The 2012 State Energy Efficiency Scorecard

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Executive Summary

Conversations about energy use in the United States often revolve around the need to expand the supply of energy to support the growth of our national economy. There is, however, a resource that is cheaper and quicker to deploy, and cleaner, than building new supply—energy efficiency. Energy efficiency improvements help businesses, governments, and consumers meet their needs by using *less* energy, saving them money, driving investment across all sectors of the economy, creating much-needed jobs, and reducing environmental impacts.

Governors, legislators, regulators, and citizens are increasingly recognizing that energy efficiency is a critical state resource. In fact, a great deal of the innovation in policies and programs that promote energy efficiency originates in states across the country. The *2012 State Energy Efficiency Scorecard* captures this activity through a comprehensive analysis of state efforts to advance energy efficiency.

In this sixth edition of ACEEE's *State Energy Efficiency Scorecard*, we rank states on their policy and program efforts, document best practices, and provide recommendations for ways in which states can improve their energy efficiency performance. The State Scorecard serves as a benchmark for state efforts on energy efficiency policies and programs each year, encouraging them to continue strengthening efficiency commitments as a pragmatic and effective strategy for securing environmental benefits and promoting economic growth.

KEY FINDINGS

- **Massachusetts** retained the top spot in the *State Energy Efficiency Scorecard* rankings for the second year in a row, having overtaken California last year, based on its continued commitment to energy efficiency under its Green Communities Act of 2008. Among other things, the Act spurred greater investments in energy efficiency programs by requiring utilities to save a large and growing percentage of energy every year through efficiency measures.

- Joining Massachusetts in the top five are **California**, **New York**, **Oregon,** and **Vermont**, which together comprise a group of truly leading states that have made broad, long-term commitments to developing energy efficiency as a state resource.

- Rounding out the top ten states are **Connecticut**, **Washington**, **Rhode Island, Maryland,** and **Minnesota**. Connecticut appears poised to break back into a top five spot, which it has held in the past.

- This year's most improved states are **Oklahoma**, **Montana,** and **South Carolina**. All three states significantly increased their budgets for electric efficiency programs in 2011 over previous years, and saved more energy from such programs in 2010 than in 2009. Oklahoma put in place natural gas efficiency programs for the first time in 2011, and Montana dramatically increased its budgets for these programs. These funding increases will likely yield further savings in coming years.

- Other states making significant progress include **Arizona**, **Michigan**, **North Carolina,** and **Pennsylvania**, whose implementation of Energy Efficiency Resource Standards led to large increases in efficiency program spending from 2010 to 2011.

- Annual savings from customer-funded energy efficiency programs topped 18 million MWh in 2010, a 40% increase over a year earlier. This is roughly equivalent to the amount of electricity the state of Wyoming uses each year.

- Utility budgets for electric and natural gas efficiency programs rose to almost $7 billion in 2011, a 27% increase over a year earlier. Of this, $5.9 billion went to electric efficiency programs, with the remaining $1.1 billion for natural gas programs. These represent 29% and 18% increases, respectively, over 2010 budgets.

- Twenty-four states have adopted and adequately funded an Energy Efficiency Resource Standard, which sets long-term energy savings targets and drives investments in utility-sector energy efficiency programs. The states with the most aggressive savings targets include **Arizona**, **Hawaii**, **Maryland**, **Massachusetts**, **Minnesota**, **New York**, **Rhode Island,** and **Vermont**.

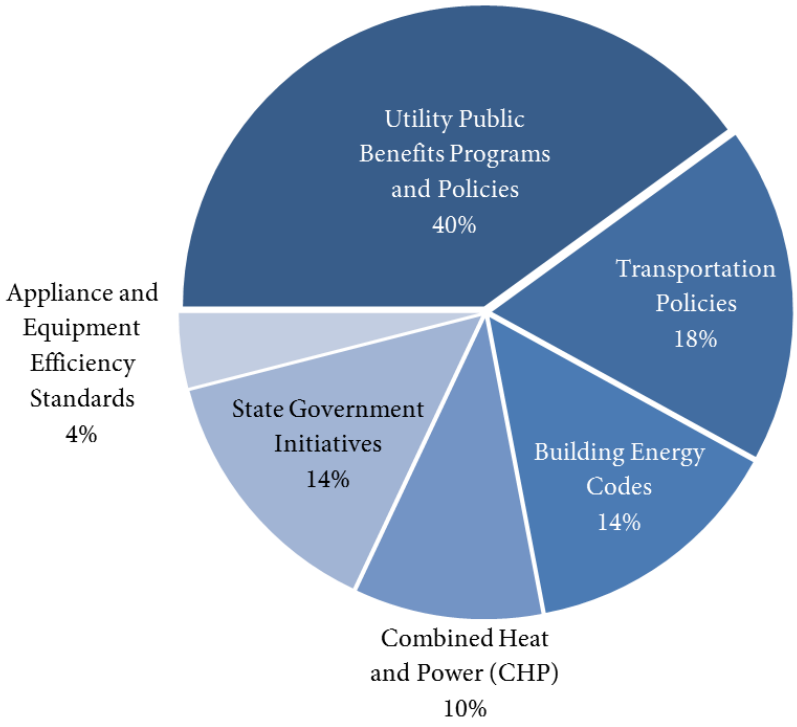
Ten states have adopted energy efficiency codes for new building construction that exceed the IECC 2009 or ASHRAE 90.1-2007 codes for residential and commercial building construction. Two additional states, **Maryland** and **Illinois**, have advanced even further by adopting the most recent and most stringent code for residential construction, the 2012 IECC.

METHODOLOGY

The *2012 State Energy Efficiency Scorecard* provides a broad assessment of policy and programs that improve energy efficiency in our homes, businesses, industry, and transportation. This report examines six of the primary policy areas in which states typically pursue energy efficiency: utility and "public benefits" programs and policies; transportation policies; building energy codes; combined heat and power policies; state government-led initiatives around energy efficiency; and appliance and equipment standards. Figure ES-1 provides a percentage breakdown of the points assigned to each policy area.

The baseline year against which we assessed policy and program changes varies by policy category. Most scores are based on policies in place as of September 2012. In Chapter 2 on utility and public benefits programs, however, we scored states based on data from 2011 and 2010, the latest years in which data were available for our metrics.

Figure ES-1: Percent of Total Points by Policy Area



This year we updated the scoring methodology in four policy areas to better reflect potential energy savings, limitations in the data, economic realities, and changing policy landscapes. Regarding utility and public benefits programs and policies (Chapter 2), as in the past, we asked state public utility commissions for net electric savings, but in some cases states only report gross electric savings. To aid in comparison, we have adjusted reported gross savings by a standard factor (a "net-to-gross ratio"). In Chapter 3 on transportation, we consider for the first time whether or not states have adopted legislation that encourages transit investment by state or local governments. This new category takes one-half point from previous scoring of complete streets legislation and high-efficiency vehicle tax credits, based on their relative potential for energy savings. The scoring of building energy codes in Chapter 4 is more stringent this year, with states receiving full points for building code stringency only if they have updated, or have made significant progress toward updating, their statewide energy codes to the IECC 2012 and ASHRAE 90.1-2010 codes. In Chapter 5 on combined heat and power, we made changes to the types of policies considered and their relative weighting in the overall category score, and more clearly defined the criteria that states must meet to receive points.

This year we contacted every state utility commission to review spending and savings data for the customer-funded energy efficiency programs presented in Chapter 2. In an effort to more fully represent states' customer-funded energy efficiency programs, this year we also requested program savings and budget data from 43 of the largest municipal utilities and cooperatives. These were added, where appropriate, to the savings and budget data reported in Chapter 2. In addition, state energy officials were given the opportunity to review the material on ACEEE's State Energy Efficiency Policy Database (ACEEE 2012) and to provide updates to the information scored in Chapter 6.

RESULTS

Figure ES-2 shows states' rankings in the *2012 State Energy Efficiency Scorecard*, dividing them into five tiers for ease of comparison. The scores upon which these rankings are based are detailed in Table ES-1 on the next page. States could score a maximum of 50 possible points allocated across the six policy areas considered. Although we provide individual state scores and rankings, the difference between states is both easiest to understand and most instructive in tiers of ten. This is because the group of states that compose each of the five tiers have tended to be fairly consistent over time, although states can and do move into new tiers from year to year. Therefore, differences between individual states are generally less important than differences between the tiers of states. An identical ranking for two or more states indicates a tie (e.g., Arizona and Michigan both rank 12th).

Figure ES-2: 2012 State Scorecard Rankings Map

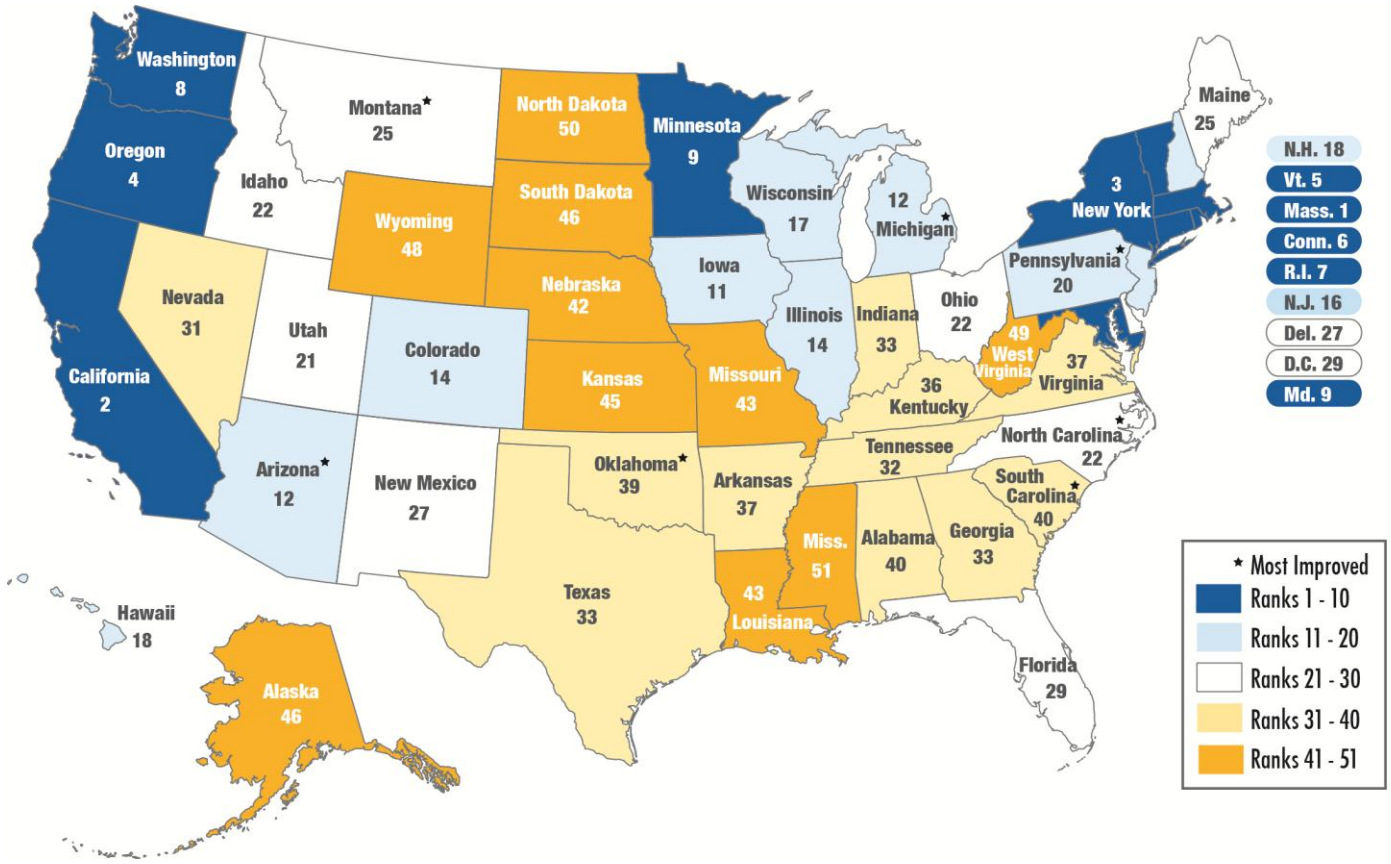


Table ES-1: Summary of State Scores

Rank	State	Utility & Public Benefits Programs & Policies (20 pts.)	Transport-ation Policies (9 pts.)	Building Energy Codes (7 pts.)	Combined Heat & Power (5 pts.)	State Government Initiatives (7 pts.)	Appliance Efficiency Standards (2 pts.)	**TOTAL SCORE (50 pts.)**	Change in rank from 2011
1	Massachusetts	19.5	6.5	6	4.5	7	0	**43.5**	0
2	California	17.5	7.5	6	2	5.5	2	**40.5**	0
3	New York	17.5	7.5	5	2.5	6.5	0	**39**	0
4	Oregon	16	6	6	2.5	6.5	0.5	**37.5**	0
5	Vermont	19	4.5	5	2.5	4.5	0	**35.5**	0
6	Connecticut	15	5.5	4.5	3	5.5	1	**34.5**	2
7	Rhode Island	18.5	5.5	4	2.5	2	0.5	**33**	-2
8	Washington	14.5	6	6	2.5	2.5	0.5	**32**	-3
9	Maryland	12	6	5.5	1	5	0.5	**30**	1
9	Minnesota	19	2.5	3	1	4.5	0	**30**	-1
11	Iowa	15.5	1	4.5	2	3.5	0	**26.5**	0
12	Arizona	13.5	2	3	2	4.5	0.5	**25.5**	5
12	Michigan	13.5	2	3.5	2	4.5	0	**25.5**	5
14	Colorado	11	2	4	2	6	0	**25**	-2
14	Illinois	8	3.5	6	2.5	5	0	**25**	3
16	New Jersey	9	5.5	3.5	3	3.5	0	**24.5**	-1
17	Wisconsin	10.5	1	4	2	5	0	**22.5**	-1
18	Hawaii	12.5	3	4	0.5	2	0	**22**	-6
18	New Hampshire	10	1	4.5	1.5	4.5	0.5	**22**	3
20	Pennsylvania	5	4.5	4	2	6	0	**21.5**	5
21	Utah	11.5	0.5	4.5	0.5	3	0	**20**	-4
22	Idaho	10.5	0	5	0	4	0	**19.5**	4
22	North Carolina	6	1	5	1.5	6	0	**19.5**	5
22	Ohio	8.5	0	3.5	3.5	4	0	**19.5**	2
25	Maine	8.5	4	2.5	2	2	0	**19**	-13
25	Montana	9	1	5	0.5	3.5	0	**19**	10
27	Delaware	3.5	5	4	2	4	0	**18.5**	4
27	New Mexico	9	2	3.5	1	3	0	**18.5**	0
29	District of Columbia	6	3.5	5	0.5	2	0.5	**17.5**	-7
29	Florida	3.5	4.5	5.5	0.5	3.5	0	**17.5**	-2
31	Nevada	9.5	0	4.5	1	1.5	0	**16.5**	-9
32	Tennessee	1.5	3	3	1.5	6	0	**15**	-2
33	Georgia	1.5	2.5	5.5	0.5	3.5	0.5	**14**	3
33	Indiana	7	0	3.5	2	1.5	0	**14**	-1
33	Texas	3	0	3.5	2	5	0.5	**14**	0
36	Kentucky	4	0	4	0.5	5	0	**13.5**	1
37	Arkansas	7	0	3	1	2	0	**13**	1
37	Virginia	1.5	1.5	4.5	1	4.5	0	**13**	-3
39	Oklahoma	5	0.5	2.5	0	3	0	**11**	8
40	Alabama	2.5	0	3.5	0.5	4	0	**10.5**	3
40	South Carolina	2	1	4	0.5	3	0	**10.5**	6
42	Nebraska	2	0	4	0	3.5	0	**9.5**	-2
43	Louisiana	2.5	0.5	3.5	0.5	2	0	**9**	-3
43	Missouri	3.5	0	2.5	0.5	2.5	0	**9**	1
45	Kansas	1.5	1	1.5	1	3.5	0	**8.5**	3
46	Alaska	0	1	0.5	0.5	6	0	**8**	-8
46	South Dakota	4.5	0	1	1	1.5	0	**8**	-4
48	Wyoming	2.5	0	2	0.5	1.5	0	**6.5**	2
49	West Virginia	0	0.5	3	0.5	2	0	**6**	-5
50	North Dakota	0.5	1	1	1	0.5	0	**4**	1
51	Mississippi	0	0	0	0	2.5	0	**2.5**	-2

Massachusetts scored a total of 43.5 points, retaining the top spot in the *State Energy Efficiency Scorecard* rankings for the second year in a row, based in large part on its continued commitment to energy efficiency under its Green Communities Act of 2008. It continues to lead California, which remained in second place.

Joining Massachusetts and California in the top five are New York, Oregon, and Vermont. These five states have long supported energy efficiency as a state energy resource, scoring in the top five of the State Scorecard at least five out of six years (see Table ES-2). The states rounding out the top ten—Connecticut, Rhode Island, Washington, Maryland, and Minnesota—all scored more than 29.5 points, significantly higher than the trailing states.

Table ES-2: Leading States in the State Scorecard, by Years at the Top

State	Year in Top 5	Years in Top 10
California	6	6
Oregon	6	6
Massachusetts	5	6
New York	5	6
Vermont	5	6
Connecticut	3	6
Minnesota	0	6
Washington	0	6
Rhode Island	0	5
Maine	0	2
Maryland	0	2
New Jersey	0	2
Wisconsin	0	1

The difference between states' total scores in the second, third, and fourth tiers of the State Scorecard is small: only five points separate the states in the second tier, 2.5 points in the third tier, and six points in the fourth tier. For the states in these three tiers, small improvements in energy efficiency may have a significant effect on their rankings. Therefore, idling states will easily fall behind as other states in this large group ramp up efficiency efforts.

Changes in states' overall scores are a function both of changes in their efforts to improve energy efficiency (as is expected in the scoring) and adjustments to our scoring methodology. Therefore, differences between this and last year's rankings cannot be explained only by changes in states' energy efficiency programs or policies. As noted above, we updated the scoring methodology in four policy areas to better reflect potential energy savings, limitations in the data, economic realities, and changing policy landscapes. See the relevant chapter in the main body of the report for the specifics of these updates to the methodology.

STATES ON THE MOVE

Twenty-two states rose in the rankings this year, with several states moving up more significantly than others. "Most improved" status was granted to states based on their change in rank compared to the *2011 State Energy Efficiency Scorecard* (reflecting their efforts relative to those of other states) and percentage change in score over last year (reflecting their efforts relative to themselves).

This year's most improved states are Oklahoma, Montana, and South Carolina. All three states had significantly higher budgets for electric efficiency programs in 2011 than in previous years, and saved more energy from such programs in 2010 than in 2009. Oklahoma put in place natural gas efficiency programs for the first time in 2011, and Montana dramatically increased its budgets for these programs. Each of these states also earned more points this year for their state-led efficiency initiatives, while South Carolina and Montana also earned credit for transportation efficiency measures. Oklahoma and South Carolina earned credit for, respectively, adopting and pursuing greater compliance with more efficient statewide building energy codes.

The continued implementation of energy efficiency resource standards by Arizona, Michigan, North Carolina, and Pennsylvania led to large increases in efficiency program spending from 2010 to 2011 by these states. While not most improved, Kansas, Wyoming, and North Dakota all improved their scores significantly on a percentage basis.

STRATEGIES FOR IMPROVING ENERGY EFFICIENCY

No state received a full 50 points in the *2012 State Energy Efficiency Scorecard*, reflecting the fact that there remain a wide range of opportunities in all states—including the leading states—to further improve energy efficiency. We offer the following recommendations to highlight key ways states may improve their energy efficiency:

- **Put in place, and adequately fund, an Energy Efficiency Resource Standard or similar energy savings target.** Many of the leading states have an Energy Efficiency Resource Standard in place, which can have a catalytic effect on increasing energy efficiency and its associated economic and environmental benefits. The long-term goals associated with an EERS send a clear signal to market actors about the importance of energy efficiency in utility program planning, creating a level of certainty to encourage large-scale, productive investment in energy efficiency technology and services. Long-term energy savings targets require leadership, sustainable funding sources, and institutional support to deliver on their goals. See Chapter 2 for further details.

- **Adopt updated building energy codes and enable the involvement of utility program administrators in building energy code compliance.** Buildings consume more than 40% of total energy in the United States, making them an essential target for energy savings. Utilities can also support code compliance financially by purchasing equipment that code officials can use to measure compliance, as well as generally through new construction programs. See Chapter 4 for further details.

- **Adopt stringent tailpipe emissions standards for cars and trucks, and set quantitative targets for reducing vehicle miles traveled.** States that have adopted California's stringent tailpipe emissions standards (a proxy for energy use) will realize energy savings and pollution reductions greater than those resulting from new federal fuel economy standards. Codified targets for reducing vehicle miles traveled are an important step towards states' achieving substantial reductions in energy use and certain pollutants. See Chapter 3 for further details.

- **Treat combined heat and power as an energy efficiency resource equivalent to other forms of energy efficiency in an Energy Efficiency Resource Standard.** See Chapter 5 for further details.

- **Put in place sustainable funding for state government-led energy efficiency incentive programs; enact policies that require benchmarking of state building energy use and that drive the market for energy service contracting; and invest in energy efficiency-related research, development and demonstration centers.** State government-led initiatives complement the existing landscape of utility programs, leveraging resources from the state's public and private sectors to generate energy and cost savings that benefit taxpayers and consumers. See Chapter 6 for further details.

CONCLUSIONS & LOOKING AHEAD

Energy efficiency policies and programs have continued to advance at the state level over the past year. A group of leading states remains committed to pursuing more efficient use of energy in transportation, buildings, and industry; fostering economic development in the energy efficiency services and technology industry; and saving money for consumers to spur growth in all sectors of the economy.

A growing number of states have progressed, some rapidly, over the past few years in the pursuit of their energy efficiency goals. There has been a lot of movement within and outside of the top tier of states, with Connecticut poised to break into the top five again, and with several states potentially able to move into the top tier. This dynamism at the policy and program levels is reflected in growing utility program budgets and savings, as well as in the wide range of other efforts states are taking to improve their energy efficiency.

We see signs that many states will continue to raise the bar on their commitments to energy efficiency in 2013 and beyond. For example:

- A July 2012 draft of Massachusetts' second Three-Year Energy Efficiency Plan (State of Massachusetts 2012), required by the Green Communities Act, proposes annual savings goals of 2.5% of electricity retail sales from 2013-2015, and 1.1% of natural gas retail sales starting in 2013 (and increasing in subsequent years), supported by funding for energy efficiency programs of $2 billion over the three years.

- Oregon's Governor Kitzhaber recently released a draft of his *10-Year Energy Action Plan* (State of Oregon 2012), which calls for energy efficiency and conservation to meet 100% of future growth in the electricity load. He called for improving the energy performance of every occupied state-owned building over the next ten years as a first step towards meeting this goal.

- Connecticut's Governor Malloy has made a commitment to pursue the top spot in the State Scorecard in future years, calling for an increase in spending for utility energy efficiency programs, a strengthening of the bonding authority of the state's clean energy investment authority, and reductions in state building energy use starting in 2013 (State of Connecticut 2012).

- In October 2011, the New York Public Service Commission extended the state's Energy Efficiency Portfolio Standard for an additional 4 years, through 2015, and increased funding for energy efficiency programs operated by the New York State Energy Research and Development Authority and the state's investor-owned utilities by more than $2 billion. The Commission also approved a new Technology & Market Development program providing an additional $410 million in public benefit funding over the next 5 years.

- The State of Vermont released its Final Comprehensive Energy Plan 2011, its first since the late 1990s, which promotes increased use of efficiency as one of its first priorities. The plan recommends: the use of innovative energy efficiency program designs to capture all cost-effective efficiency; changes to building efficiency program design; goals for increasing the stringency of and compliance with building energy codes in new construction (including in public buildings); and a review of state land use provisions and infrastructure needs for electric vehicles. The Climate Cabinet, established through Executive Order No. 05-11, is responsible for implementation of the plan (State of Vermont 2011).

  Oklahoma, one of the most improved states this year, is poised to make further improvements in energy efficiency with the recent enactment of Bill 1096, which calls for a 20% reduction in the energy use of state buildings and educational institutions. Governor Fallin, in her 2012 State of the State address, specifically called for Oklahoma to pursue further strategies for improving the state's energy efficiency (State of Oklahoma 2012).

In addition, numerous states that only recently began implementing utility-sector energy efficiency programs such as Michigan, Ohio, Indiana, Arkansas, and Arizona will likely continue to ramp up efficiency program activity over the next few years to meet those rising goals.[1] As noted in Chapter 2, combined utility investments in electric and natural gas efficiency programs are estimated to more than double from 2010 levels to $10.8 billion by 2025, if current savings targets are met, and more than triple to $16.8 billion if many states give energy efficiency a prominent role as a resource (Goldman et al. 2012).

[1] See (Nowak et al. 2011) for a full discussion of how states are preparing to meet higher energy savings targets.

These projections of an increasing role for energy efficiency will not, however, occur in a vacuum. Both state support for energy efficiency and external factors beyond states' control will likely influence the impact of energy efficiency programs and policies in 2013 and beyond. Continued uncertainty around the economic recovery could dampen consumer demand for energy efficiency upgrades in the residential and commercial sectors, which would impact savings from efficiency programs. More concerning is the impact on budgets for efficiency. Some policymakers have responded to continued strain on state budgets by redirecting funds from utility customers or other sources originally meant for efficiency programs to shore up state finances in other areas,[2] or have not allocated energy efficiency budgets at a level necessary to meet mandated savings goals.[3]

Energy efficiency can save consumers money, drive investment across sectors of the economy, and create jobs. While several states are consistently leading the way on energy efficiency and many more are dramatically increasing their efforts, significant opportunities remain to both sustain current efforts and continue to scale up. Energy efficiency is a resource abundant in every state and reaping its full economic, energy security, and environmental benefits will require continued leadership from a wide range of stakeholders, including legislators, regulators, and the utility industry.

[2] New Jersey Governor Christie redirected $42.5 million from the state's Clean Energy Fund in fiscal year 2011 to cover state energy bills, and will do the same in FY 2013 (which started July 1, 2012), with a reallocation of $210 million (NJ Spotlight 2012; State of New Jersey 2012). At the beginning of this year, New Jersey also withdrew from the Regional Greenhouse Gas Initiative, which had been providing the state with substantial funding for energy efficiency projects (State of New Jersey 2011).

[3] Maine legislators have not sufficiently allocated FY 2013 funds to efficiency programs in the state. This point is discussed more fully in Chapter 2.