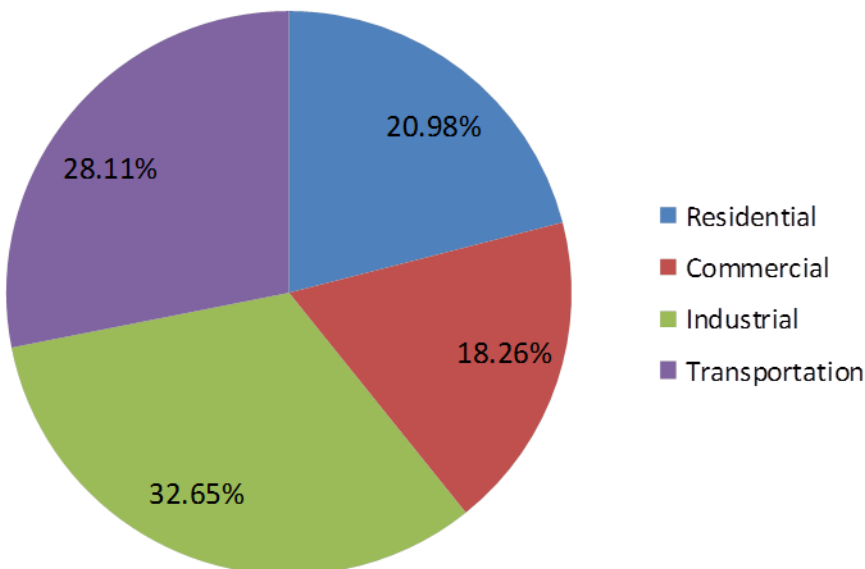
Consumption by Sector (%)



Sector	Billion Btu	Percentage
Total	379,100	100%
Industrial	119,000	31.39%
Transportation	117,500	30.99%
Residential	81,200	21.42%
Commercial	61,400	16.20%

United States Total Energy Consumption, 2012

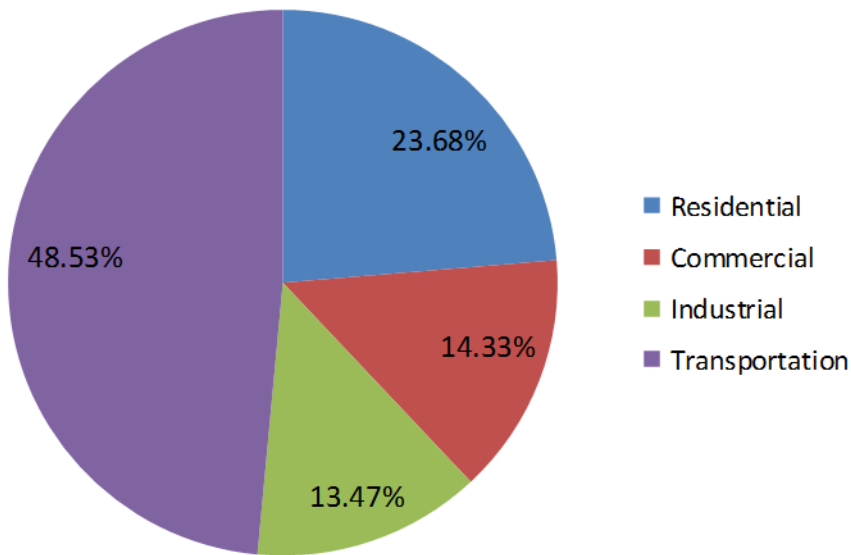
Consumption by Sector (%)



Sector	Billion Btu	Percentage
Total	94,970,900	100%
Industrial	31,003,500	32.65%
Transportation	26,700,000	28.11%
Residential	19,924,700	20.98%
Commercial	17,342,700	18.26%

Maine Total Energy Expenditures, 2012

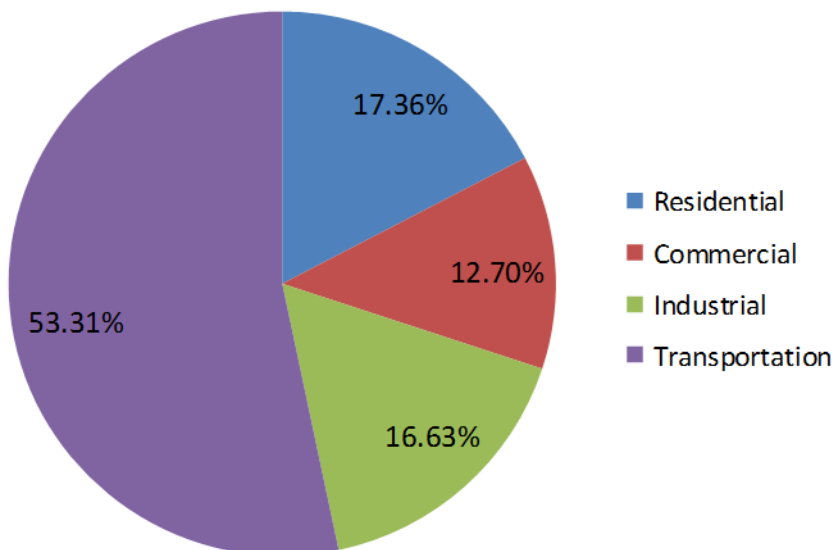
Expenditures by Sector (%)



Sector	Million (\$ US)	Percentage
Total	7,000.9	100%
Transportation	3,397.2	48.53%
Residential	1,657.5	23.68%
Commercial	1,003.4	14.33%
Industrial	942.8	13.47%

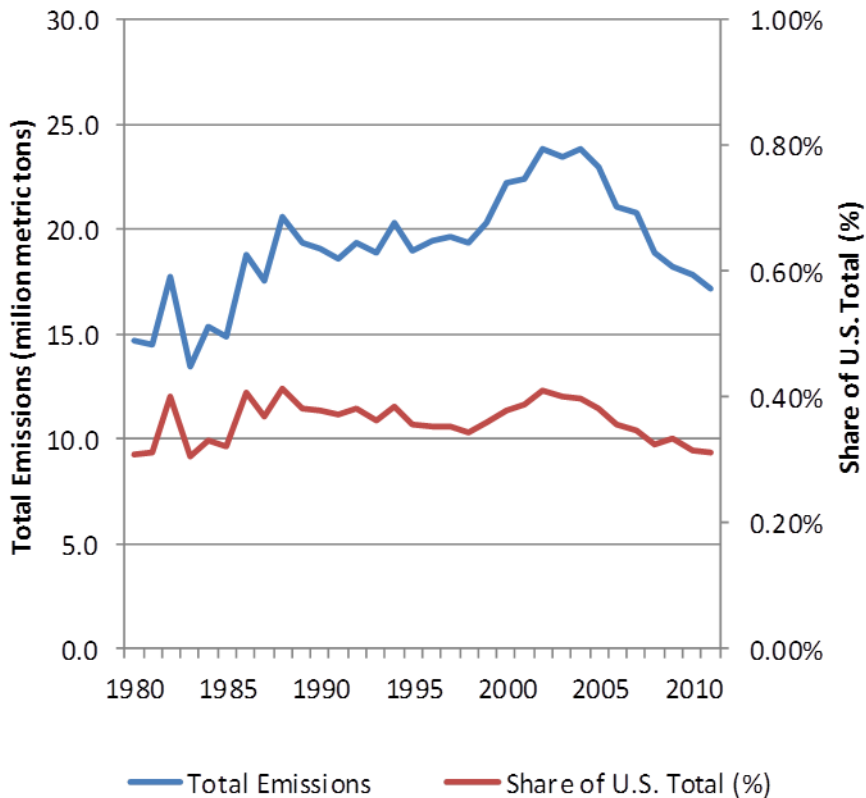
United States Total Energy Expenditures, 2012

Expenditures by Sector (%)



Sector	Million (\$ US)	Percentage
Total	1,355,676.7	100%
Transportation	722,656.9	53.31%
Residential	235,380.9	17.36%
Industrial	225,512.4	16.63%
Commercial	172,126.4	12.70%

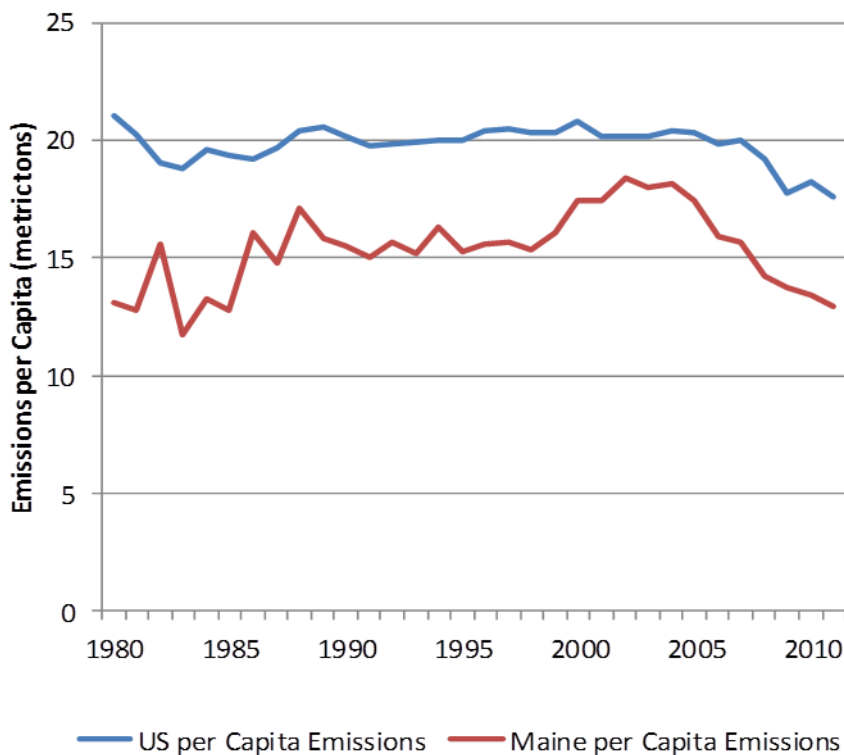
Maine Total CO₂ Emissions (Million Metric Tons), 1980-2011



2011 National Comparison

State	Total Emissions (million metric tons)	National Rank
Texas	655.52	1
US Average	105.56	-
Maine	17.21	44
Vermont	5.70	50

Maine and United States CO₂ Emissions per Capita (Million Metric Tons) 1980-2011

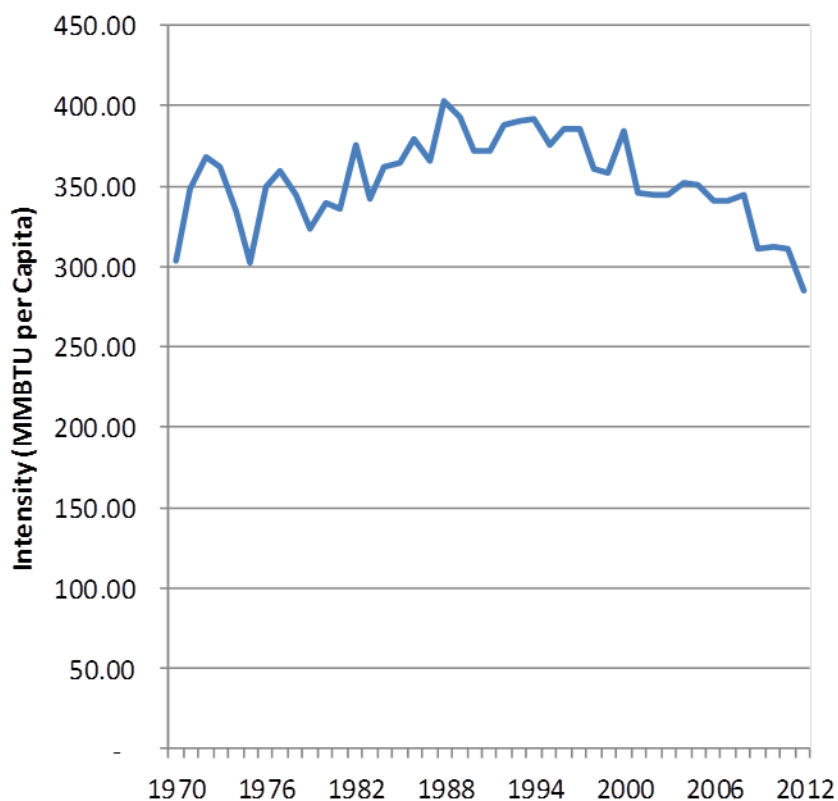


2011 National Comparison

State	Emissions per Capita (metric tons)	National Rank
Wyoming	110.64	1
US Average	17.15	-
Maine	12.96	33
New York	4.88	50

Maine Total Energy Intensity, 1970-2012

Consumption (Btu) per Capita

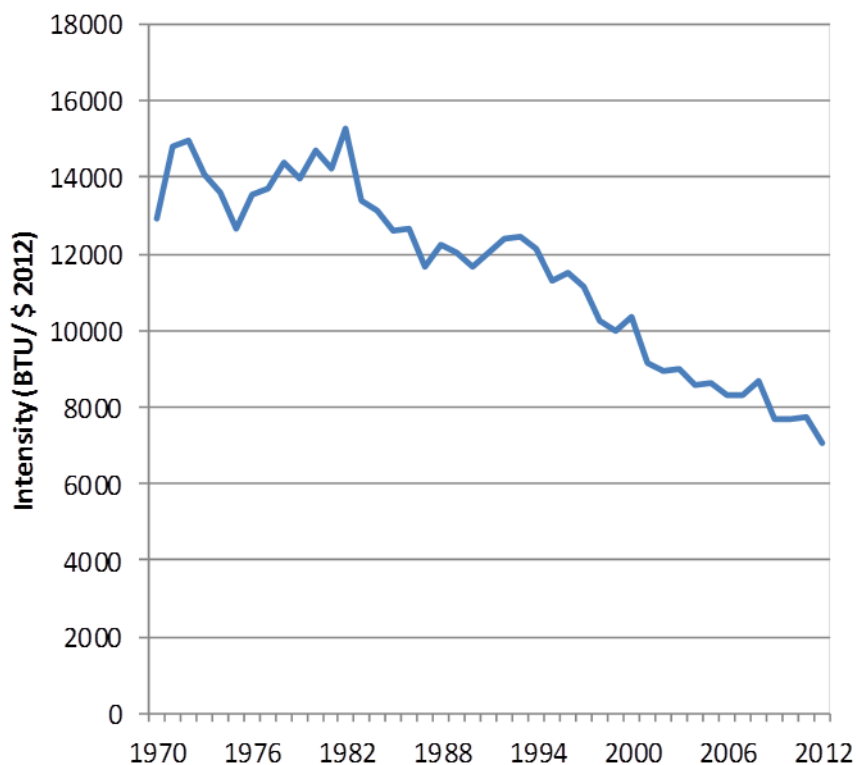


2012 National Comparison

State	Consumption (MMBTU) Per Capita	National Rank
Wyoming	91.68	1
US Average	349.79	-
Maine	285.36	30
Rhode Island	172.90	50

Maine Residential Sector Energy Intensity, 1970-2012

Consumption (Btu) per State GDP \$



2012 National Comparison

State	Consumption BTU/ State GDP \$	National Rank
Louisiana	15,549.25	1
Maine	7,065.38	22
US Average	6,907.03	-
New York	2,743.26	50

2014 Maine State Energy Profile

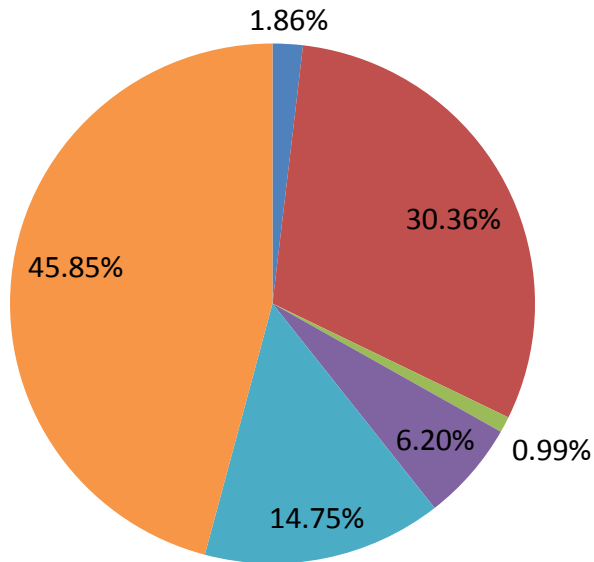
Residential Sector



Governor's Energy Office

Maine Residential Sector Consumption, 2012

Consumption by Fuel Type (%)

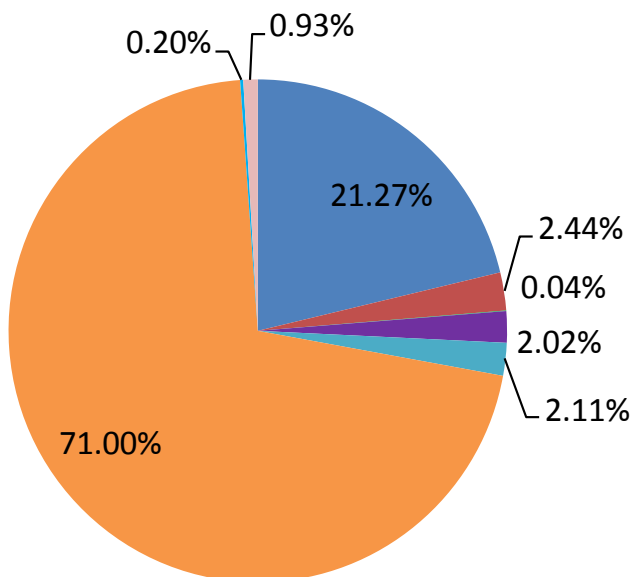


■ Natural Gas
 ■ Distillate Fuel Oil
 ■ Kerosene
 ■ LPG
 ■ Wood and Waste
 ■ Electricity

Fuel Type	Billion Btu	Percentage
Total	81,200	100%
Electricity	37,000	45.62%
Distillate Fuel Oil	24,500	30.21%
Wood and Waste	11,900	14.67%
Propane	5,000	6.17%
Natural Gas	1,500	1.85%
Kerosene	800	0.99%
Solar/PV	300	0.37%
Geothermal	100	0.12%

United States Residential Sector Consumption, 2012

Consumption by Fuel Type (%)

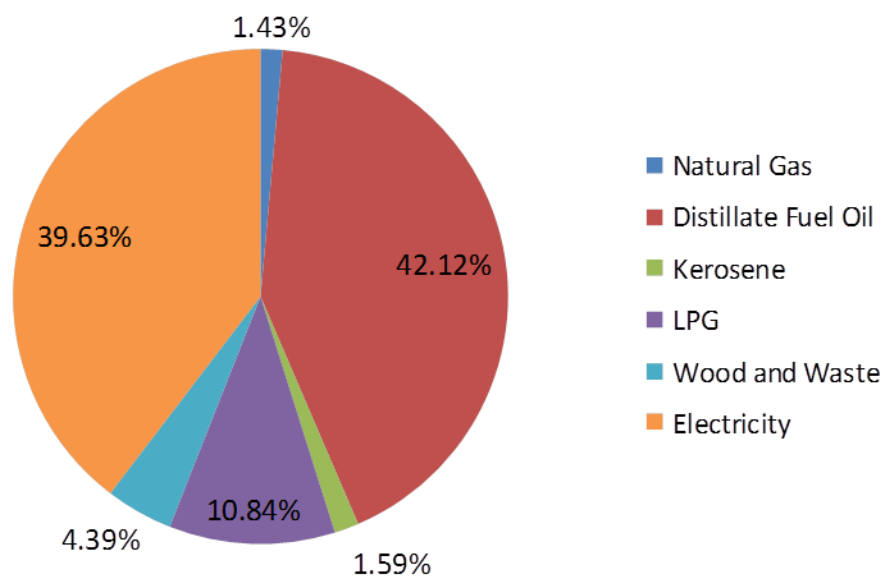


■ Natural Gas
 ■ Distillate Fuel Oil
 ■ Kerosene
 ■ LPG
 ■ Wood and Waste
 ■ Electricity
 ■ Geothermal
 ■ Solar/PV

Fuel Type	Billion Btu	Percentage
Total	19,924,700	100%
Electricity	14,146,000	71.00%
Natural Gas	4,237,000	21.27%
Distillate Fuel Oil	486,600	2.44%
Wood and Waste	420,000	2.11%
Propane	401,600	2.02%
Solar/PV	186,200	0.93%
Geothermal	39,600	0.20%
Kerosene	7,700	0.04%

Maine Residential Sector Expenditures, 2012

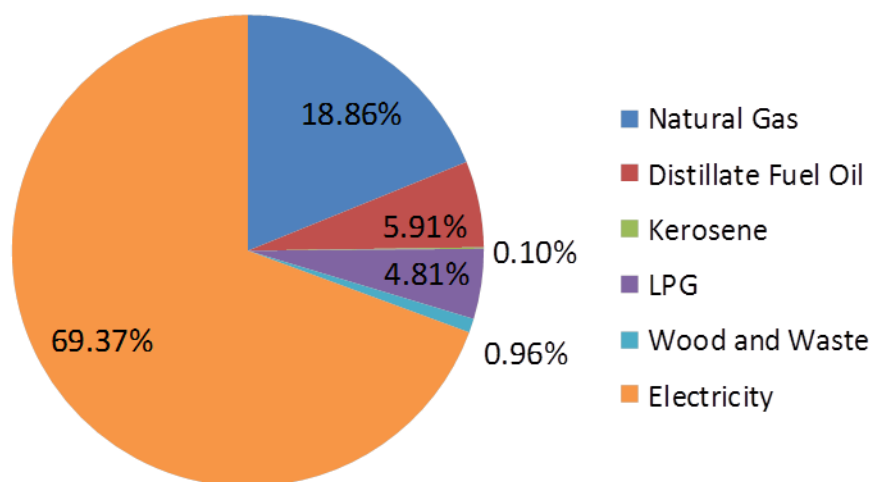
Expenditures by Fuel Type (%)



Fuel Type	Million (\$ US)	Percentage
Total	1,657.5	100%
Distillate Fuel Oil	698.1	42.12%
Electricity	656.8	39.63%
Propane	179.7	10.84%
Wood	72.8	4.39%
Kerosene	26.4	1.59%
Natural Gas	23.7	1.43%

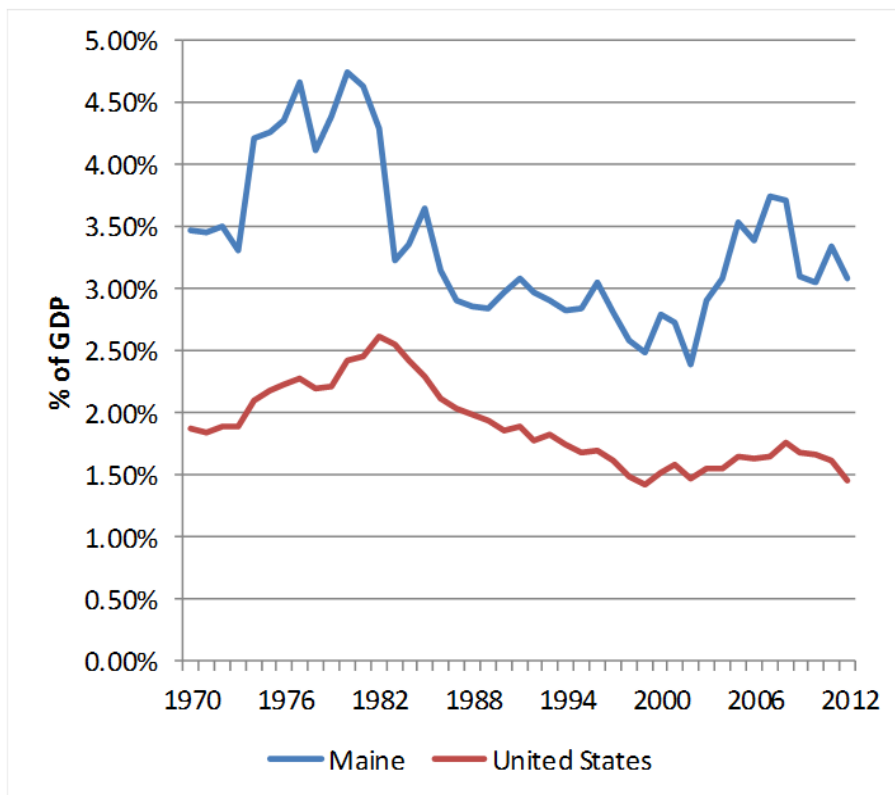
United States Residential Sector Expenditures, 2012

Expenditures by Fuel Type (%)



Fuel Type	Million (\$ US)	Percentage
Total	235,380.9	100%
Electricity	163,280.5	69.37%
Natural Gas	44,384	18.86%
Distillate Fuel Oil	13,913.9	5.91%
Propane	11,315.4	4.81%
Wood	2,253.5	0.96%
Kerosene	233.6	0.10%

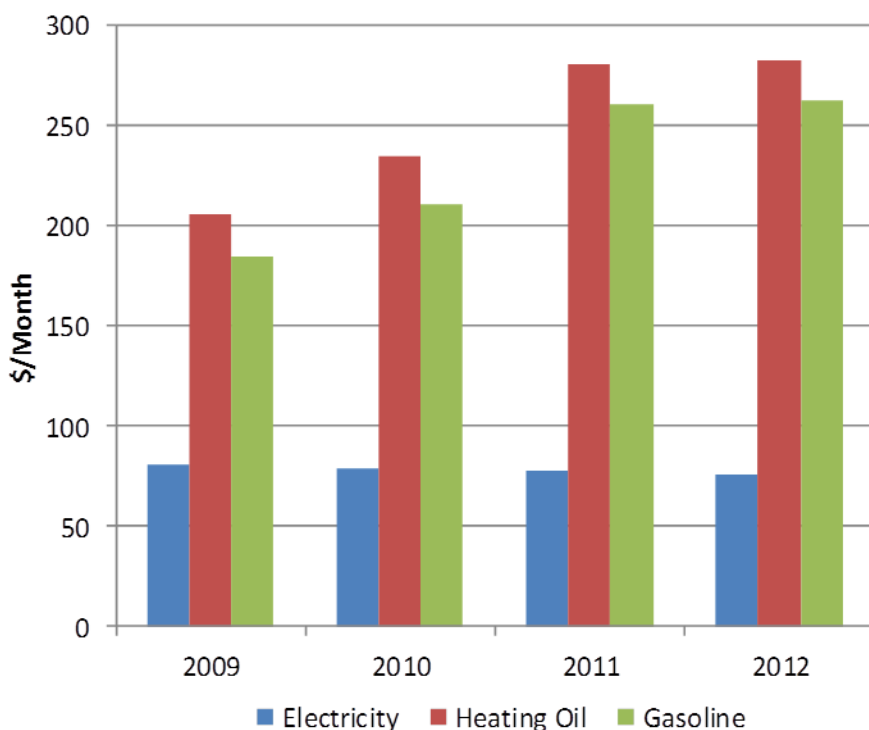
Maine vs. United States Residential Energy Expenditures As a Percent of Gross Domestic Product, 1970-2012



2012 National Comparison

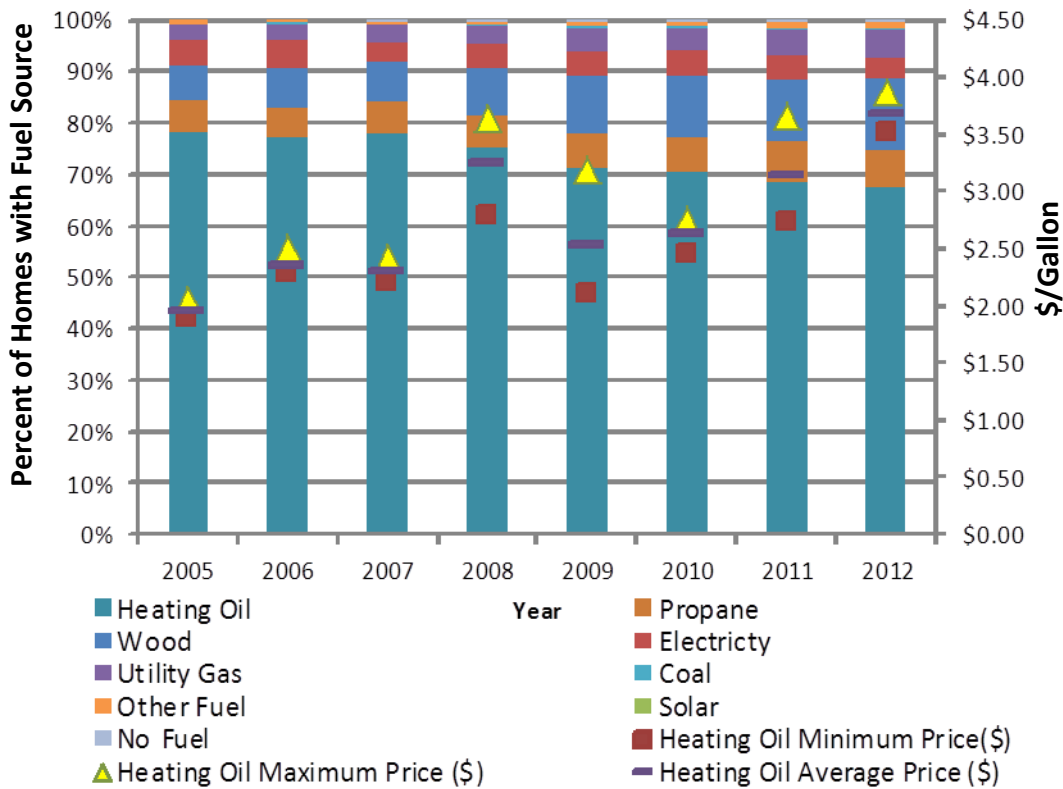
State	Residential Energy Expenditures/GDP (%)	National Rank
California	0.90%	1
US Average	1.54%	-
NE Average	2.37%	-
Maine	3.09%	50

Maine Monthly Electricity, Heating Oil, and Gasoline Expenditures per Maine Household



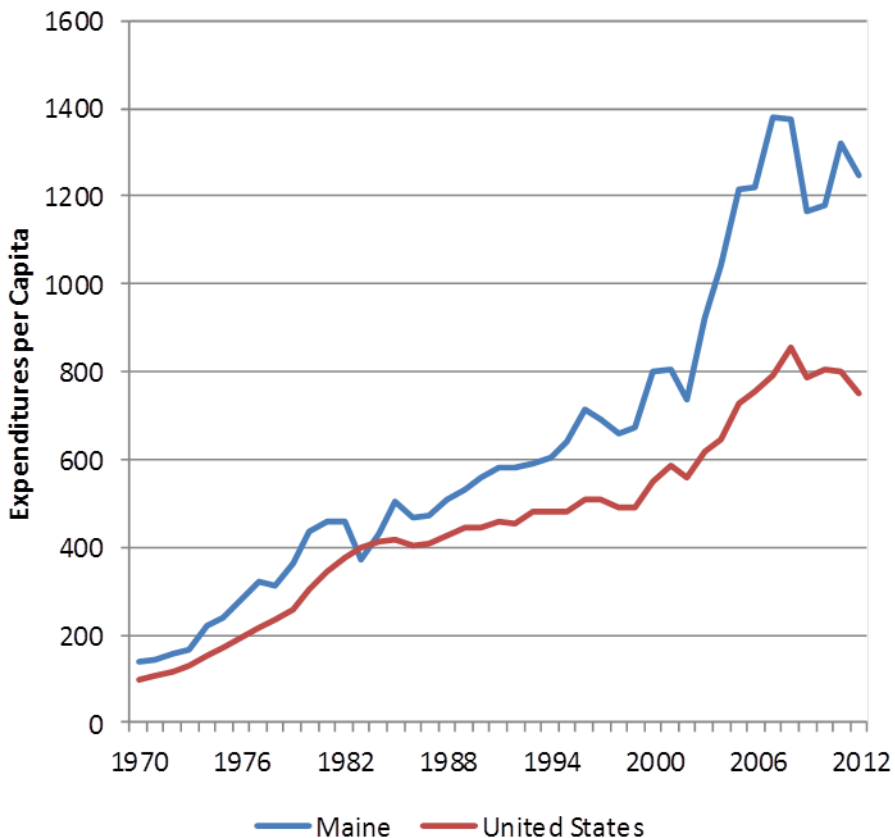
Year	Monthly Electricity Cost	Monthly Heating Oil Cost	Monthly Motor Gasoline Cost
2009	\$80.70	\$205.62	\$184.94
2010	\$79.27	\$234.35	\$210.97
2011	\$78.35	\$281.12	\$261.15
2012	\$75.69	\$282.76	\$262.44

Maine Home Heating By Fuel Type, 2005-2012



2012 Breakdown	
Heating Source	Statewide Usage
Heating Oil	67.5%
Wood	13.7%
Propane	7.5%
Utility Gas	5.2%
Electricity	4.2%
Other Fuel	1.3%
Coal	0.4%
No Fuel	0.2%
Solar	0.1%

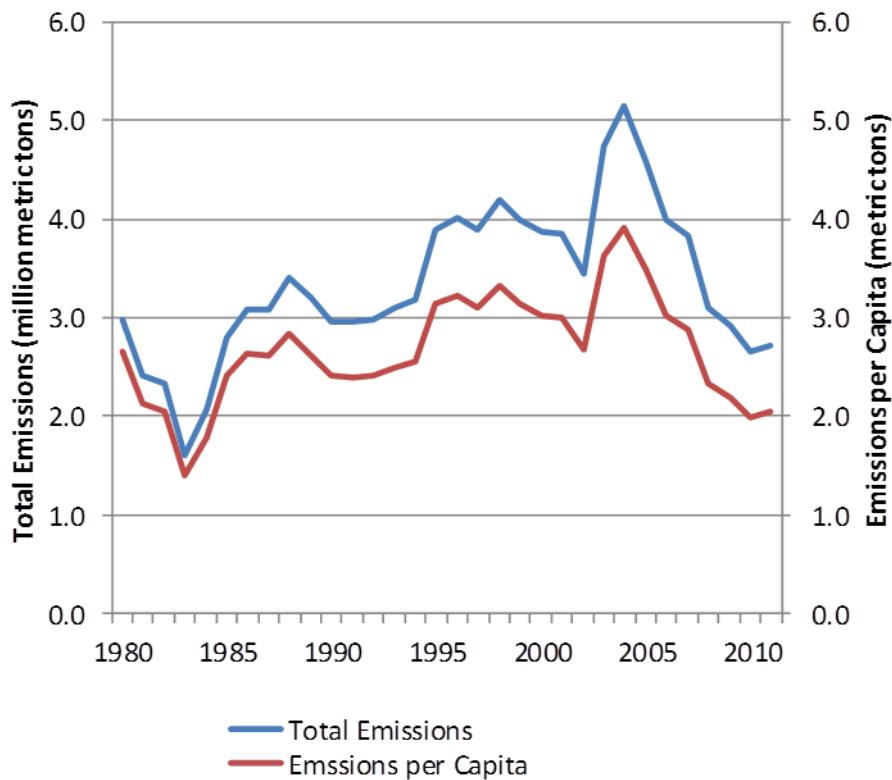
Maine and US Residential Energy Expenditures per Capita, 1970-2012



2012 National Comparison

State	Residential Energy Expenditures per Capita	National Rank
California	\$505.58	1
US Average	\$749.92	-
Maine	\$1,247.65	48
Vermont	\$1,402.66	50

Maine Residential Sector CO₂ Emissions (Million Metric Tons), 1980-2011

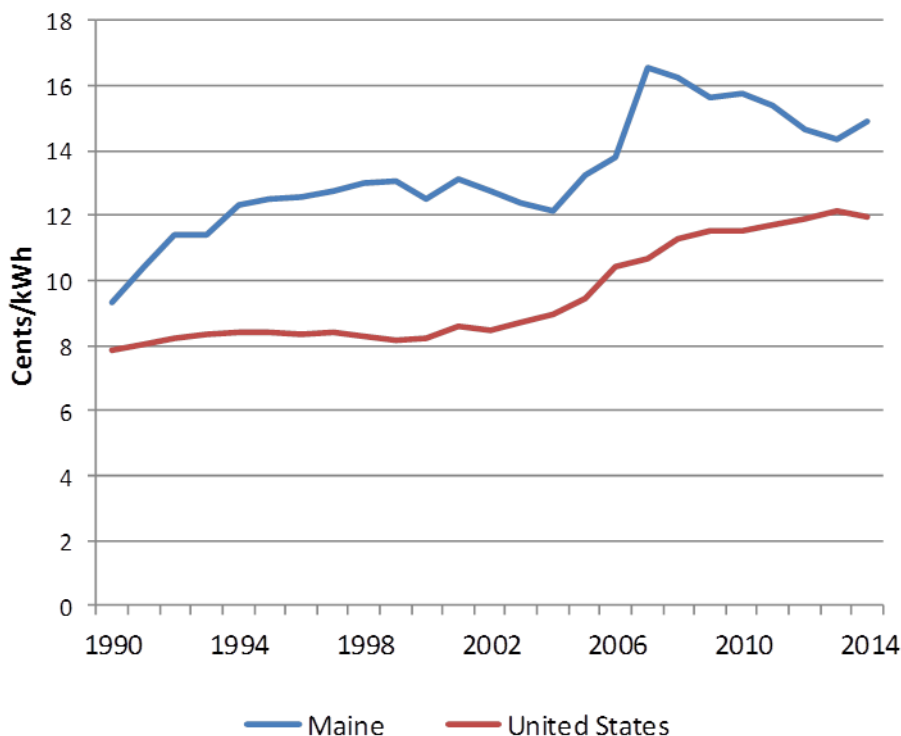


2011 National Comparison (Residential Sector)

State	Total CO ₂ Emissions (Million metric tons)	National Rank
New York	30.86	1
US Average	6.39	-
Maine	2.72	27
Hawaii	0.06	50

State	CO ₂ Emissions Per Capita (metric tons)	National Rank
Alaska	2.36	1
Maine	2.05	4
United States	0.71	-
Hawaii	0.04	50

Maine vs. United States Residential Sector Electricity Rates (cents/kWh) 1990-2014

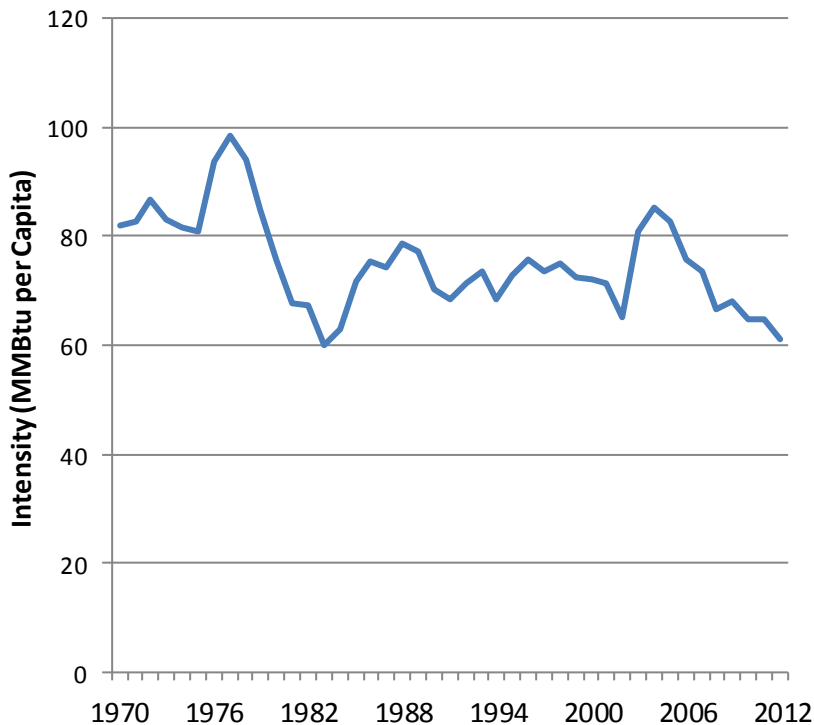


2014 National Comparison (as of May)

State	Electricity Costs (cents/kWh)	National Rank
North Dakota	8.41	1
US Average	11.98	-
Maine	14.88	41
Hawaii	37.77	50

Maine Residential Sector Energy Intensity, 1970-2012

Consumption (Btu) per Capita

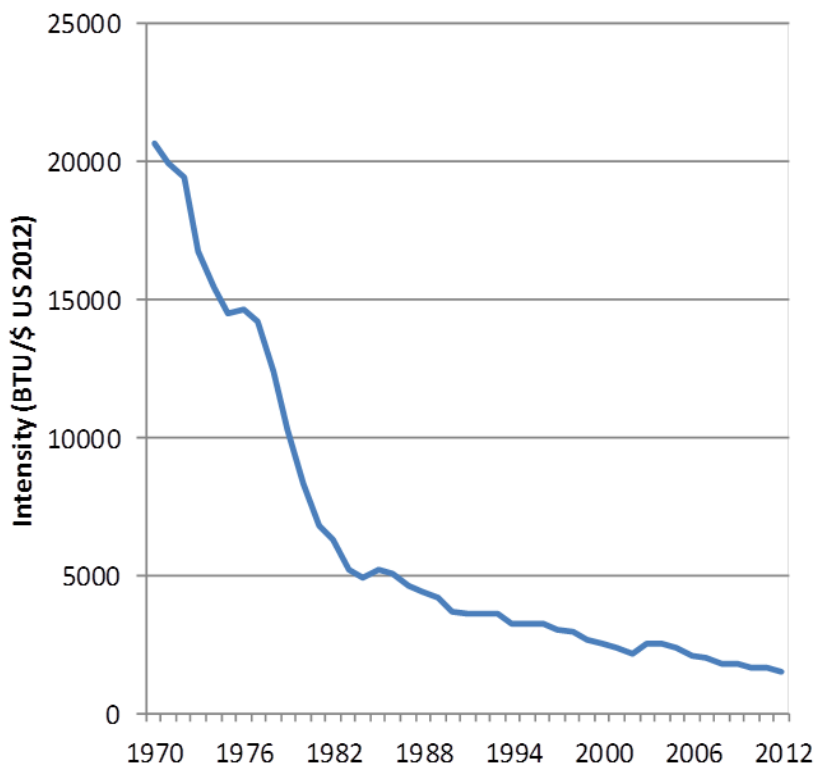


2012 National Comparison

State	Consumption (MMBTU) Per Capita	National Rank
North Dakota	91.68	1
US Average	67.75	-
Maine	61.12	40
Hawaii	25.39	50

Maine Residential Sector Energy Intensity, 1970-2012

Consumption (Btu) per State GDP \$



2012 National Comparison

State	Consumption BTU/ State GDP \$	National Rank
West Virginia	2,276.54	1
Maine	1,513.34	17
US Average	1,376.63	-
Hawaii	311.08	50

2014 Maine State Energy Profile

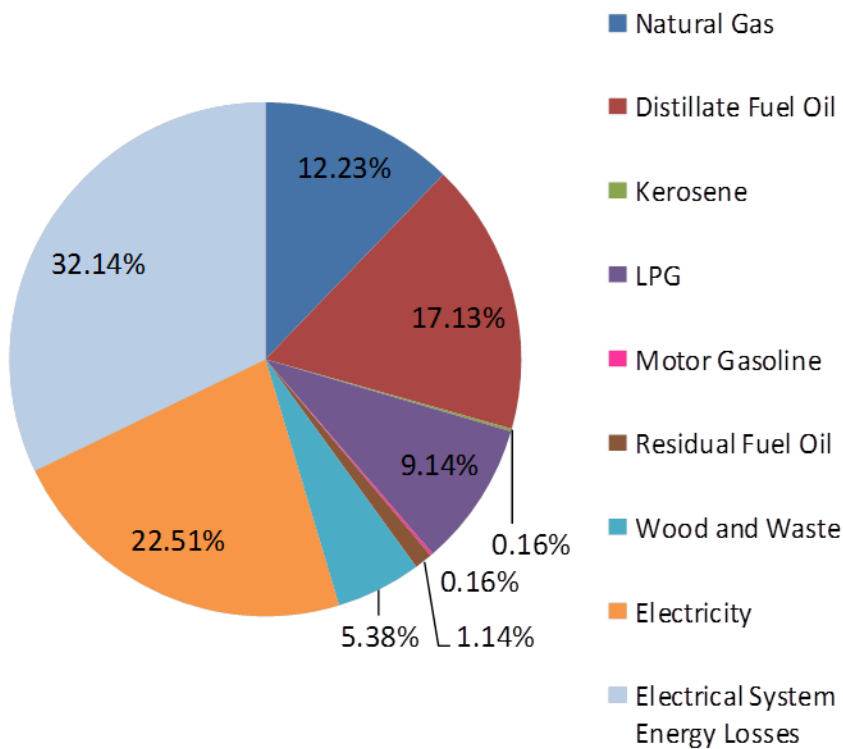
Commercial Sector



Governor's Energy Office

Maine Commercial Sector Consumption, 2012

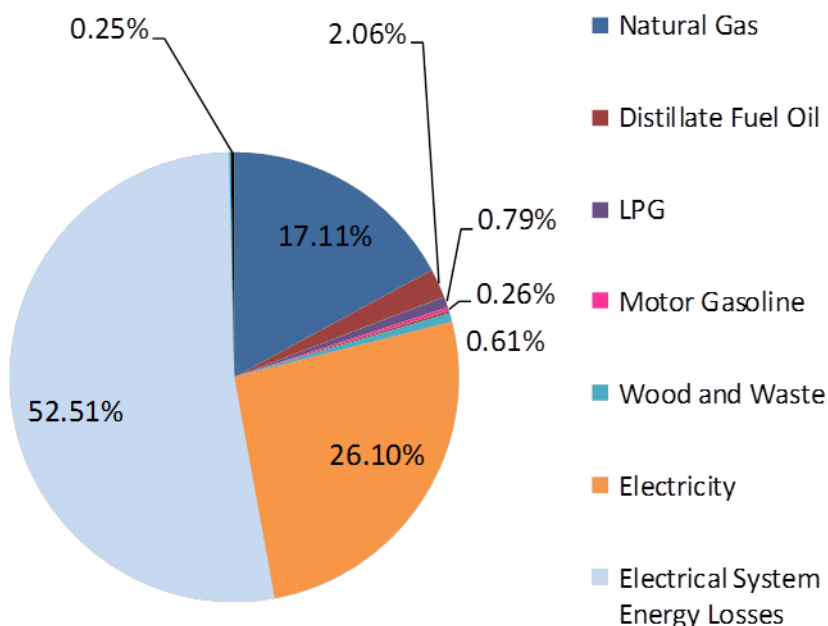
Consumption by Fuel Type (%)



Fuel Type	Billion Btu	Percentage
Total	61,400	100%
Electric System Energy Losses	19,700	32.14%
Electricity	13,800	22.51%
Distillate Fuel Oil	10,500	17.13%
Natural Gas	7,500	12.23%
LPG	5,600	9.14%
Wood and Waste	3,300	5.38%
Residual Fuel Oil	700	1.14%
Kerosene	100	0.16%
Motor Gasoline	100	0.16%

United States Commercial Sector Consumption, 2012

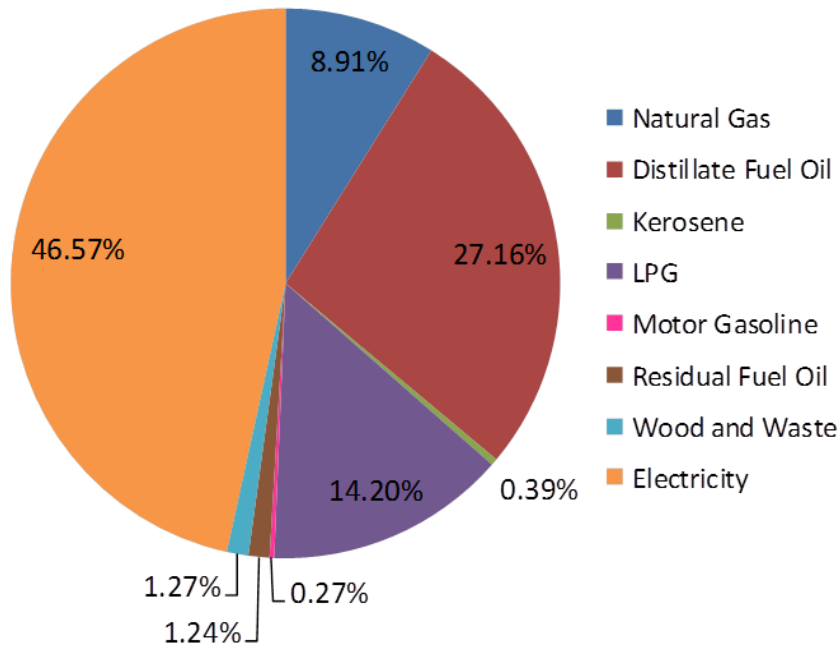
Consumption by Fuel Type (%)



Fuel Type	Billion Btu	Percentage
Total	17,342,700	100%
Electrical System Energy Losses	9,111,800	52.51%
Electricity	4,528,900	26.10%
Natural Gas	2,968,800	17.11%
Distillate Fuel Oil	358,300	2.06%
LPG	137,600	0.79%
Wood and Waste	105,900	0.61%
Motor Gasoline	44,700	0.26%
Coal	43,700	0.25%
Residual Fuel Oil	31,400	0.18%
Geothermal	19,700	0.11%
Kerosene	1,200	0.01%

Maine Commercial Sector Expenditures, 2012

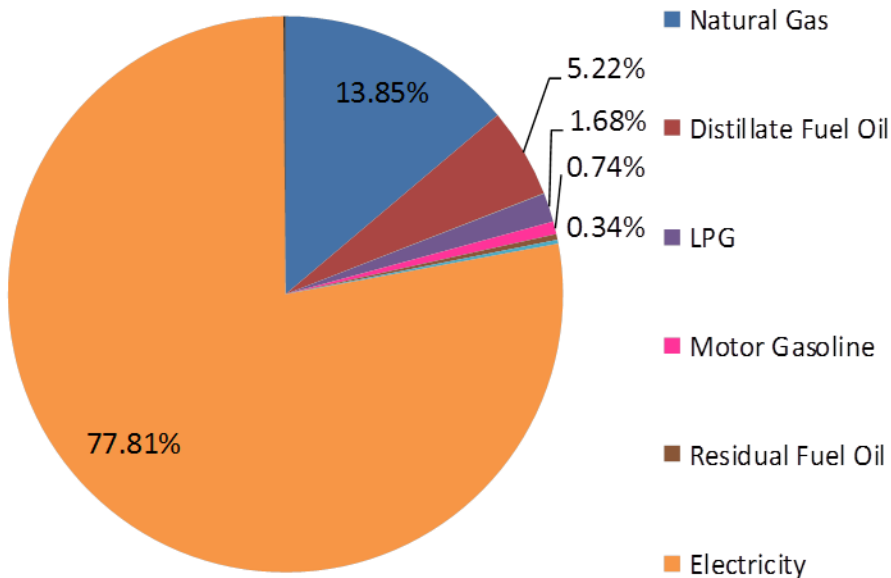
Expenditures by Fuel Type (%)



Fuel Type	Million (\$ US)	Percentage
Total	1,003.4	100%
Electricity	467.2	46.57%
Distillate Fuel Oil	272.5	27.16%
LPG	142.5	14.20%
Natural Gas	89.4	8.91%
Wood and Waste	12.7	1.27%
Residual Fuel Oil	12.4	1.24%
Kerosene	3.9	0.39%
Motor Gasoline	2.7	0.27%

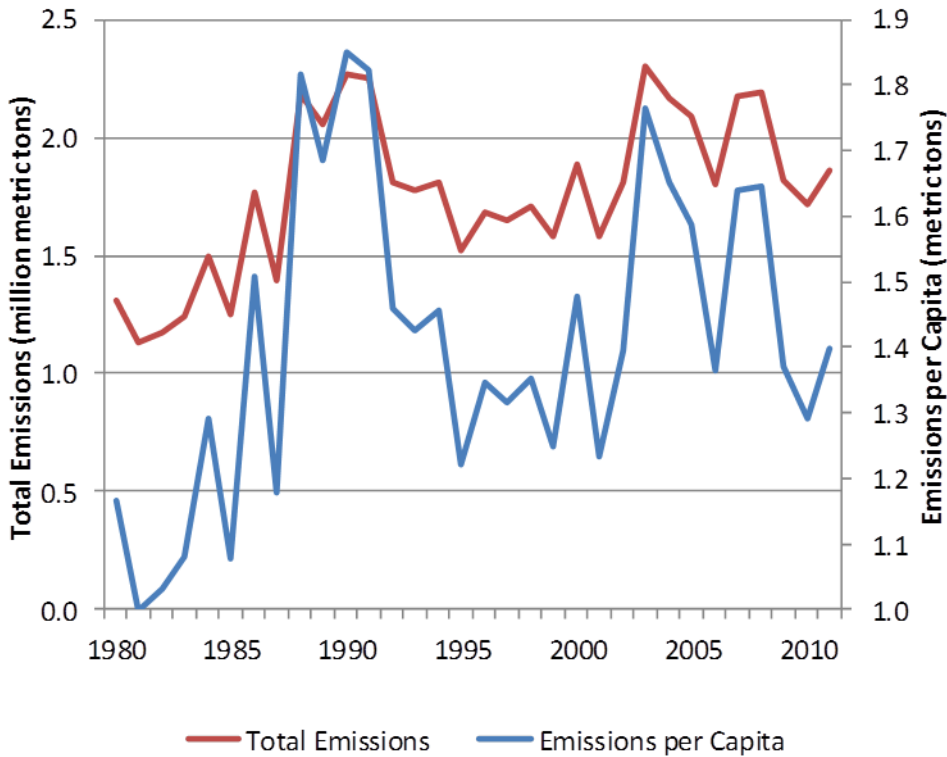
United States Commercial Sector Expenditures, 2012

Expenditures by Fuel Type (%)



Fuel Type	Million (\$ US)	Percentage
Total	172,126.40	100%
Electricity	133,926.0	77.81%
Natural Gas	23,846.5	13.85%
Distillate Fuel Oil	8,987.7	5.22%
LPG	2,896.9	1.68%
Motor Gasoline	1,276.5	0.74%
Residual Fuel Oil	577.5	0.34%
Wood and Waste	378.1	0.22%
Coal	191.2	0.11%
Kerosene	36.2	0.02%

Maine Commercial Sector CO₂ Emissions (Million Metric Tons), 1980-2011

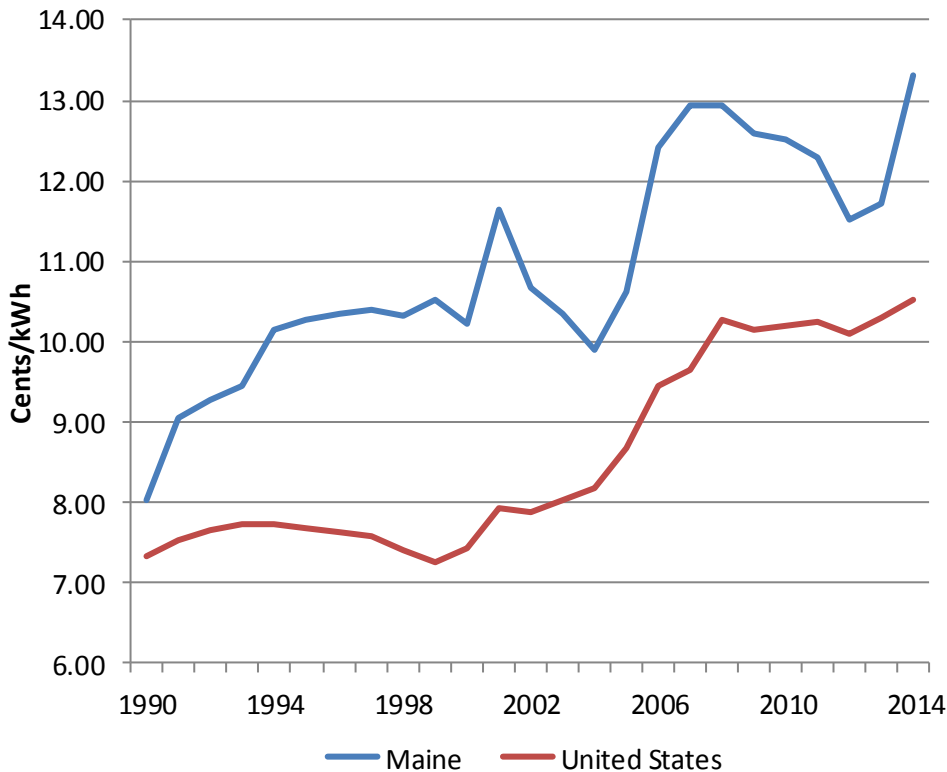


2011 National Comparison (Commercial Sector)

State	Total CO ₂ Emissions (Million metric tons)	National Rank
New York	24.33	1
US Average	4.38	-
Maine	1.86	36
Hawaii	0.29	50

State	CO ₂ Emissions Per Capita (metric tons)	National Rank
Alaska	3.57	1
Maine	1.40	4
United States	0.71	-
Hawaii	0.21	50

Maine vs. United States Commercial Sector Electricity Rates (cents/kWh) 1990-2014

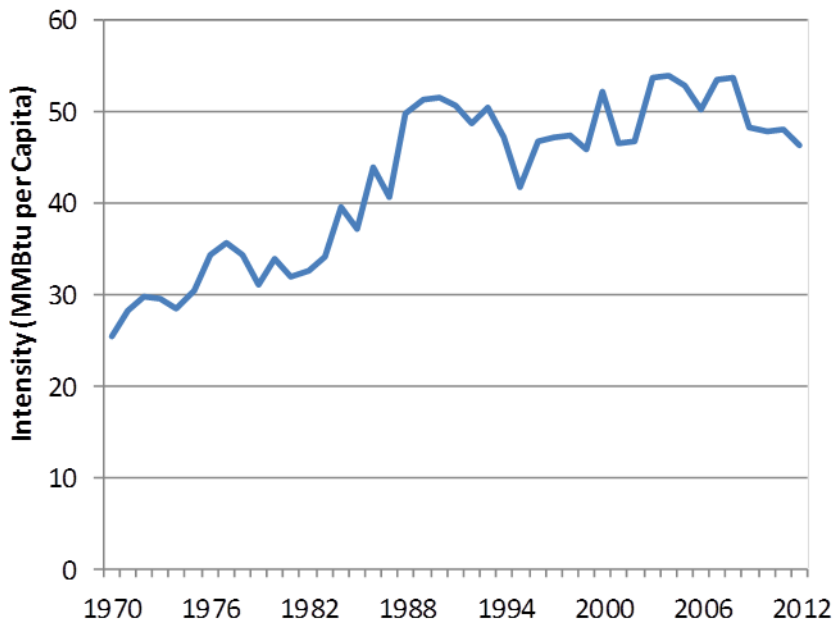


2014 National Comparison (as of May)

State	Electricity Costs (cents/kWh)	National Rank
Idaho	7.56	1
US Average	10.52	-
Maine	13.31	40
Hawaii	34.81	50

Maine Commercial Sector Energy Intensity, 1970-2012

Consumption (Btu) per Capita

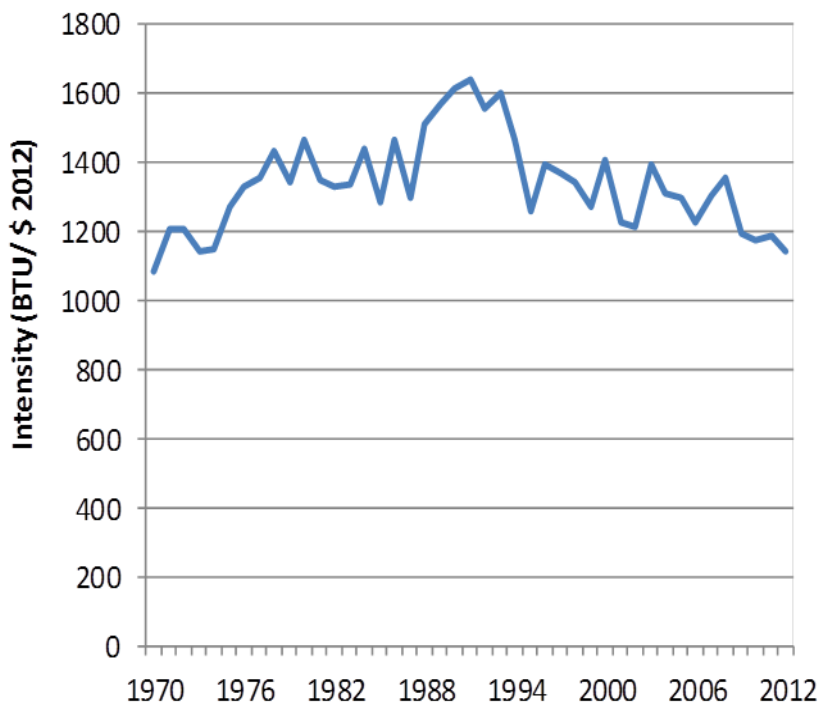


2012 National Comparison

State	Consumption (MMBTU) Per Capita	National Rank
Wyoming	110.99	1
US Average	98.79	-
Maine	46.22	45
Hawaii	27.34	50

Maine Commercial Sector Energy Intensity, 1970-2012

Consumption (Btu) per State GDP \$



2012 National Comparison

State	Consumption BTU/ State GDP \$	National Rank
Montana	1,786.90	1
US Average	1,182.37	-
Maine	1,144.33	30
Hawaii	524.05	50

2014 Maine State Energy Profile

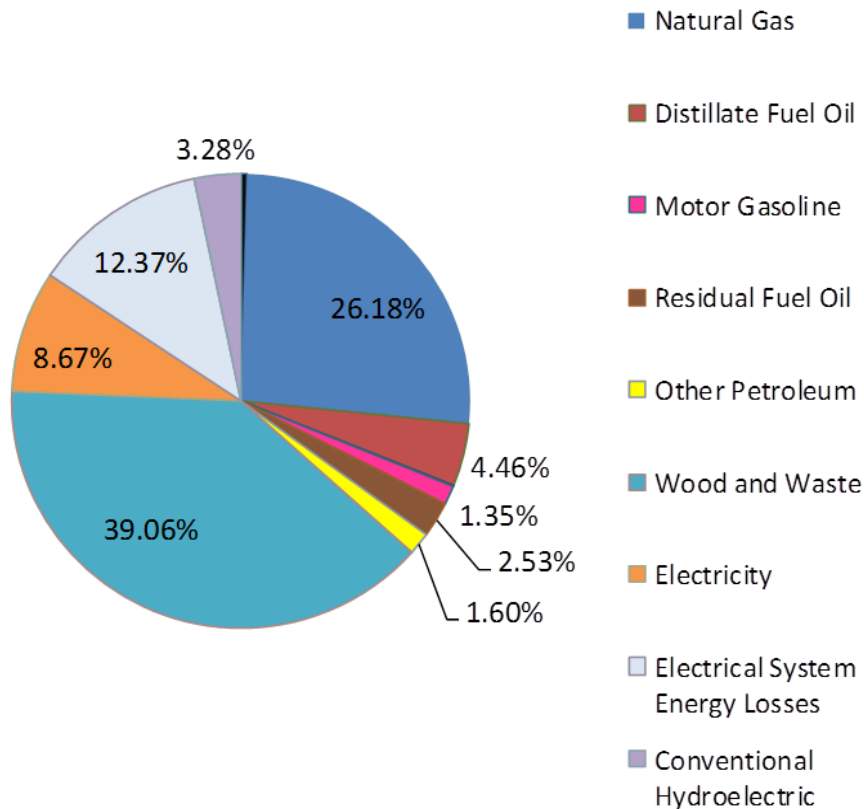
Industrial Sector



Governor's Energy Office

Maine Industrial Sector Consumption, 2012

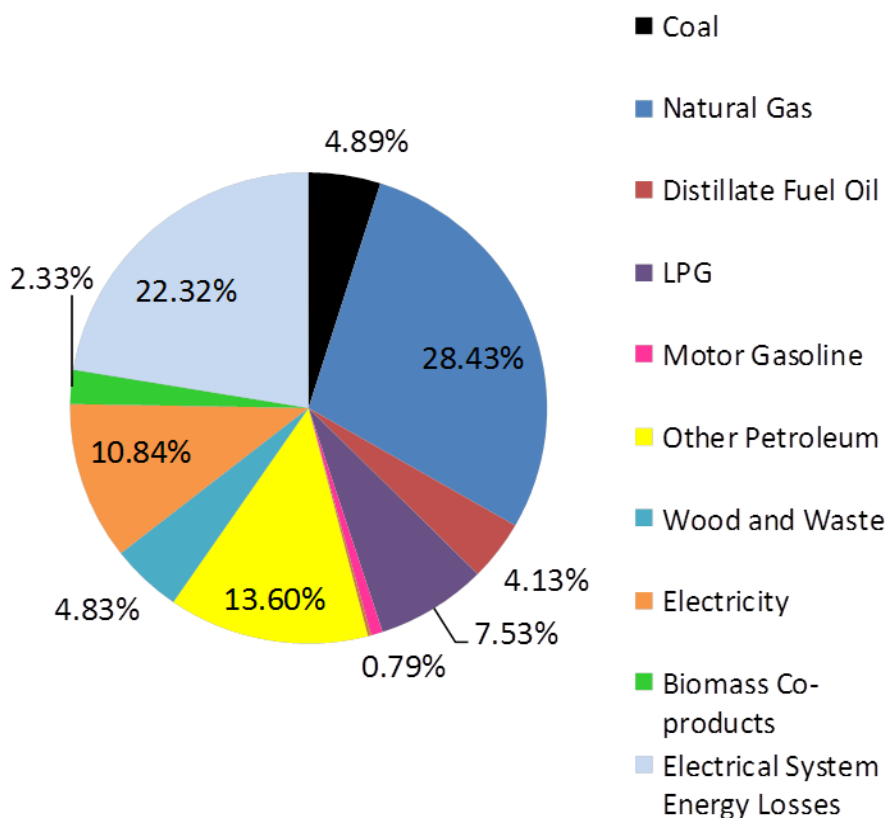
Consumption by Fuel Type (%)



Fuel Type	Billion Btu	Percentage
Total	119,000	100%
Wood and Wood Waste	46,400	39.06%
Natural Gas	31,100	26.18%
Electrical System Energy Losses	14,700	12.37%
Electricity	10,300	8.67%
Distillate Fuel Oil	5,300	4.46%
Conventional Hydroelectric	3,900	3.28%
Residual Fuel Oil	3,000	2.53%
Other Petroleum ^A	1,900	1.60%

United States Industrial Sector Consumption, 2012

Consumption by Fuel Type (%)

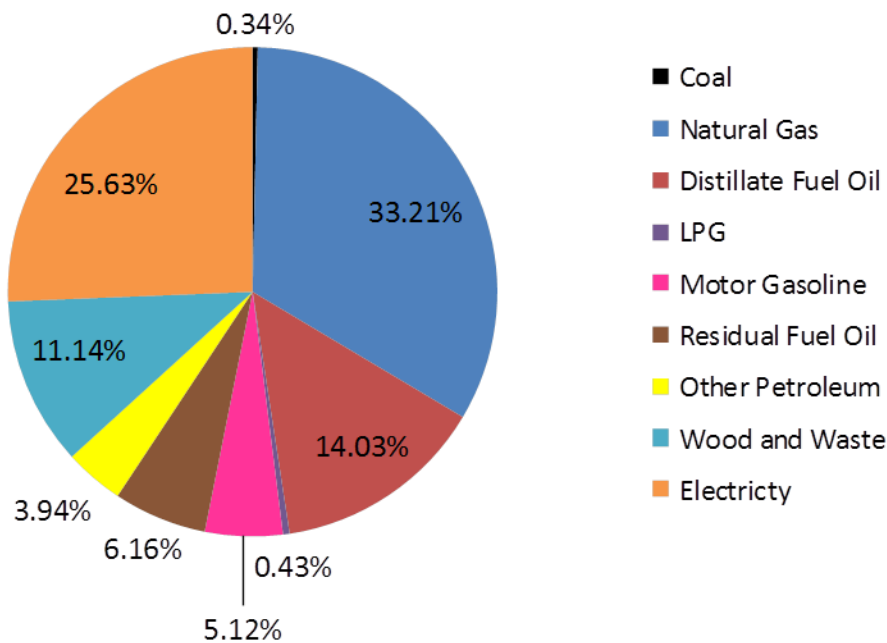


Fuel Type	Billion Btu	Percentage
Total	31,003,500	100%
Natural Gas	8,820,200	28.43%
Electrical System Energy Losses	6,925,300	22.32%
Other Petroleum ^A	4,221,500	13.60%
Electricity	3,364,800	10.84%
LPG	2,335,400	7.53%
Coal	1,515,800	4.89%
Wood and Wood Waste	1,498,300	4.83%
Distillate Fuel Oil	1,282,700	4.13%

^A Other Petroleum includes asphalt, road oil, kerosene, and lubricants

Maine Industrial Sector Expenditures, 2012

Expenditures by Fuel Type (%)

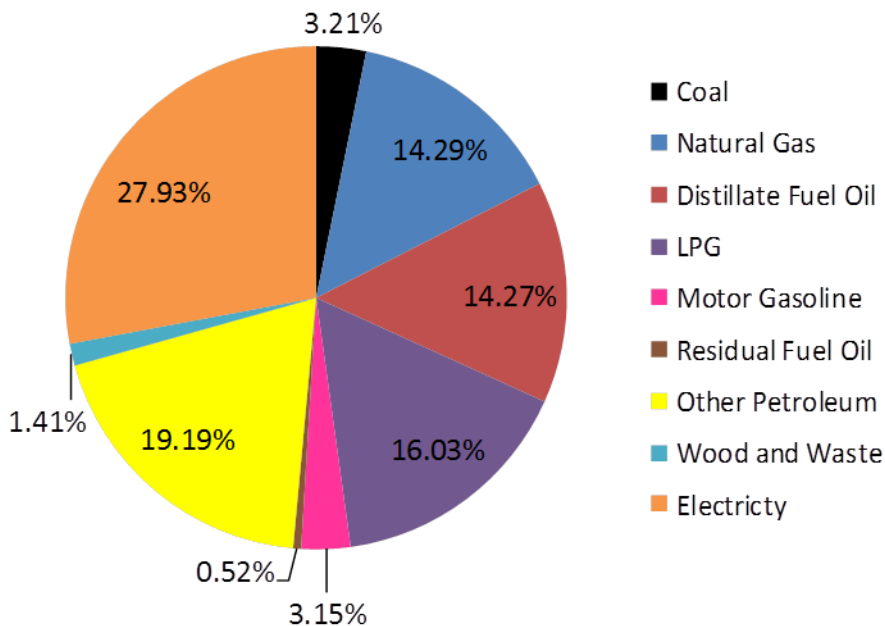


Fuel Type	Million (\$ US)	Percentage
Total	942.8	100%
Natural Gas	313.1	33.21%
Electricity	241.6	25.63%
Distillate Fuel Oil	132.3	14.03%
Wood and Wood Waste	105.0	11.14%
Residual Fuel Oil	58.1	6.16%
Motor Gasoline	48.3	5.12%
Other Petroleum ^A	37.1	3.94%
LPG	4.1	0.43%
Coal	3.2	0.34%

^A Other Petroleum includes asphalt, road oil, kerosene, and lubricants

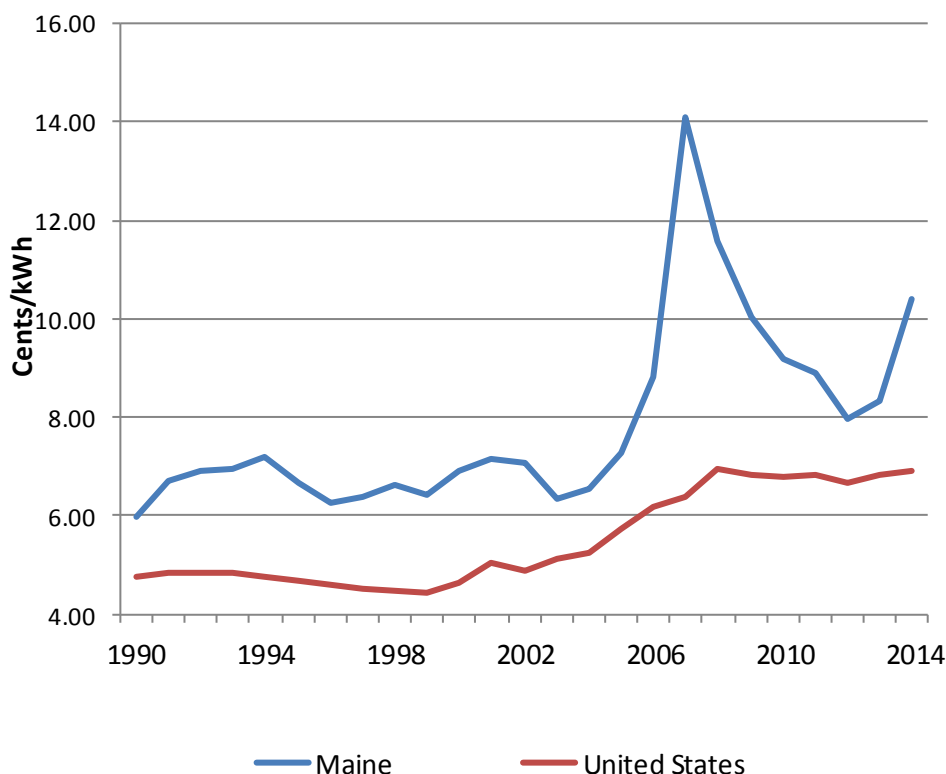
United States Industrial Sector Expenditures, 2012

Expenditures by Fuel Type (%)



Fuel Type	Million (\$ US)	Percentage
Total	225,512.00	100%
Electricity	62,946.2	27.93%
Other Petroleum ^A	43,235.4	19.19%
LPG	36,177.0	16.03%
Natural Gas	32,201.1	14.29%
Distillate Fuel Oil	32,153.4	14.27%
Coal	7,328.1	3.21%
Motor Gasoline	7,108.5	3.15%
Wood and Wood Waste	3,174.3	1.41%
Residual Fuel Oil	1,163.8	0.52%

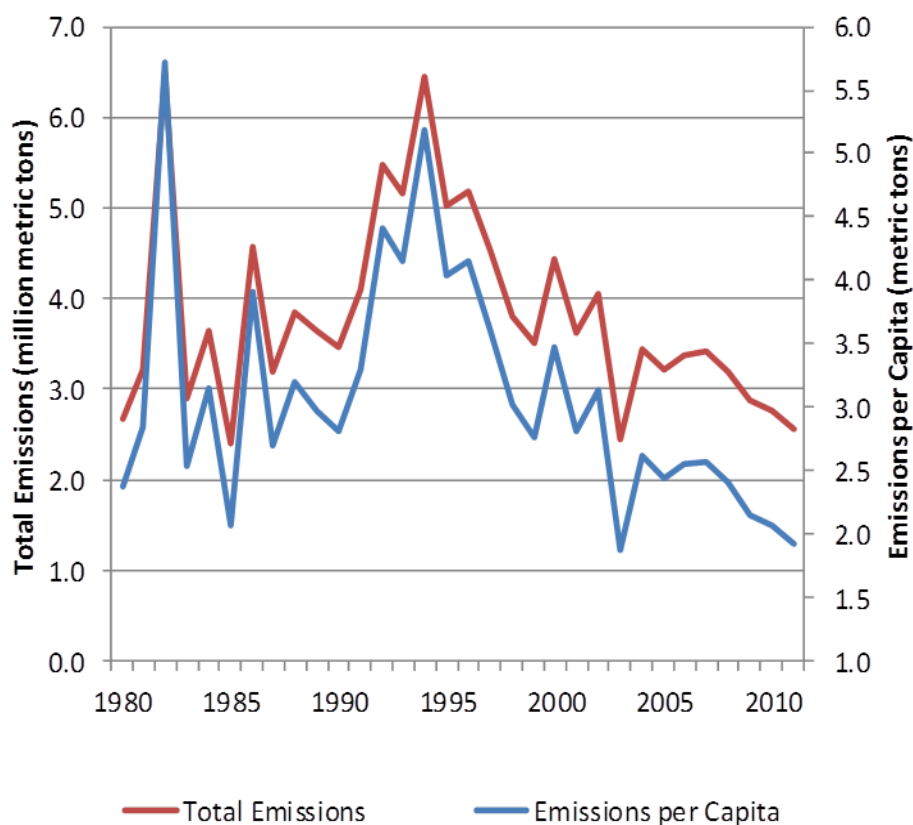
Maine vs. United States Industrial Sector Electricity Rates (cents/kWh) 1990-2014



2014 National Comparison (as of May)

State	Electricity Costs (cents/kWh)	National Rank
Washington	4.30	1
US Average	6.91	-
Maine	10.41	42
Hawaii	30.69	50

Maine Industrial Sector CO₂ Emissions (Million Metric Tons), 1980-2011



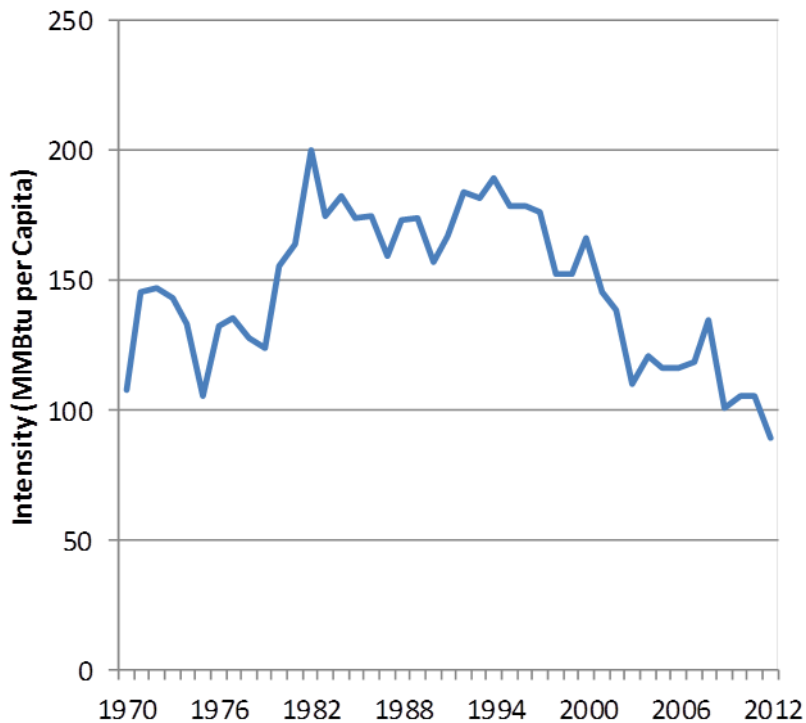
2011 National Comparison (Industrial Sector)

State	Total CO ₂ Emissions (Million metric tons)	National Rank
Texas	204.56	1
US Average	17.88	-
Maine	2.72	42
Rhode Island	2.55	50

State	CO ₂ Emissions Per Capita (metric tons)	National Rank
Louisiana	26.77	1
United States	2.27	-
Maine	1.92	29
Connecticut	0.21	50

Maine Industrial Sector Energy Intensity, 1970-2012

Consumption (Btu) per Capita

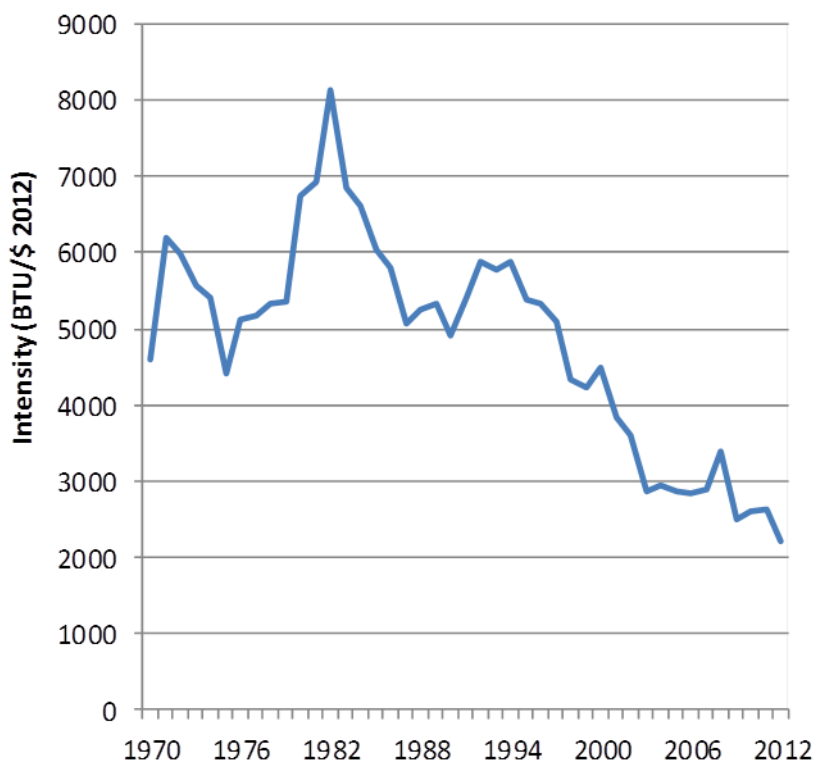


2012 National Comparison

State	Consumption (MMBTU) Per Capita	National Rank
Louisiana	571.08	1
US Average	98.79	-
Maine	89.57	28
New York	17.33	50

Maine Industrial Sector Energy Intensity, 1970-2012

Consumption (Btu) per State GDP \$



2012 National Comparison

State	Consumption BTU/ State GDP \$	National Rank
Louisiana	10,455.55	1
Maine	2,217.83	23
US Average	1,934.13	-
New York	264.93	50

2014 Maine State Energy Profile

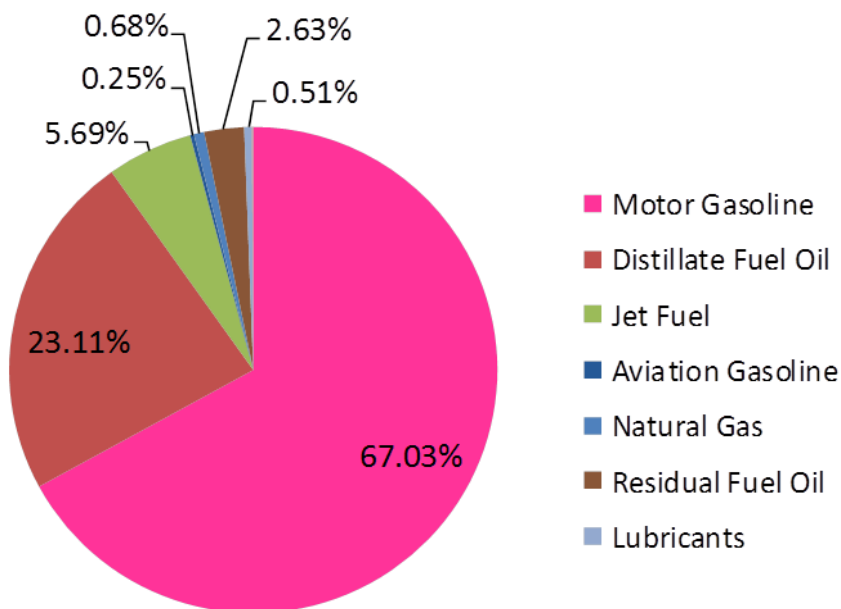
Transportation Sector



Governor's Energy Office

Maine Transportation Sector Consumption, 2012

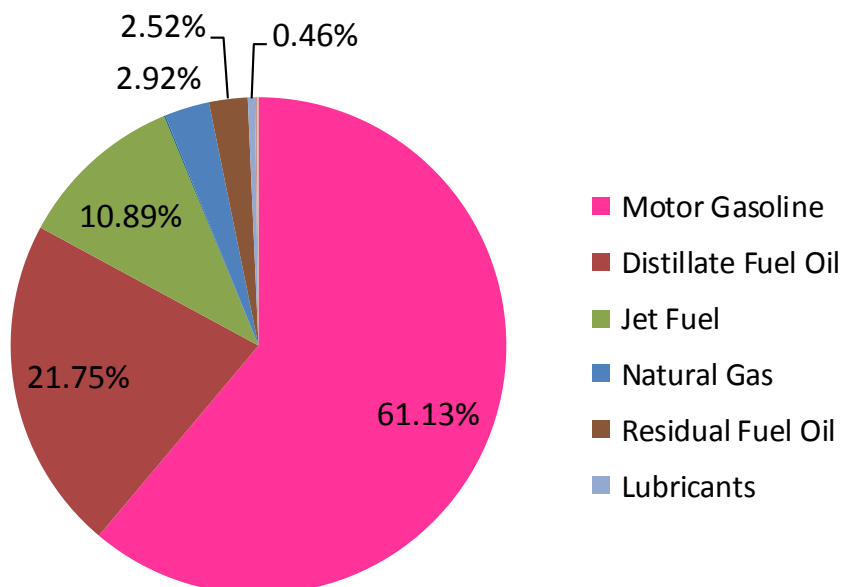
Consumption by Fuel Type (%)



Fuel Type	Billion Btu	Percentage
Total	117,600	100%
Motor Gasoline	78,900	67.03%
Distillate Fuel Oil	27,200	23.11%
Jet Fuel	6,700	5.69%
Residual Fuel Oil	3,100	2.63%
Natural Gas	800	0.68%
Lubricants	600	0.51%
Aviation Gasoline	300	0.25%
LPG	100	0.08%

United States Transportation Sector Consumption, 2012

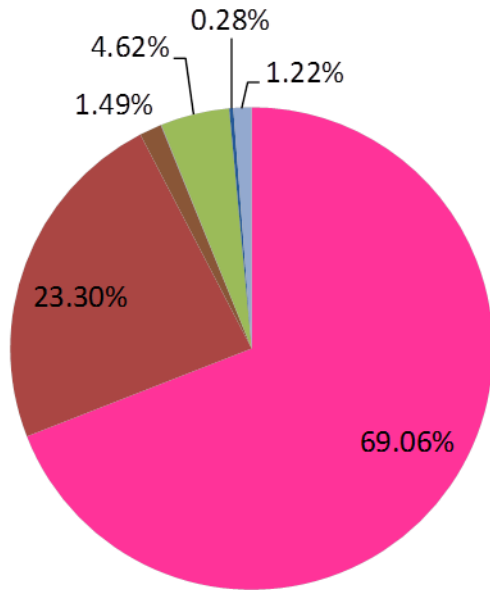
Consumption by Fuel Type (%)



Fuel Type	Billion Btu	Percentage
Total	26,651,000	100%
Motor Gasoline	16,293,000	61.13%
Distillate Fuel Oil	5,796,000	21.75%
Jet Fuel	2,901,400	10.89%
Natural Gas	779,500	2.92%
Residual Fuel Oil	670,500	2.52%
Lubricants	123,300	0.46%
LPG	37,200	0.14%
Aviation Gasoline	25,100	0.09%
Electricity	25,000	0.09%

Maine Transportation Sector Expenditures, 2012

Expenditures by Fuel Type (%)

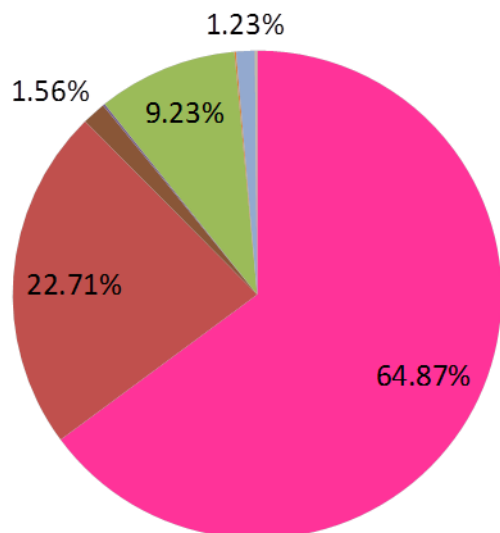


- Motor Gasoline
- Distillate Fuel Oil
- Residual Fuel Oil
- Jet Fuel
- Aviation Gasoline
- Lubricants

Fuel Type	Million (\$ US)	Percentage
Total	3,397.2	100%
Motor Gasoline	2,346.2	69.06%
Distillate Fuel Oil	791.6	23.30%
Jet Fuel	156.9	4.62%
Residual Fuel Oil	50.5	1.49%
Lubricants	41.3	1.22%
Aviation Gasoline	9.4	0.28%
LPG	1.3	0.04%

United States Transportation Sector Expenditures, 2012

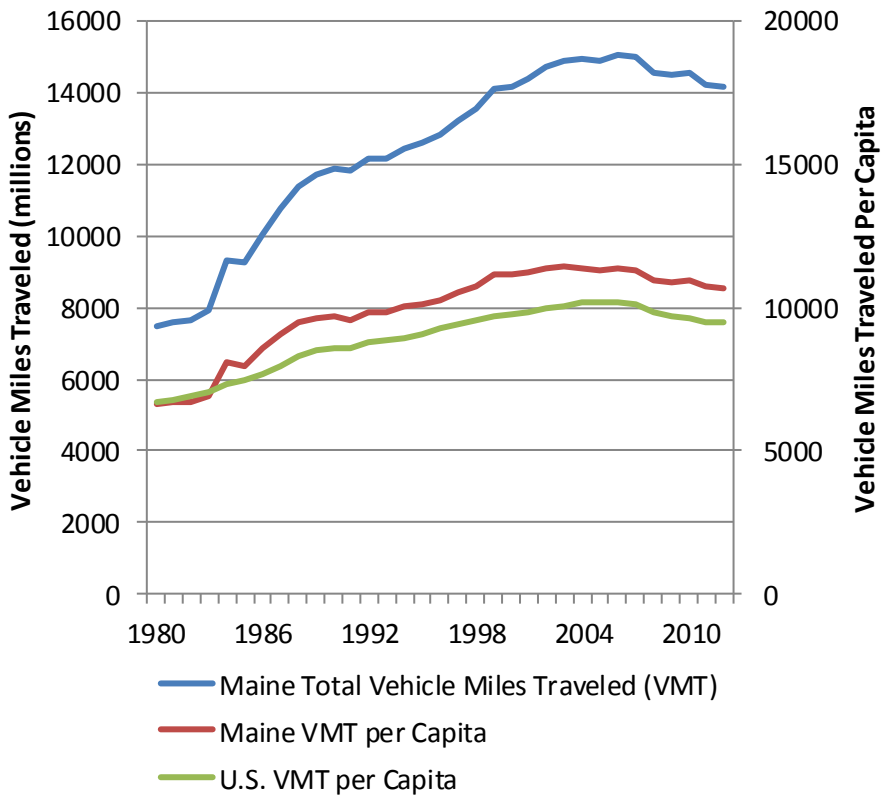
Expenditures by Fuel Type (%)



- Motor Gasoline
- Distillate Fuel Oil
- Residual Fuel Oil
- Jet Fuel
- Lubricants

Fuel Type	Million (\$ US)	Percentage
Total	722,656.9	100%
Motor Gasoline	468,758.2	64.87%
Distillate Fuel Oil	164,096.0	22.71%
Jet Fuel	66,735.5	9.23%
Residual Fuel Oil	11,299.3	1.56%
Lubricants	8,887.2	1.23%
LPG	983.3	0.14%
Aviation Gasoline	829.7	0.11%
Electricity	747.4	0.10%
Natural Gas	320.3	0.04%

Maine Vehicle Miles Traveled (VMT, Million Miles), 1980-2012

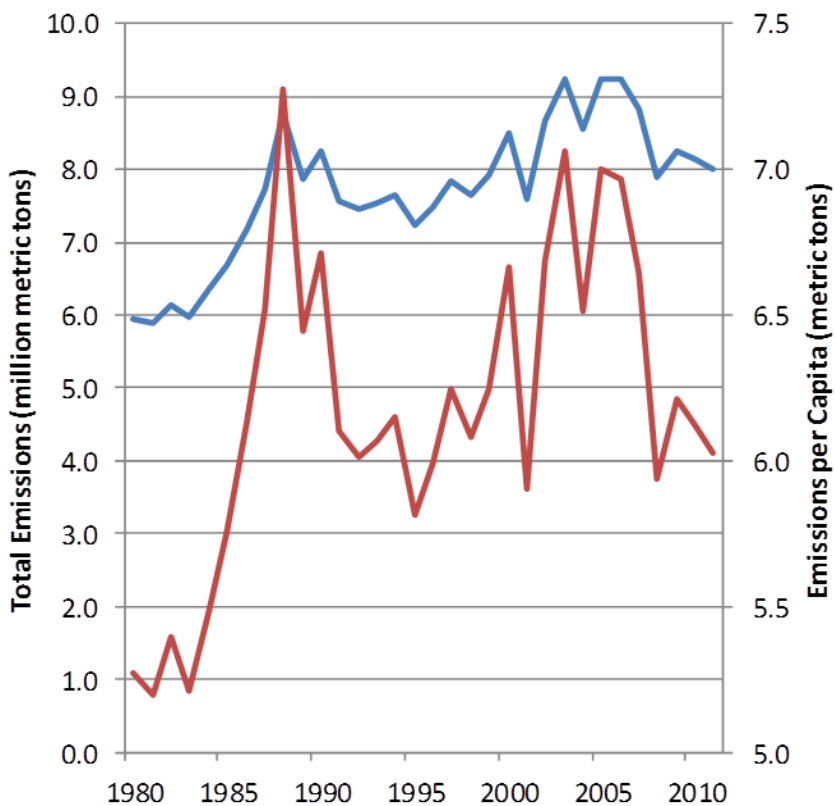


2012 National Comparison

State	VMT (million miles)	National Rank
California	326,272	1
US Average	58,506	-
Maine	14,199	41
Alaska	4,792	50

State	VMT per capita (miles)	National Rank
Wyoming	16,078	1
Maine	10,688	17
US Average	9,459	-
New York	6,550	50

Maine Transportation Sector CO₂ Emissions (Million Metric Tons), 1980-2011



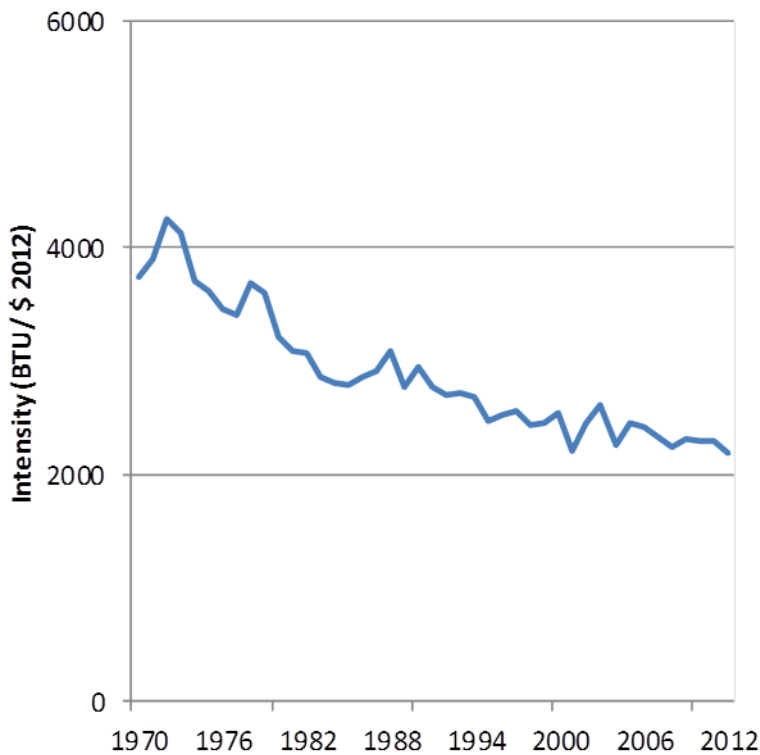
2011 National Comparison (Transportation Sector)

State	Total CO ₂ Emissions (Million metric tons)	National Rank
California	199.3	1
US Average	34.94	-
Maine	8.00	42
New York	3.26	50

State	CO ₂ Emissions Per Capita (metric tons)	National Rank
Alaska	19.10	1
Maine	6.02	24
US Average	5.68	-
New York	3.26	50

Maine Transportation Sector Energy Intensity, 1970-2012

Consumption (Btu) per State GDP \$

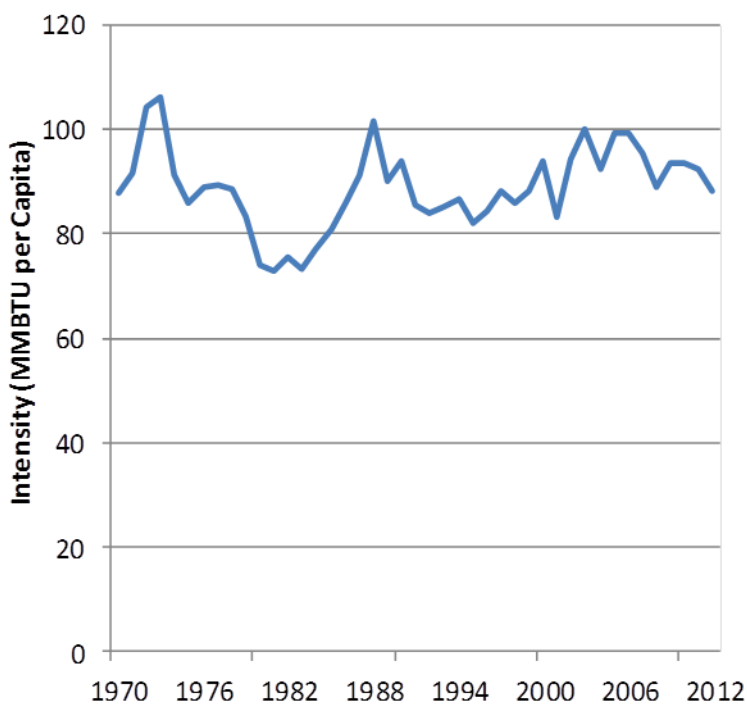


2012 National Comparison

State	Consumption BTU/ State GDP \$	National Rank
Mississippi	3,629.8	1
Maine	2,189.9	16
US Average	1,664.4	-
New York	958.2	50

Maine Transportation Sector Energy Intensity, 1970-2012

Consumption (Btu) per Capita



2012 National Comparison

State	Consumption (MMBTU) Per Capita	National Rank
Alaska	100.9	1
Maine	88.4	28
US Average	85.1	-
New York	54.2	50

2014 Maine State Energy Profile

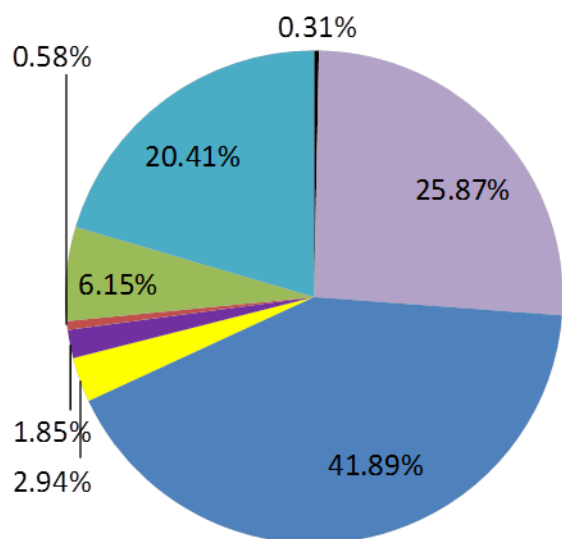
Electric Power Sector



Governor's Energy Office

Maine Total Electricity Generation, 2012

Generation by Fuel Source (%)



- Coal
- Conventional Hydroelectric
- Natural Gas
- Other Fuels
- Other Biomass
- Petroleum
- Wind
- Wood and Waste

Fuel Source	Generation (MWh)	Percentage
Total	14,428,596	100%
Natural Gas	6,043,695	41.89%
Hydropower Conventional	3,732,604	25.87%
Wood and Wood Derived Fuels	2,944,950	20.41%
Wind	886,918	6.15%
Other Fuels ^A	424,478	2.94%
Other Biomass ^B	266,928	1.85%
Petroleum	83,765	0.58%
Coal	45,258	0.31%

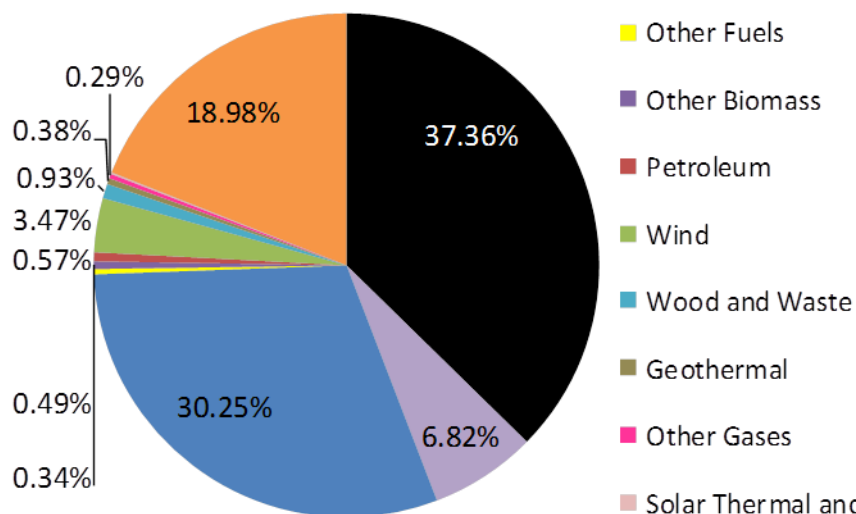
^A Other Fuels includes solid waste, batteries, chemicals, hydrogen pitch and misc. technologies

^B Other Biomass includes landfill gas, sludge waste, agricultural byproducts, and other biomass liquids

^C Other gases includes propane gas, blast furnace gas and other waste gases

United States Total Electricity Generation, 2012

Generation by Fuel Source (%)

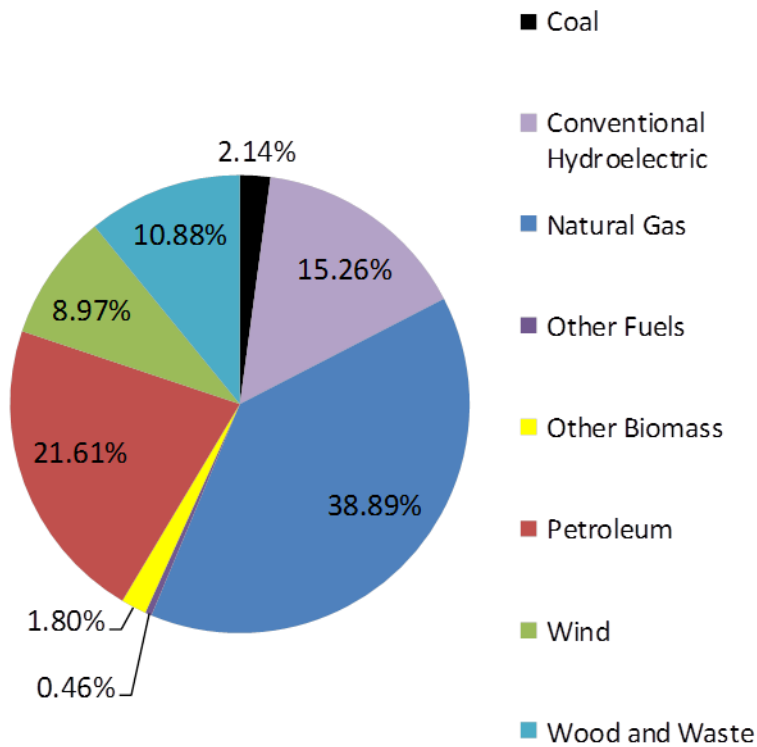


- Coal
- Conventional Hydroelectric
- Natural Gas
- Other Fuels
- Other Biomass
- Petroleum
- Wind
- Wood and Waste
- Geothermal
- Other Gases
- Solar Thermal and Photovoltaic
- Nuclear

Fuel Source	Generation (MWh)	Percentage
Total	4,047,765,259	100%
Coal	1,514,042,945	37.36%
Natural Gas	1,225,894,175	30.25%
Nuclear	769,331,249	18.98%
Conventional Hydroelectric	276,240,223	6.82%
Wind	140,821,703	3.47%
Wood and Wood Derived Fuels	37,799,129	0.93%
Petroleum	23,189,541	0.57%
Other Biomass ^B	19,823,037	0.49%
Geothermal	15,562,426	0.38%
Other Fuels ^A	13,787,067	0.34%
Other Gases ^C	11,897,585	0.29%
Solar Thermal and Photovoltaic	4,326,675	0.11%

Maine Existing Nameplate Capacity, 2012

Capacity by Fuel Source (%)

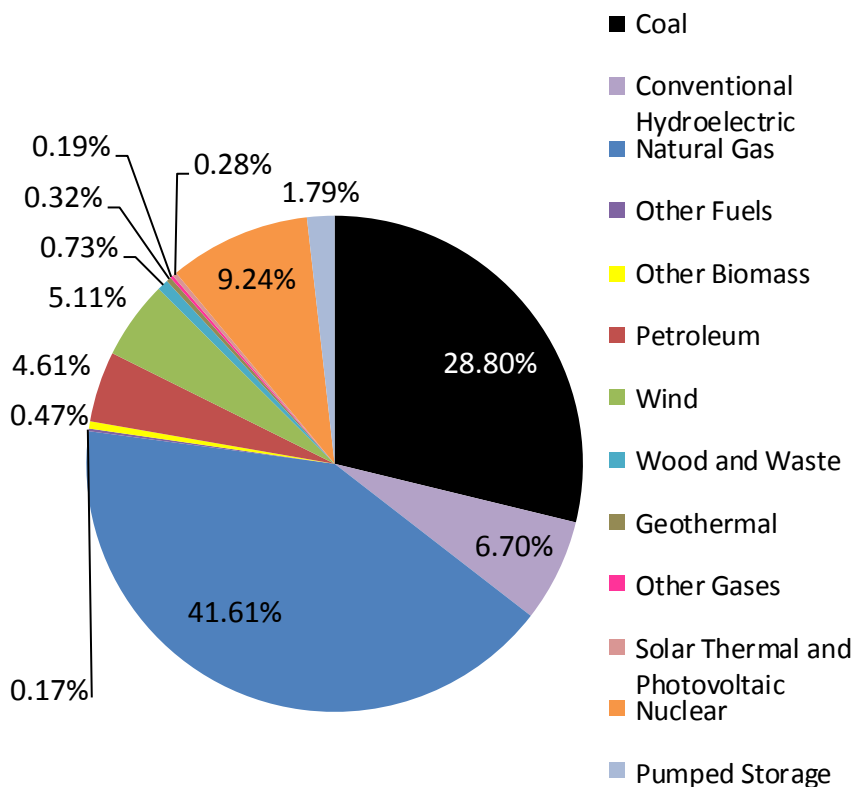


Fuel Source	Capacity (MW)	Percentage
Total	4,800.4	100%
Natural Gas	1,866.8	38.89%
Petroleum	1,037.3	21.61%
Conventional	732.6	15.26%
Wood and Wood Derived Fuels	522.1	10.88%
Wind	430.6	8.97%
Coal	102.6	2.14%
Other Biomass ^B	86.4	1.80%
Other Fuels ^A	22.0	0.46%

^A Other Fuels includes solid waste, batteries, chemicals, hydrogen pitch and misc. technologies
^B Other Biomass includes landfill gas, sludge waste, agricultural byproducts, and other biomass liquids
^C Other gases includes propane gas, blast furnace gas and other waste gases

United States Existing Nameplate Capacity, 2012

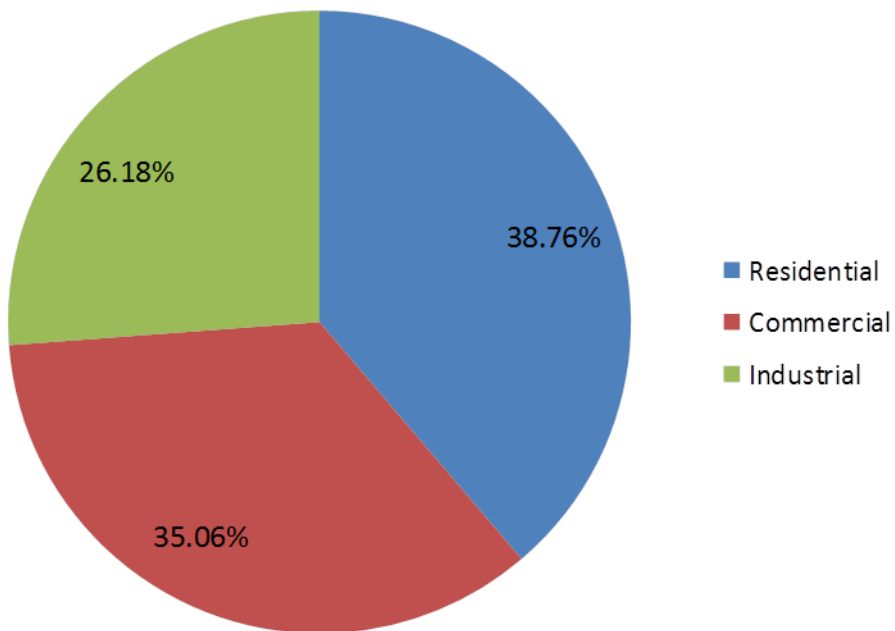
Capacity by Fuel Source (%)



Fuel Source	Capacity (MW)	Percentage
Total	1,167,995.4	100%
Natural Gas	485,956.9	41.61%
Coal	336,340.9	28.80%
Nuclear	107,937.6	9.24%
Hydroelectric	78,241.3	6.70%
Conventional	59,629.4	5.11%
Wind	53,789.0	4.61%
Petroleum	20,857.7	1.79%
Pumped Storage	8,520.1	0.73%
Wood and Wood Derived Fuels	5,526.5	0.47%
Other Biomass ^B	3,724.0	0.32%
Geothermal	3,214.9	0.28%
Solar Thermal and Photovoltaic	2,252.5	0.19%
Other Gases ^C	2,004.6	0.17%
Other Fuels ^A		

Maine Electricity Consumption, 2012

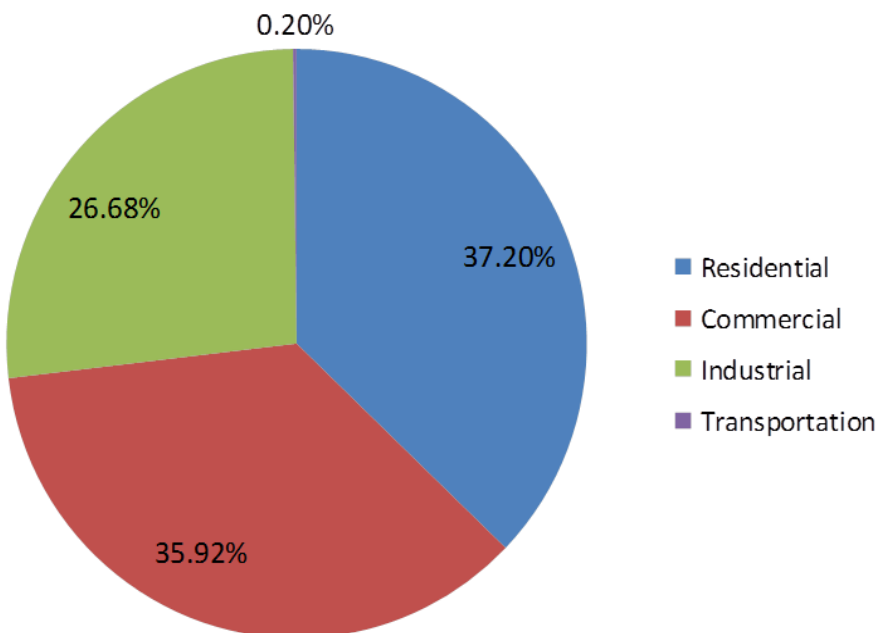
Consumption by Sector (%)



Renewable Source	Consumption (million kilowatt hours)	Percent
Total	11,561	100%
Residential	4,481	38.76%
Commercial	4,053	35.06%
Industrial	3,027	26.18%

United States Electricity Consumption, 2012

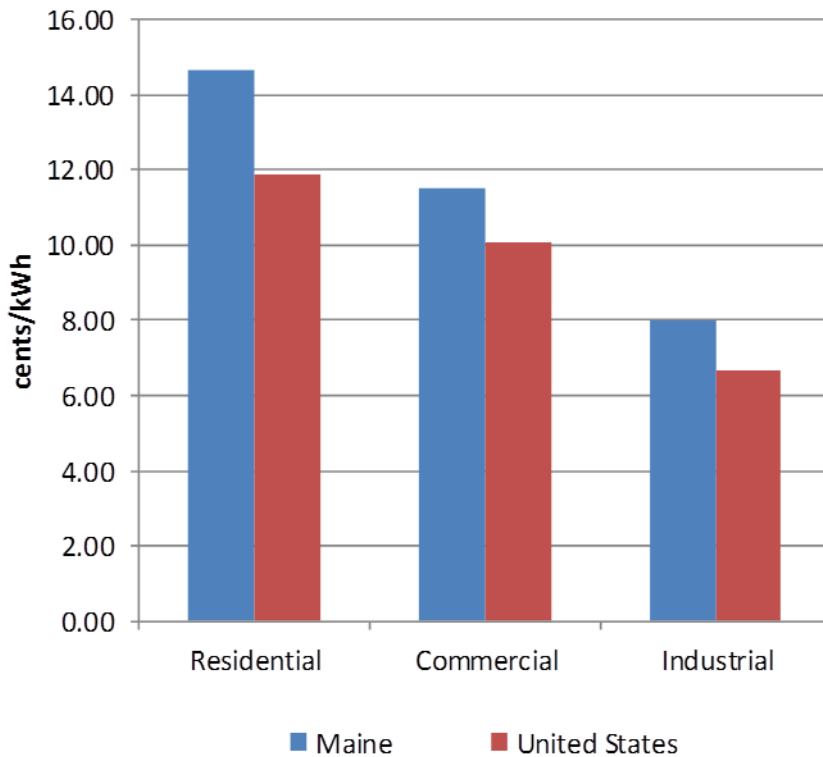
Consumption by Sector (%)



Sector	Consumption (million kilowatt hours)	Percent
Total	3,694,650	100%
Residential	1,374,515	37.20%
Commercial	1,327,101	35.92%
Industrial	985,714	26.68%
Transportation	7,320	0.20%

Average Electricity Rates by Sector, 2012

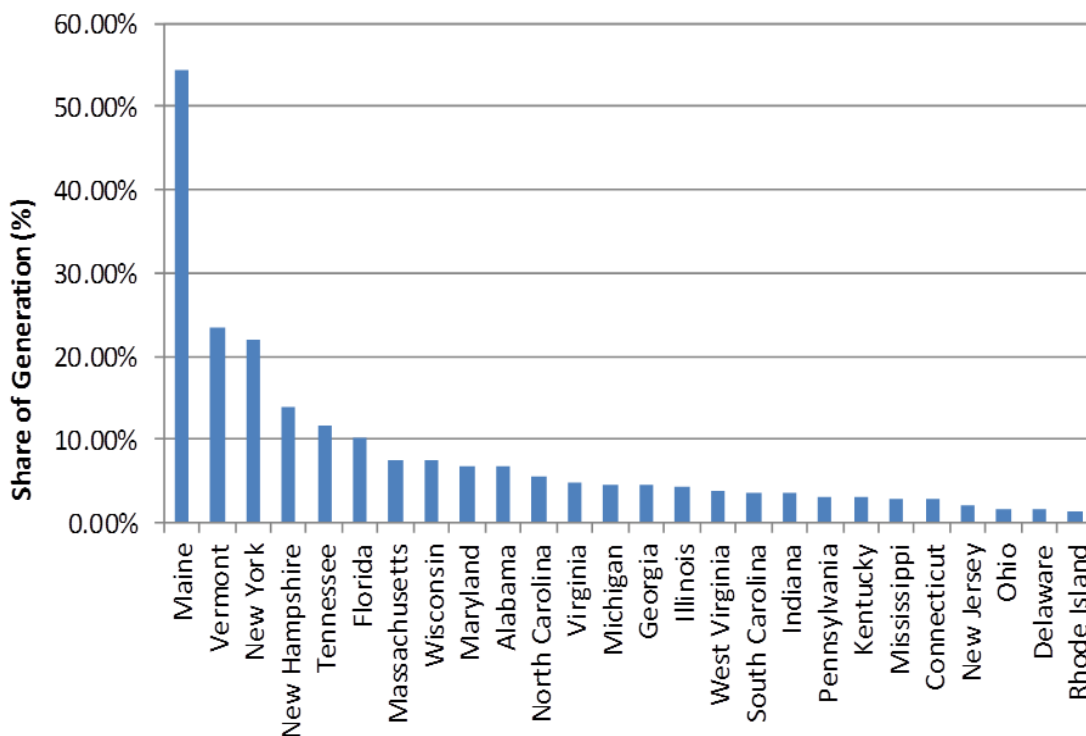
Maine vs. United States



Sector	Maine (c/kWh)	United States (c/kWh)	Difference (%)
Residential	14.66	11.88	23.4%
Commercial	11.53	10.09	14.3%
Industrial	7.98	6.67	19.6%
Total	11.81	9.84	20.0%

Share of Electricity Produced from Renewable Sources, 2012

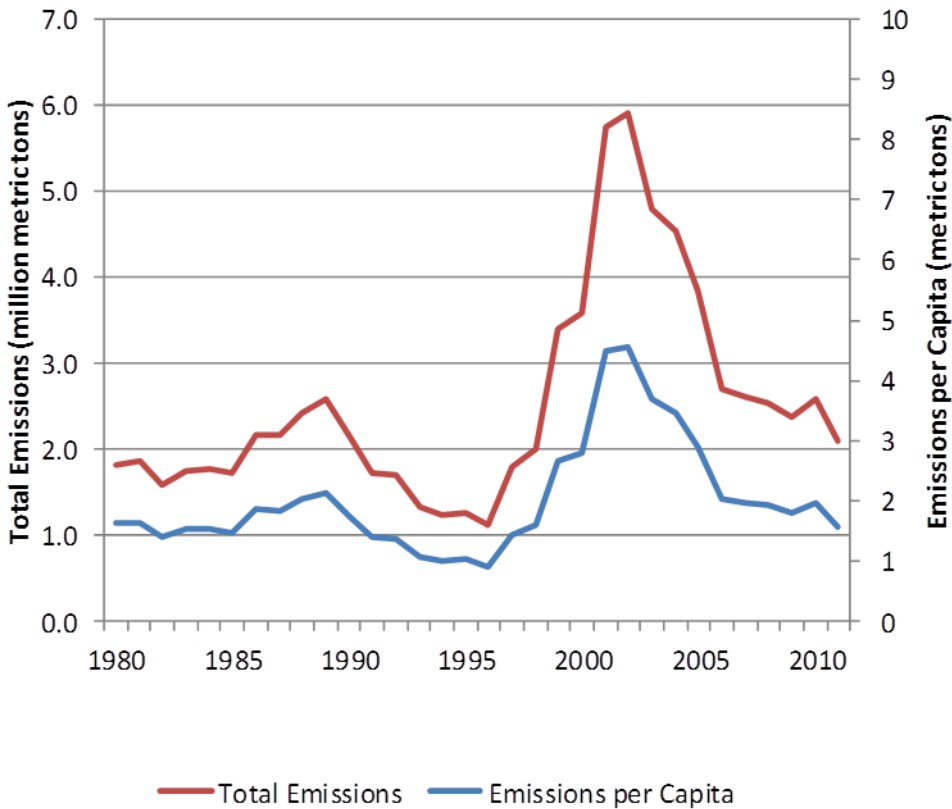
States East of the Mississippi River



2012 New England Comparison

State	% of Generation from Renewable Sources	National Rank
ME	54.28%	5
VT	23.57%	9
NH	13.86%	17
MA	7.61%	26
CT	2.72%	45
RI	1.28%	50

Maine Electric Power Sector CO₂ Emissions (Million Metric Tons), 1980-2011



2011 National Comparison (Electric Power Sector)

State	Total CO ₂ Emis- sions (Million metric tons)	National Rank
Texas	237.77	1
US Average	41.97	-
Maine	2.09	48
Vermont	0.01	50

State	CO ₂ Emissions Per Capita (metric tons)	National Rank
Wyoming	71.28	1
United States	6.82	-
Maine	1.57	46
Vermont	0.01	50

Ten Largest Electricity Producing Plants by Generation Capacity Maine, 2012

Plant	Primary En- ergy Source	Operating Company	Location	Capacity (MW)
William F Wyman	Petroleum	FPL Energy Wyman LLC	Yarmouth, ME	822
Westbrook Energy Center Power Plant	Natural Gas	Westbrook Energy Center	Westbrook, ME	506
Maine Independence Station	Natural Gas	Casco Bay Energy Co LLC	Veazie, ME	490
Verso Paper	Natural Gas	Verso Bucksport LLC	Bucksport, ME	274
Rumford Power Associates	Natural Gas	Rumford Power	Rumford, ME	254
Androscoggin Energy Center	Natural Gas	Verso Paper Androscoggin LLC	Jay, ME	137
Kibby Wind Power Project	Wind	TransCanada Maine Wind Development	Eustis, ME	132
Great Lakes Hydro America - ME	Hydroelectric	Great Lakes Hydro America LLC	Millinocket, ME	132
Harris	Hydroelectric	Brookfield White Pine Hydro LLC	Squaretown, ME	87
Rumford Cogeneration	Coal	NewPage Corporation	Rumford, ME	85 ₃₅

2014 Maine State Energy Profile

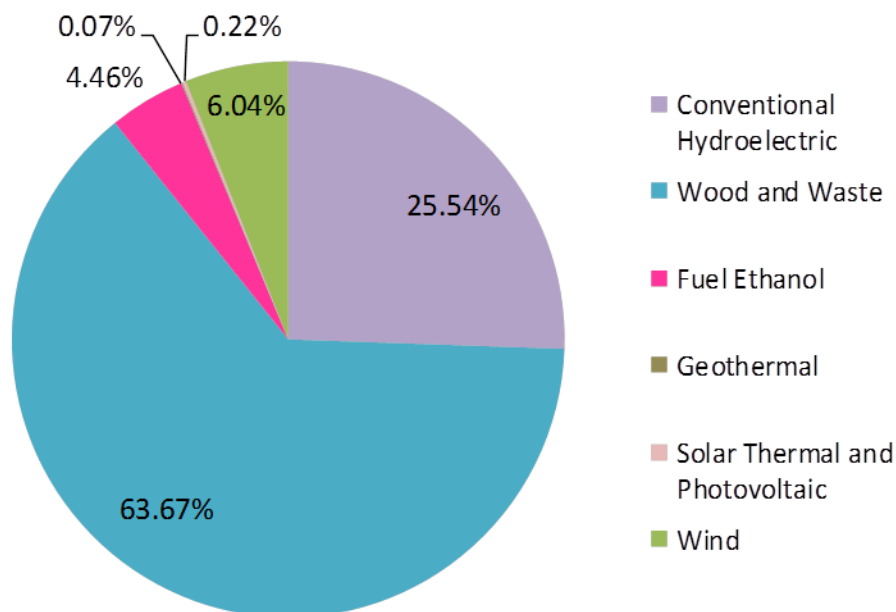
Renewable Energy



Governor's Energy Office

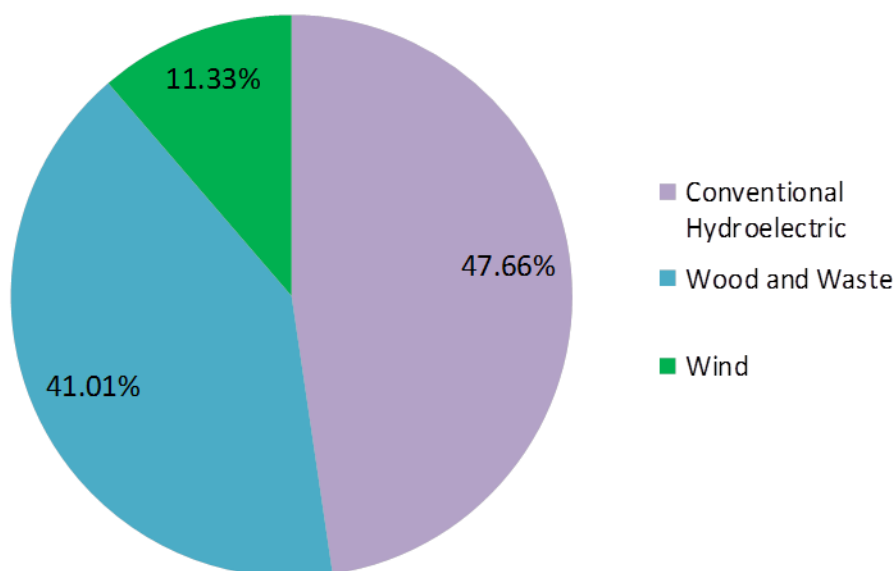
Maine Renewable Energy Production by Source (All Sectors), 2012

Production by Renewable Source (%)



Renewable Source	Production (billion Btu)	Percent
Total	139,100	100%
Wood and Waste Derived Fuels	88,500	63.67%
Hydropower Conventional	35,500	25.54%
Wind	8,400	6.04%
Fuel Ethanol	6,200	4.46%
Geothermal	300	0.22%
Solar Thermal and Photovoltaic	100	0.07%

Maine Electricity Generation by Renewable Source, 2012*

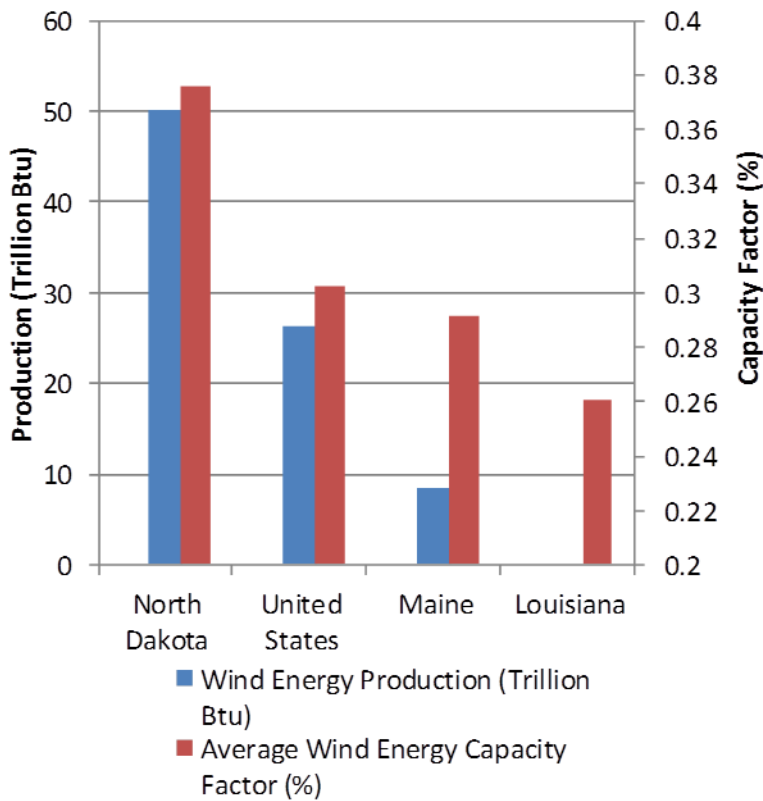


Renewable Source	Generation (mWh)	Percent
Total	7,831,400	100%
Hydropower Conventional	3,732,604	47.66%
Wood and Waste Derived Fuels	3,211,878	41.01%
Wind	886,918	11.33%

*From grid-tied, non-net metering sources

Onshore Wind Energy Production vs. Average Capacity Factor, 2012

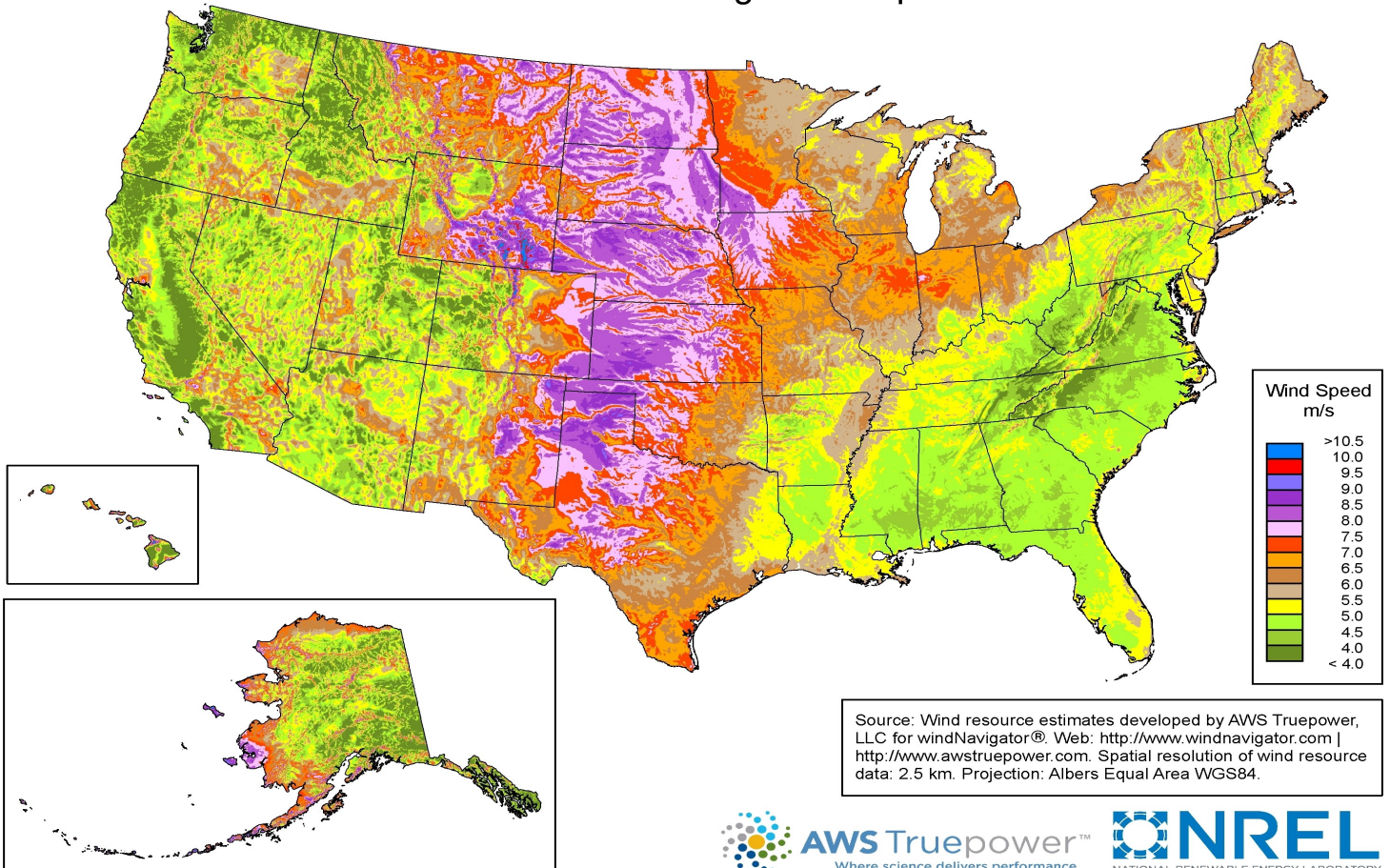
State-by-State Comparison



National Comparison

State	Wind Energy Production (Trillion Btu)	Average Statewide Capacity Factor (%)	Production Rank	Capacity Factor Rank
North Dakota	50.4	37.61%	10	1
United States Average	26.3	30.27%	-	-
Maine	8.4	29.16%	26	24
Louisiana	0.0	26.04%	50	50

United States - Annual Average Wind Speed at 80 m

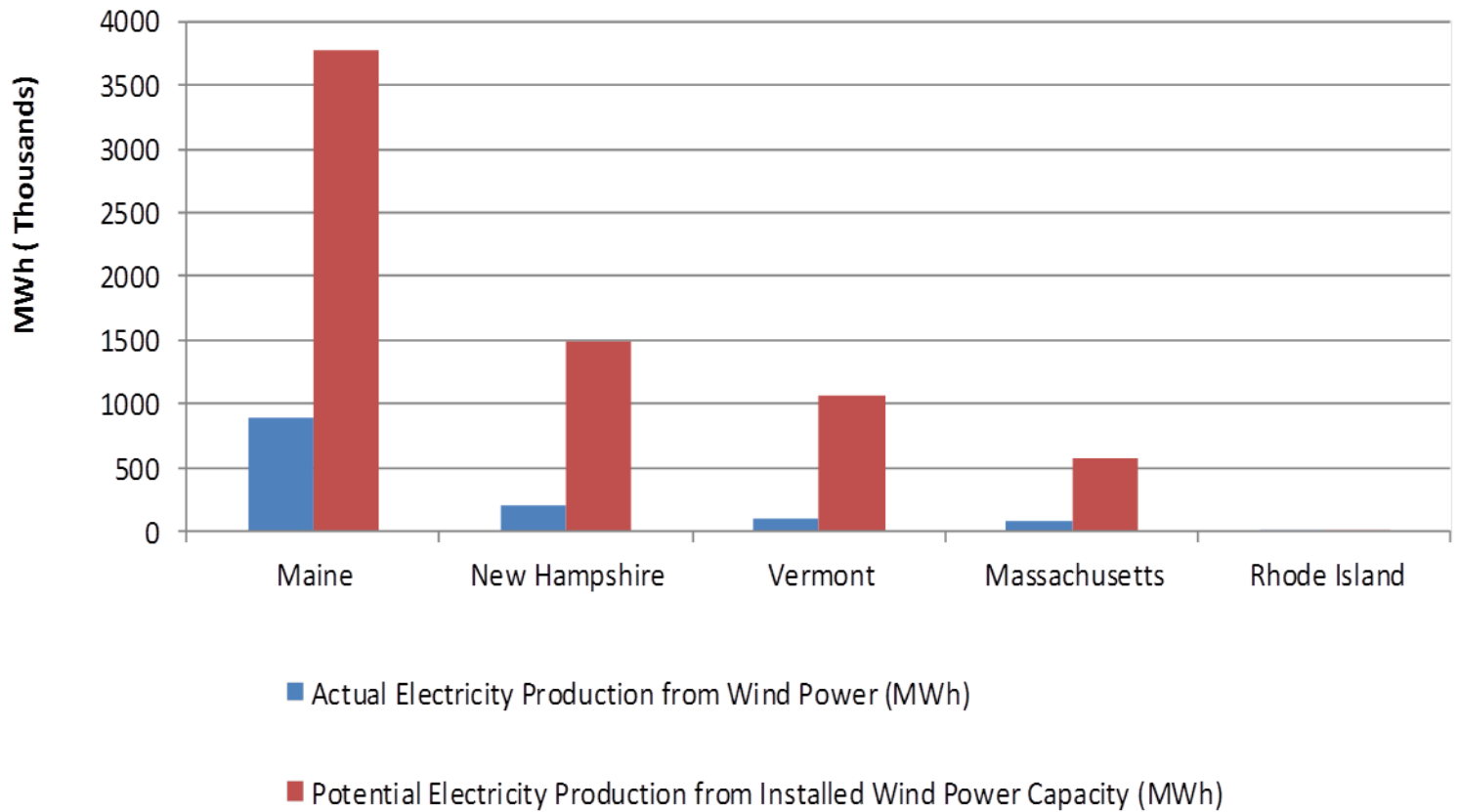


AWS Truepower™
Where science delivers performance.



NREL
NATIONAL RENEWABLE ENERGY LABORATORY
01-APR-2011 2.1.1

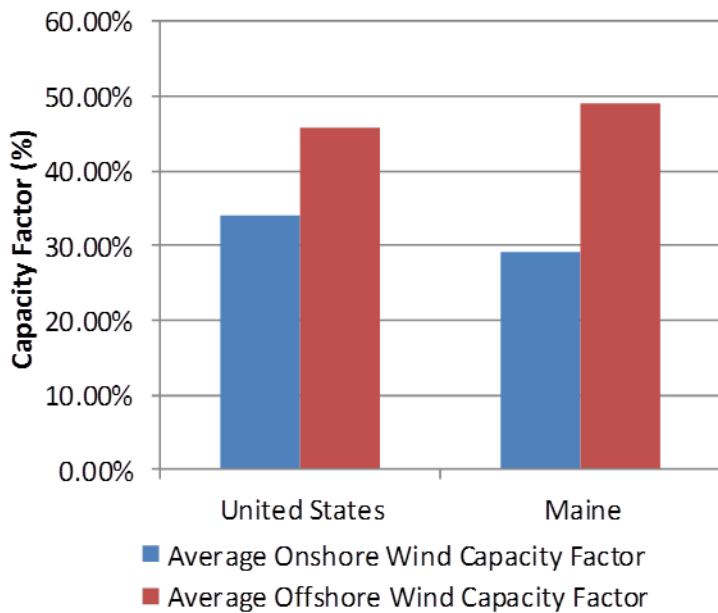
Onshore Wind Energy Production vs. Production Potential, 2012



State	Electricity Generation from Wind Power (MWh)	Potential Electricity Generation from Installed Wind Power Capacity (MWh)	Average Statewide Capacity Factor (%) (NREL)	Installed Nameplate Capacity	Installed Nameplate Capacity National Rank
Maine	886,918	3,772,056	29.16%	430.6	26
New Hampshire	208,699	1,497,960	30.51%	171.0	30
Vermont	106,897	1,059,960	30.18%	121.0	32
Massachusetts	89,673	574,656	31.40%	65.6	34
Rhode Island	1,380	13,140	31.81%	1.5	39
Connecticut	0	0	26.67%	0	T-50

Offshore Wind Capacity Factor vs. Onshore Wind Capacity Factor

National Comparison

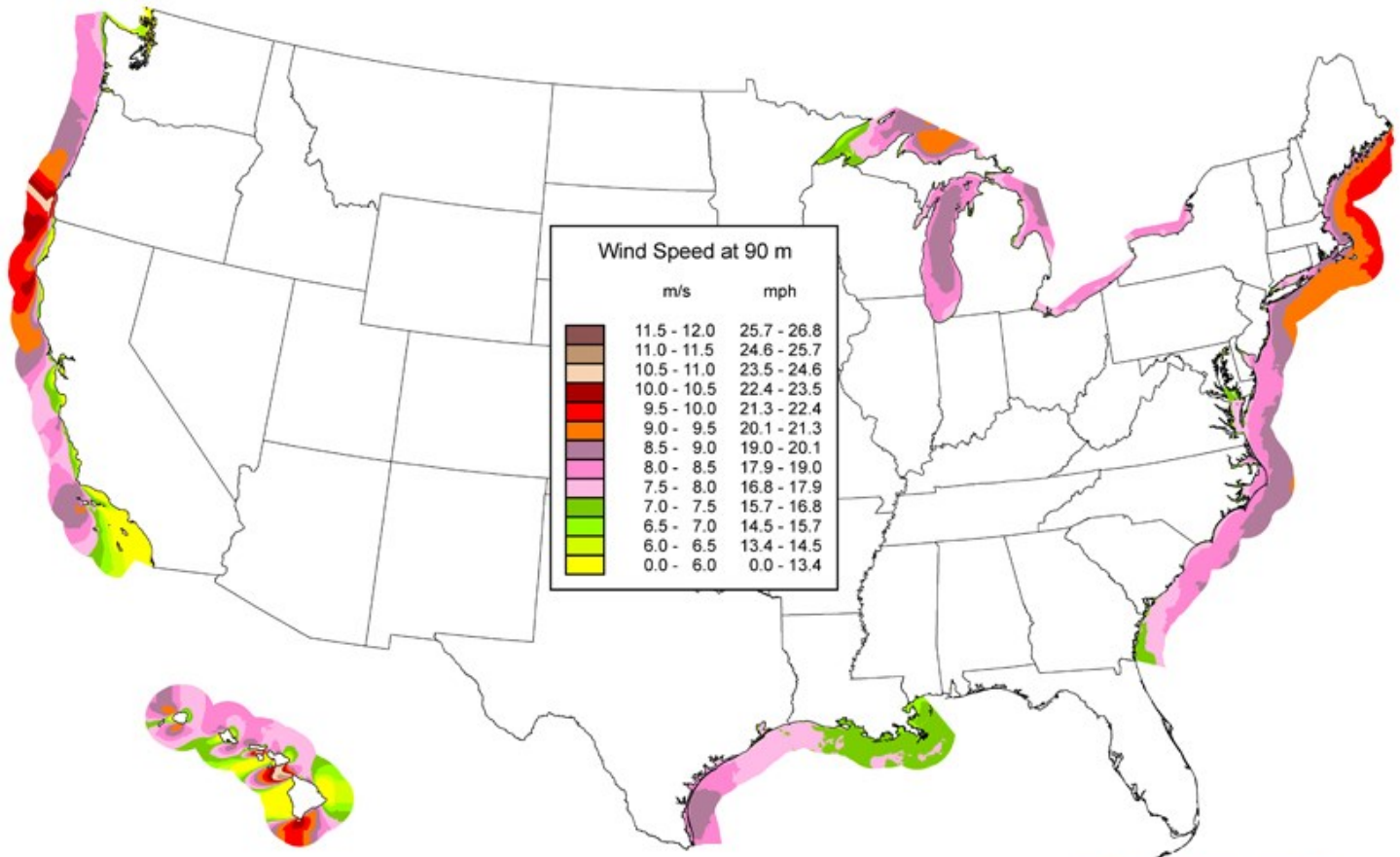


National Comparison

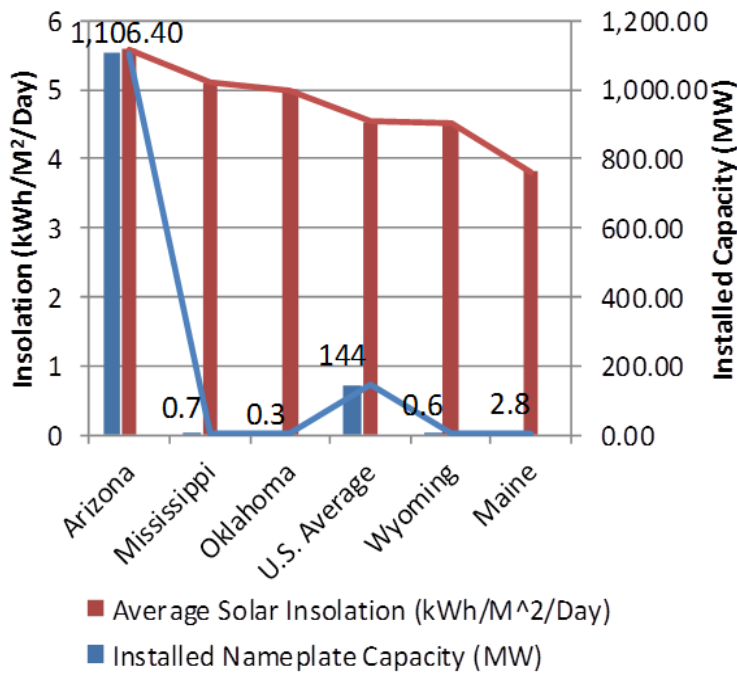
State	Average Offshore Capacity Factor (%)	Average Onshore Capacity Factor (%)	Offshore Capacity Factor Rank	Onshore Capacity Factor Rank
Massachusetts	49.57%	31.40%	1	16
Maine	48.94%	30.27%	2	24
U.S. Average	45.67%	34.16%	-	-
Louisiana	40.24%	26.04%	28*	50

*Out of 28 states with off-shore wind potential

Offshore Wind Power Potential, United States



Average Solar Insolation (kwh/m²/day) vs. Installed Solar Capacity (MW) State-by-State Comparison

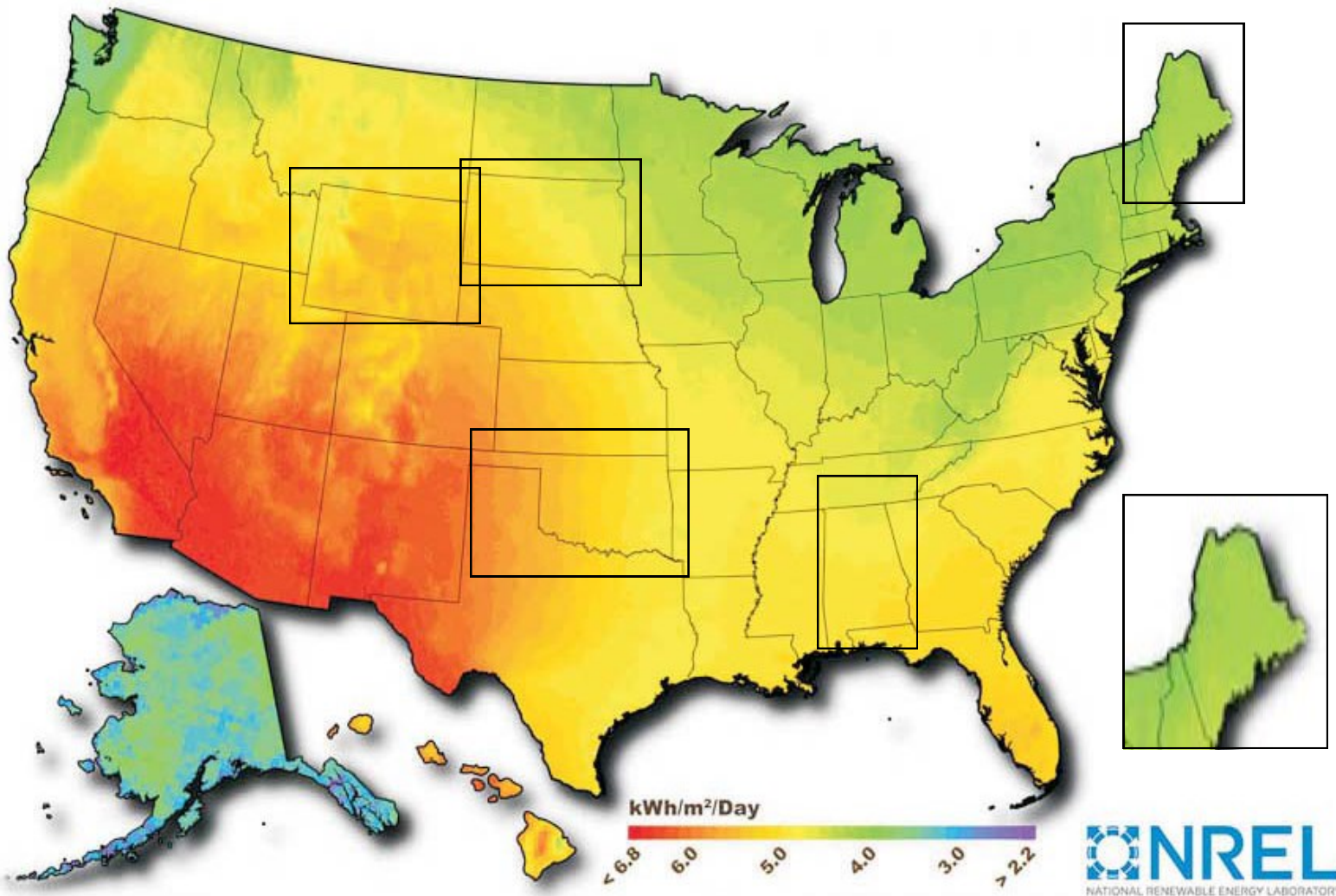


2012 National Comparison

State	Average Statewide Solar Insolation (kWh/M ² /Day)	Installed PV Nameplate Capacity (MW)	Insolation National Rank*	Installed Capacity Nation Rank
Arizona	5.59	1,106.4	1	2
Mississippi	5.11	0.7	9	44
Oklahoma	5.00	0.3	11	47
U.S. Average	4.54	144.0	-	-
Wyoming	4.51	0.6	20	45
Maine	3.82	2.8	48	36

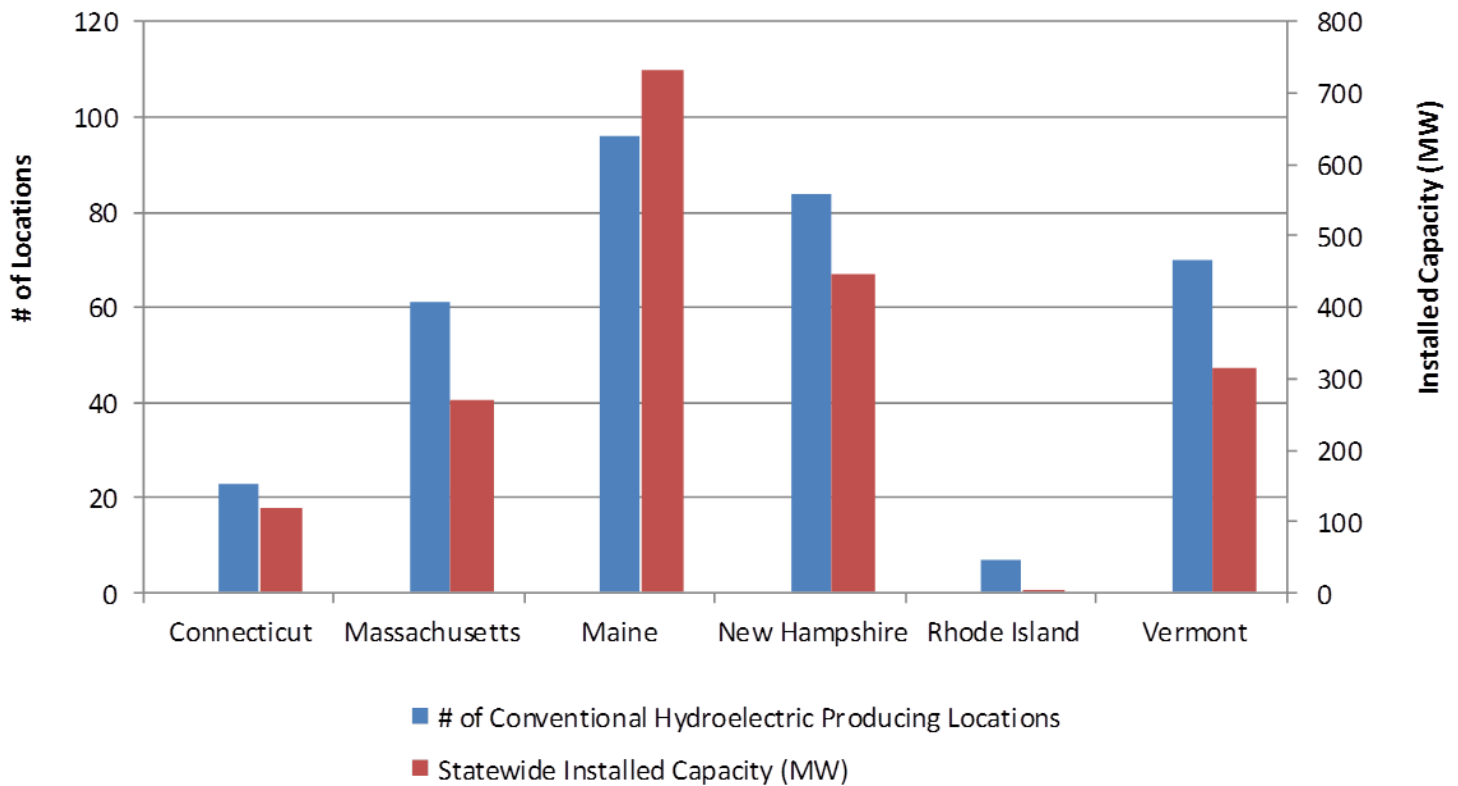
*data only collected for 48 continental states

Solar Insolation, United States (kwh/m²/day)



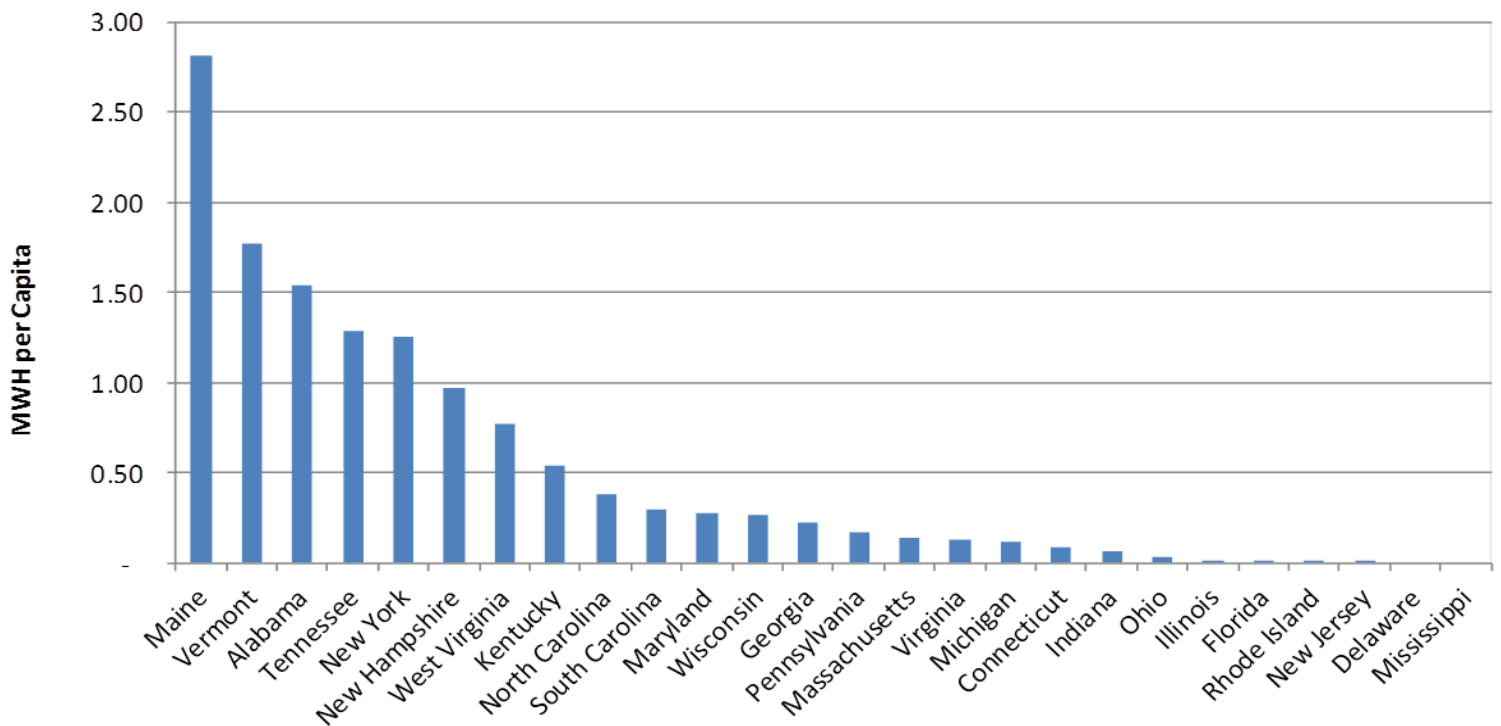
Conventional Hydropower, 2012

New England Regional Comparison



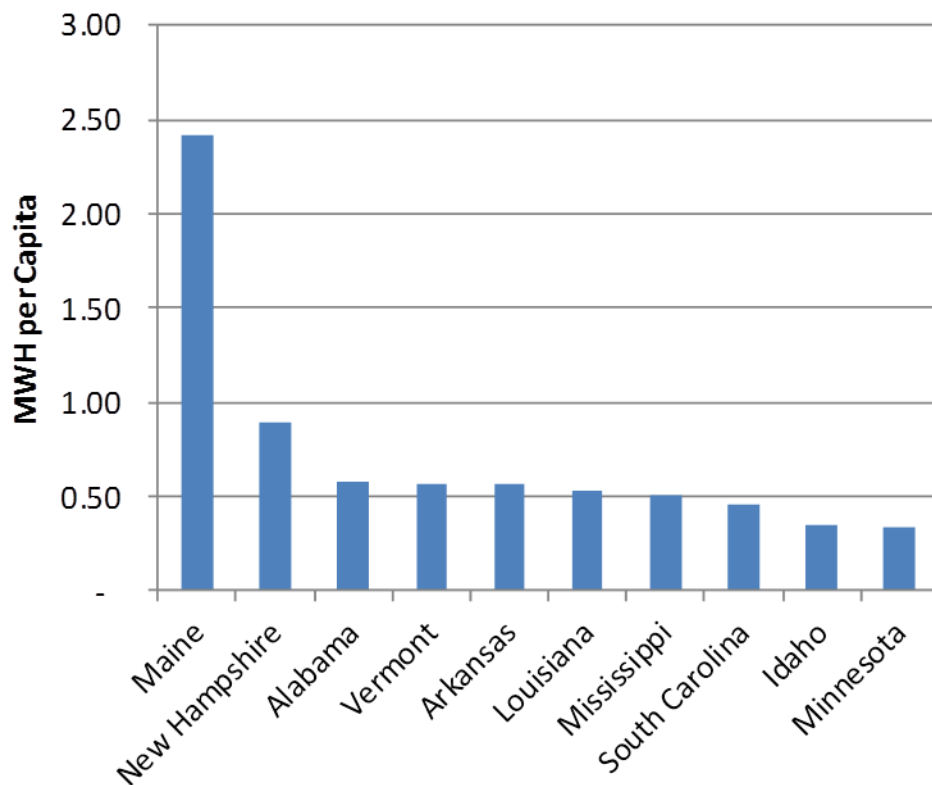
Electricity per Generation per Capita from Conventional Hydroelectric, 2012

Comparison of All States East of the Mississippi River



Biomass Electricity Generation per Capita, 2012

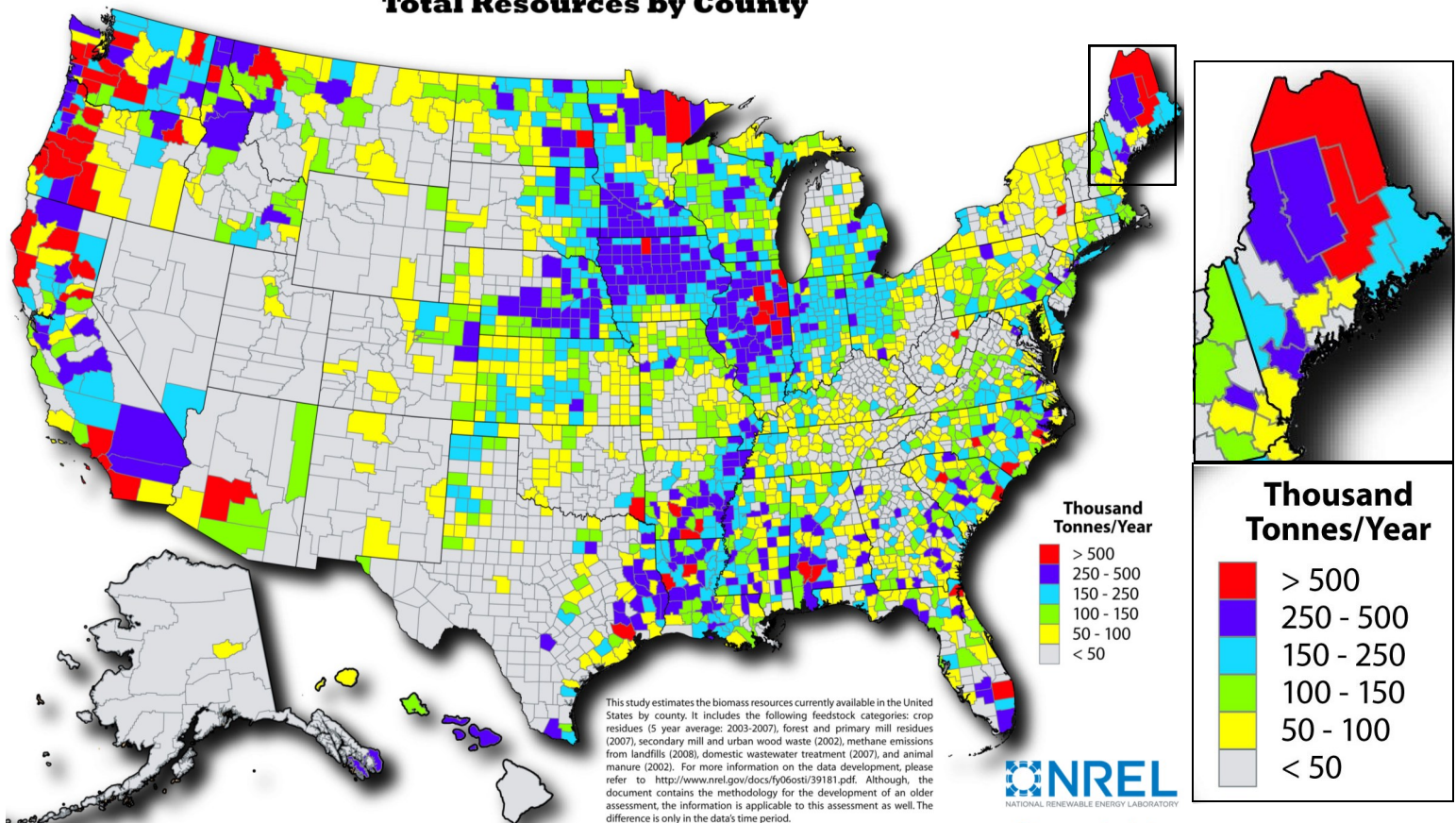
Top 10 Biomass Generating States in the Nation



2012 New England Comparison

State	Biomass Electricity Generation per Capita (MWh)	National Rank
ME	2.42	1
NH	0.89	2
VT	0.56	4
MA	0.26	16
CT	0.19	21
RI	0.10	28

Biomass Resources of the United States Total Resources by County



2014 Maine State Energy Profile

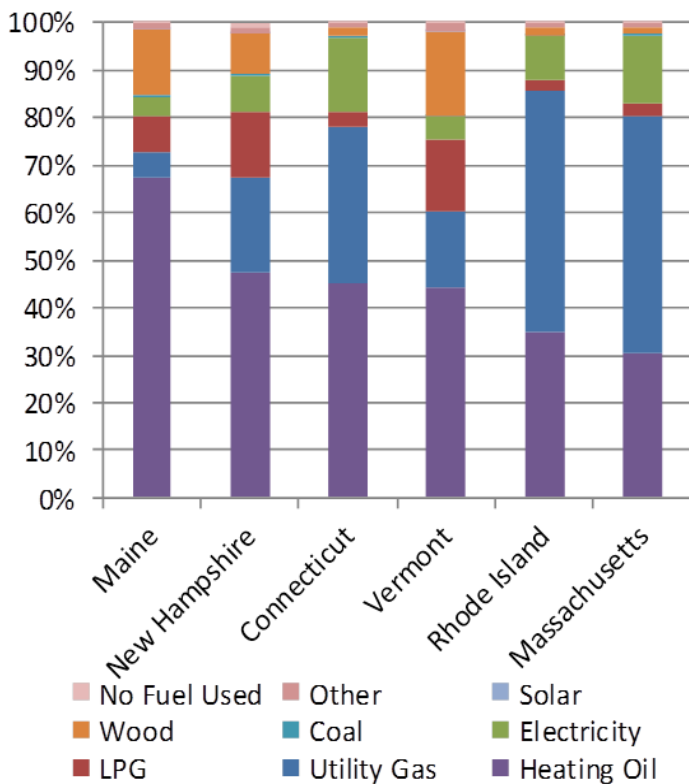
Delivered Fuels



Governor's Energy Office

Home Heating by Fuel Source, 2012

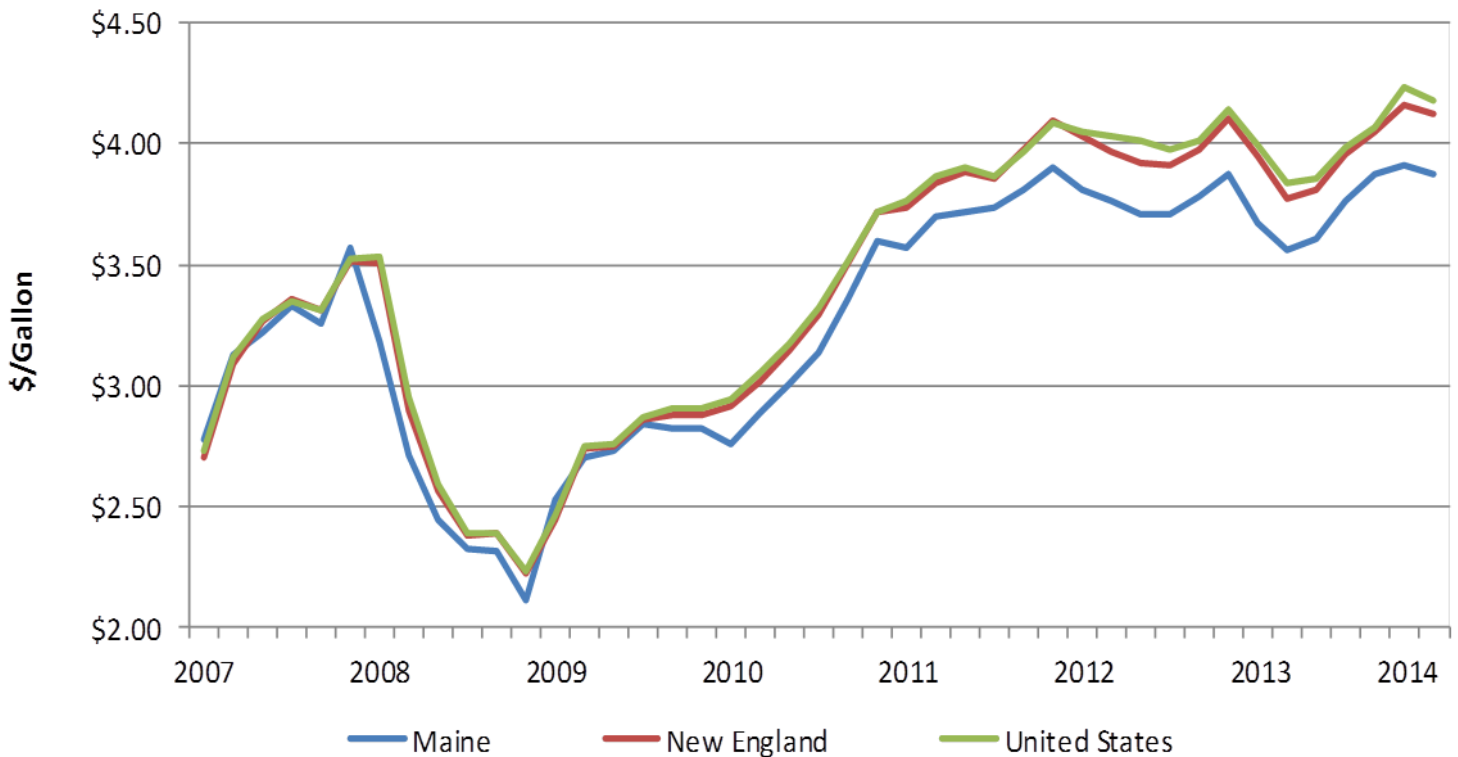
New England Regional Comparison



State	ME	NH	CT	VT	RI	MA
Heating Oil	67.5%	47.3%	45.3%	44.4%	34.9%	30.6%
LPG	7.5%	13.9%	3.2%	14.9%	2.5%	2.7%
Electricity	4.2%	7.6%	15.7%	4.8%	9.3%	14.5%
Utility Gas	5.2%	20.2%	32.6%	16.1%	50.4%	49.5%
Coal	0.4%	0.1%	0.1%	0.3%	0.1%	0.1%
Wood	13.7%	8.5%	2.0%	17.8%	1.8%	1.7%
Solar	0.1%	0.1%	0.0%	0.1%	0.0%	0.0%
Other	1.3%	1.5%	0.7%	1.5%	0.5%	0.6%
No Fuel Used	0.2%	0.9%	0.3%	0.2%	0.3%	0.2%

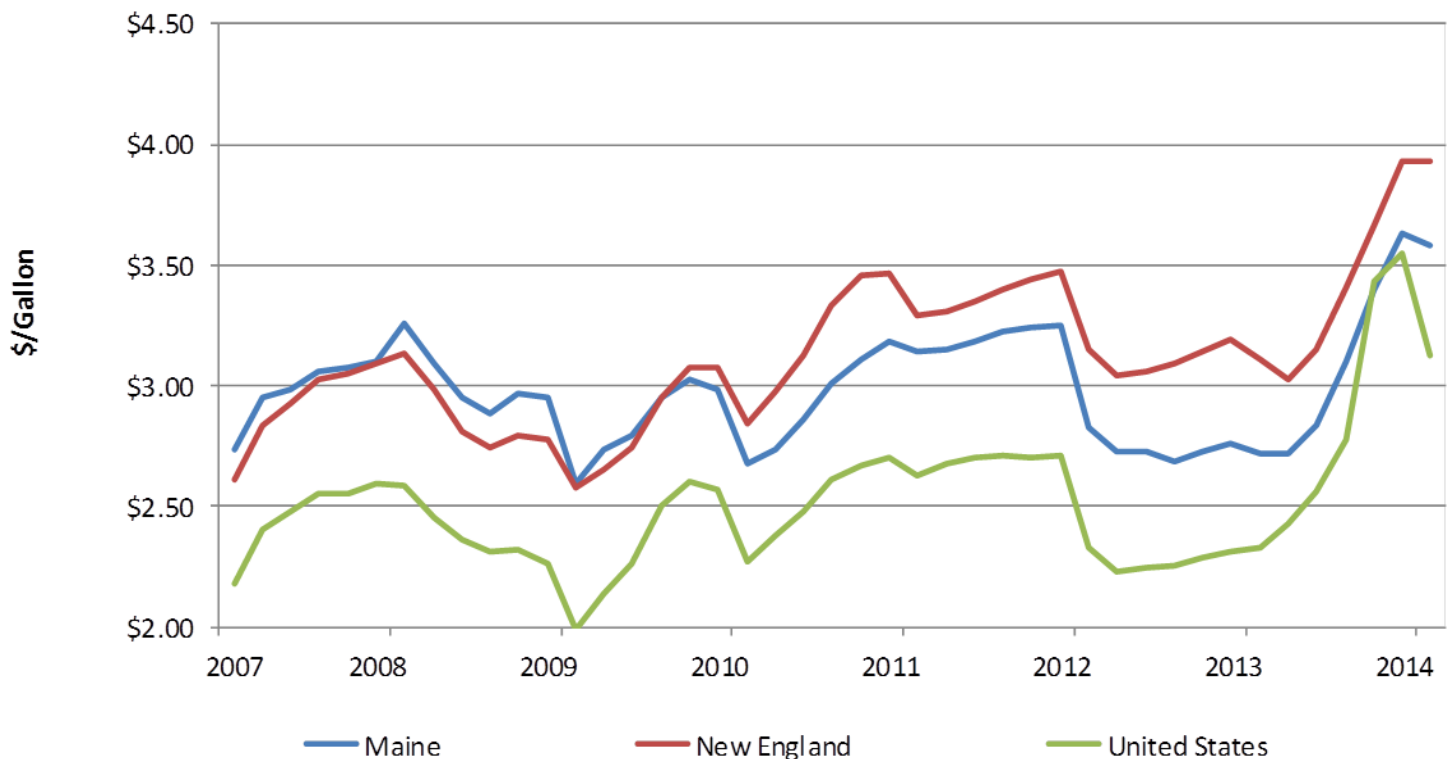
Heating Oil Price per Gallon, 2007-2014

Regional and National Comparison



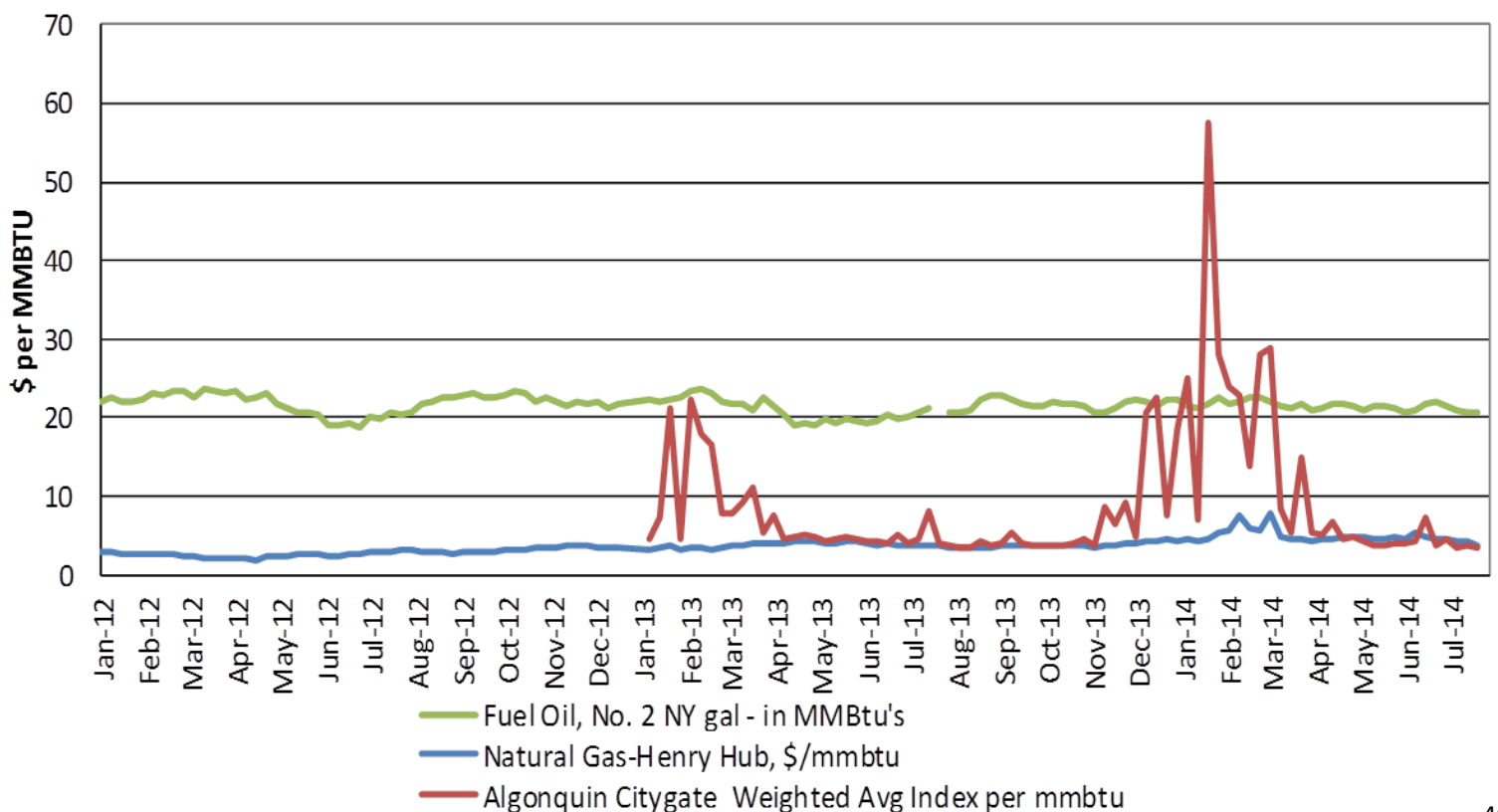
Propane Price per Gallon, 2007-2014

Regional and National Comparison



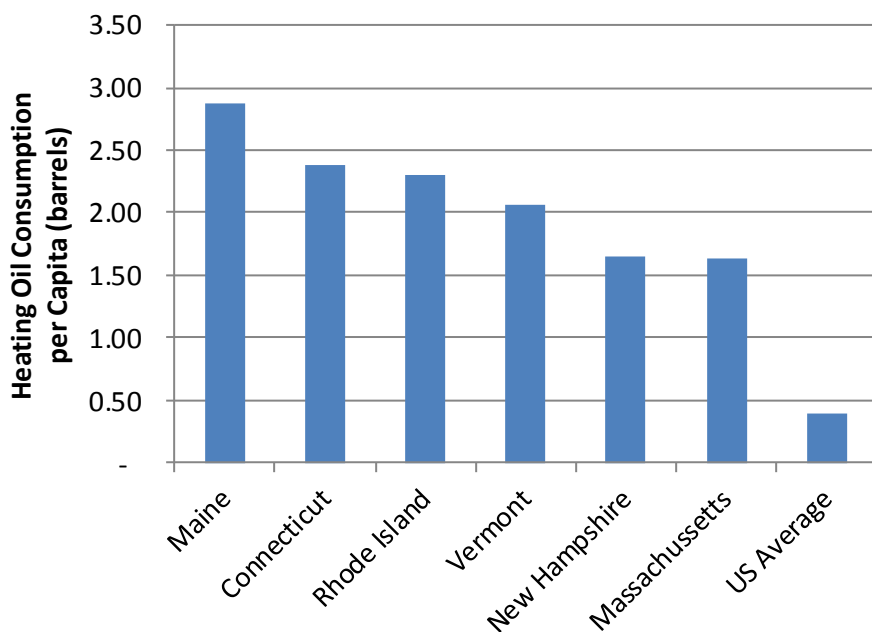
Natural Gas Average Price per MMBTU, 2012-2014

Algonquin Citygate vs. Henry Hub Spot Price



Heating Oil Consumption Per Capita (Barrels)

Regional and National Comparison



2012 New England Comparison

State	Heating Oil Consumption per Capita (barrels)	National Rank
Maine	2.87	1
Connecticut	2.39	2
Rhode Island	2.29	3
Vermont	2.07	4
New Hampshire	1.65	6
Massachusetts	1.63	7

Share of homes by primary space-heating fuel and Census Region

