ACEEE's 3rd National Scorecard on Utility and Public Benefits Energy Efficiency Programs: A National Review and Update of State-Level Activity

Dan York, Ph.D. and Marty Kushler, Ph.D.

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1001 Connecticut Avenue, NW, Suite 801, Washington, D.C. 20036
202-429-8873 phone, 202-429-2248 fax, http://aceee.org Web site

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EXECUTIVE SUMMARY

Nationwide spending on ratepayer-funded electric energy efficiency programs in 2003 was about $1.35 billion. This includes both utility demand-side management programs and public benefits energy efficiency programs. The level of spending continues a modest rebound since reaching a low point of about $900 million in 1998. This upward trend is likely to continue as states such as California have increased their commitment to supporting energy efficiency programs as part of long-term energy resource plans.

The nationwide average for electric energy efficiency program spending is $4.65 per capita. Eighteen states are above this national average; the highest (Vermont) is $28.26 per capita. The nationwide average for electric energy efficiency program spending as a percentage of total utility revenues is 0.52%. Thirteen states exceed 1% by this measure. The highest (Vermont) is 3.0%. Twenty-three states spend less than 0.1%.

Despite observed growth in overall nationwide spending and associated electric energy efficiency program activity, there are still great disparities among states. The top ten states in terms of spending per capita account for 39% of the total nationwide spending on energy efficiency programs. The top twenty states by this measure account for 90% of nationwide spending.

Cumulative energy savings achieved by electric energy efficiency programs were 1.9% of total national energy (kilowatt-hour) sales in 2003. Seven states have achieved savings greater than 5% of total energy sales. The high was 7.8% (Connecticut). The top ten states by this measure account for about 60% of nationwide savings from electric energy efficiency programs. The top twenty states account for 87% of nationwide savings.

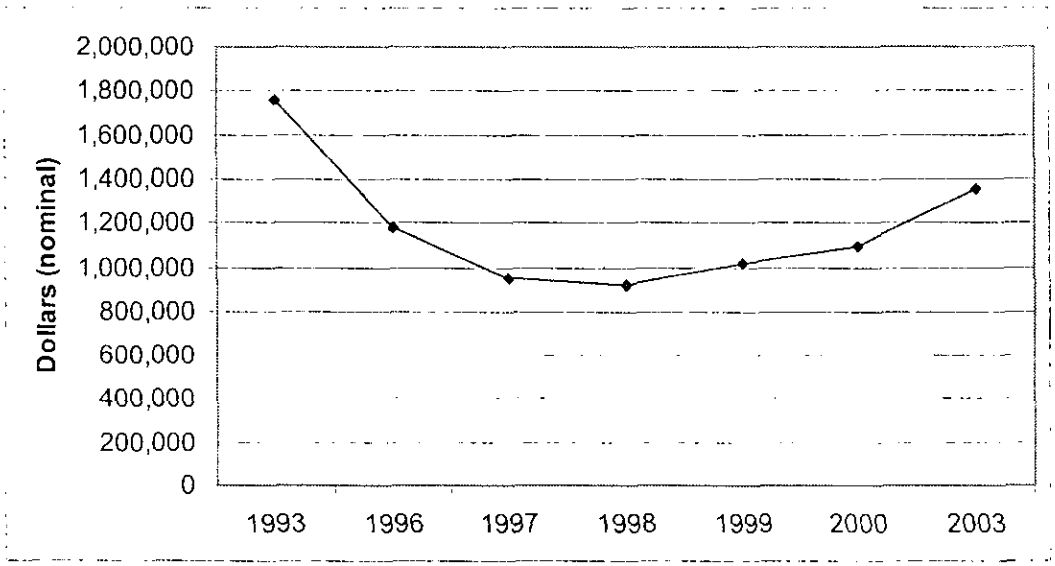
Ratepayer-funded electric energy efficiency programs have entered an era of renewed focus and importance after a decade of relative neglect in the wake of electric industry restructuring. This renewal has been driven by a combination of factors, including reliability crises such as occurred in western states in 2000–2001; dramatic increases in fossil fuel prices; growing concern over electric system capacity; and the emerging recognition of financial risks associated with future environmental costs.

Recent trends suggest that the energy utility industry is once again looking upon energy efficiency as a viable and cost-effective long-term resource for system planning and operation, and a proven mechanism for helping utilities meet customer demand.

BACKGROUND AND OVERALL TRENDS

The electric utility industry in the United States has undergone major changes over the past decade. A wave of restructuring activity swept over the nation beginning in the mid-1990s, with many states choosing to partially deregulate and restructure their electric utility industries to introduce competition at both the retail and wholesale levels. One result of such restructuring was a precipitous decrease in funding for ratepayer-funded electric energy efficiency programs[1]—from almost $1.8 billion in 1993 to about $900 million in 1998 (nominal dollars). Principal reasons for this decline included uncertainty about newly restructured markets and the expected loss of cost recovery mechanisms for energy efficiency and demand-side management (DSM) programs. Generally utilities and many regulators did not see most DSM programs as being compatible with competitive retail markets. The thinking was that pricing and other market mechanisms would guide customer decisions about energy efficiency, not regulatory-driven DSM programs. Earlier Scorecard reports by ACEEE (Nadel, Kubo, and Geller 2000; York and Kushler 2002) tracked state-level spending and related activity for ratepayer-funded electric energy efficiency programs and documented this steep decline. The latter of these reports showed a modest rebound from the low point reached in 1998—an increase to about $1.1 billion in 2000. The data now show that the upward trend in spending continued through 2003, when total spending on ratepayer-funded electric energy efficiency programs reached $1.35 billion—its highest point since 1996. Figure 1 tracks total ratepayer-funded electric energy efficiency spending from 1993 to 2003; it illustrates this decline and continued rebound.

Figure 1. Total Ratepayer-Funded Electric Energy Efficiency Program Spending in 1993 through 2003 (Nominal Dollars)



[1] By "ratepayer-funded energy efficiency" programs, we mean energy efficiency programs funded through charges included in customer rates or otherwise paid via some type of charge on customer bills. This includes both demand-side management programs and "public benefits" programs. We do not include data on separately funded low-income programs, load management programs, or energy efficiency research and development.

Key factors responsible for this "rebound" trend include:

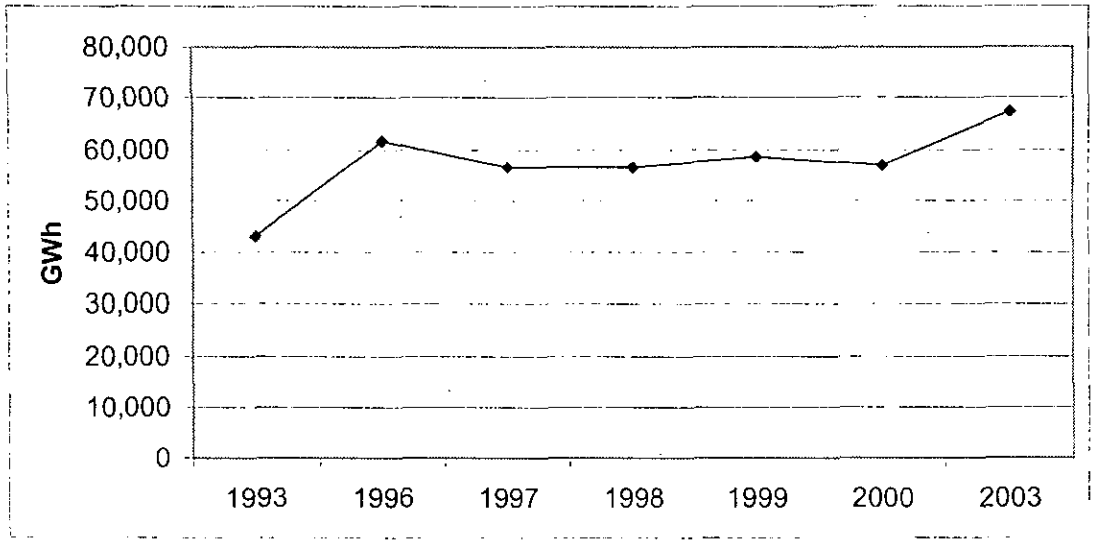
- Many states renewed and reaffirmed their commitments to ratepayer-funded energy efficiency programs—both in states that had restructured their utilities and in states that have not. The 2000–2001 electricity "crisis" that occurred in California and other western states spurred many states to bolster their energy efficiency investments as a means to help address system reliability.
- Some of the largest increases in state-level spending have come from states that have implemented "public benefits programs." In the 2002 Scorecard, many of these programs, such as in Vermont, Oregon, Wisconsin, and New Hampshire, were ramping up after their initial creation. By 2003, most of these programs had reached full funding levels.
- States that have "traditional" utility DSM have continued to support these programs at about the same funding levels as reported in previous Scorecard reports, with notable increases in Iowa, Nevada, Utah, and Washington.

Energy savings show a similar increase over this period. Total cumulative annual energy savings from ratepayer-funded electric energy efficiency programs in 2003 were over 67,000 GWh (i.e., annual savings achieved in 2003 as a result of programs operated in 2003 *and* earlier years; this is *not* life-time savings attributable to the programs). These savings are equivalent to the annual electricity consumption of a medium-sized state such as Maryland, Missouri, Louisiana, or Washington, or the equivalent annual output of about 16 average-sized coal-fired power plants.[2] We caution that savings data are likely less accurate than spending data due to a variety of factors (discussed briefly under "Caveats" in the following section). However, the overall upward trend in savings is consistent with reported spending.

Figure 2 shows total savings from 1993–2003. While the savings data exhibit an overall upward trend, there is not the precipitous drop as shown in Figure 1 with the spending data. The reason is that these are *cumulative* annual savings, not *incremental* (reporting year only) savings. The savings achieved in a given program year will continue for some time into the future even if the program is discontinued. Thus as spending and associated program activity declined from 1993–1998, the savings achieved by programs during—and even prior to 1993—continued to be realized with some degree of overall "decay" as certain energy efficiency measures implemented by programs ceased to provide savings for any number of reasons. This impact, combined with continued achievement of new savings from ongoing programs, effectively "dampens" and even flattens the total savings curve shown in Figure 2 compared to the spending curve shown in Figure 1.

[2] Assumes an average size of 600 MW with an annual generation of about 4,000 GWh.

Figure 2. Cumulative Annual Electric Energy Efficiency Program Savings from 1993 to 2003



METHODOLOGY

Data Sources

As in the earlier Scorecard reports, a primary source of data was the Energy Information Administration (EIA 2005) within the U.S. Department of Energy. EIA collects and publishes data on utility sales, revenues, DSM spending, DSM savings, and other parameters of DSM activity. The EIA data contain both load management and energy efficiency data.[3] In this report (and previous Scorecards), we present only energy efficiency program data.

The EIA data are for utility programs only (whether operated under a DSM or public benefits structure). To present a complete picture of ratepayer-funded electric energy efficiency programs, we supplemented the EIA utility data with data obtained from various state-level ratepayer-funded energy efficiency programs administered by non-utility entities (sometimes referred to as "public benefits" fund energy efficiency). We drew upon research completed for a recent report on state public benefits programs (Kushler, York, and Witte 2004) for much of the non-utility program data. We also drew upon a number of individual state references.[4] In some states with public benefits funding and structure, the utilities still are the primary program administrators and implementers. In such cases, we relied primarily on the EIA data.

[3] Load management programs primarily target peak demand (MW) reductions. Energy efficiency programs target improvements that result in saving energy (kWh) at all times an end-use technology is used.

[4] Data sources: Bergeron 2005; BPA 2005; DeCotis 2005; Efficiency Maine 2003; Efficiency Vermont 2004; EIA 2005; Energy Trust of Oregon 2004; Geller 2004; Kushler, York and Witte 2004; Maddox 2005; Nadel, Kubo and Geller 2000; Naleway 2005; NEEA 2004; NJ BPU 2004; NPPC 2005a; NYSERDA 2002, 2004; Public Utilities Commission of Texas 2003; Rogers, Messenger, and Bender 2005; Steward 2005; U.S. Census Bureau 2005; York and Kushler 2002.

Caveats

A major caveat with the data and resulting reporting and ranking is that the EIA data is self-reported and not independently verified as to accuracy. While EIA provides clear guidance, definitions, and conventions used for reporting, the accuracy of the data ultimately rests with each individual reporting utility. Data consistency and accuracy may vary among reporting utilities.

Complicating the picture is the need to rely on data from other sources not reported by EIA. Since there has been a great increase in the number of non-utility energy efficiency programs, we relied on data reported by individual non-utility organizations involved with administering and/or implementing energy efficiency programs.[5] As with the EIA data, however, we have no means to assess the veracity of the data. However, we do note that many public benefits programs are subject to independent evaluation, which gives us somewhat greater confidence in the accuracy of these data. There remain some problems with consistent reporting formats and conventions.

Another difficulty in determining state-level data is that many utilities serve multiple states, but report company-wide data to EIA. In these cases, we principally allocated data according to pro-rata shares based on a breakdown of electricity sales (MWh) among the states served by a particular utility. In a few selected cases, we had additional information on such multi-state utilities as to how to allocate the data among the various states served.

Scoring and Ranking

In this Scorecard update, we compile and report key data and then rank states according to derived indicators of energy efficiency program activity, namely:

1. energy efficiency expenditures per capita
2. energy efficiency expenditures as a percentage of utility revenues
3. electricity savings as a percentage of electricity sales

As in our earlier Scorecards, our rankings should be considered approximate—difference in ranks of just a few levels (e.g., 6th to 9th) may not be meaningful, while differences in quintiles (e.g., top ten versus next ten) are much more likely to be meaningful. The rankings should be used to indicate relative measures of energy efficiency program activity compared to other states.

An important caveat for the derived indicators we use to rank states is that because the indicators are based on statewide averages, they may mask important differences among individual utilities or other program providers with a given state. For example, the level of

[5] Non-utility program administrators include Efficiency Vermont, the Energy Trust of Oregon, State of Wisconsin—Department of Administration ("Focus on Energy"), New Jersey Board of Public Utilities, Office of Clean Energy ("New Jersey Clean Energy Program"), New York State Energy Research and Development Authority ("New York Energy Smart"), and Efficiency Maine.

energy efficiency program spending by a given utility may be quite high, but the statewide spending average (both per capita and as a percentage of revenues) may be relatively low if other utilities in that state are spending relatively little. This also would be true for savings as a percentage of total electricity sales (which are for all utilities in a state, not just those offering energy efficiency programs).

As with the 2002 Scorecard, we focus in this report primarily on expenditures on energy efficiency programs rather than reported savings. We do this because we believe that data on expenditures are much less prone to variations due to different ways of estimating the values or otherwise interpreting what data to report. Such difficulties are inherent in reporting savings data. While spending data does not necessarily track actual program results, we believe that it is a good indicator of relative support for energy efficiency programs and related program activity. Most programs are subject to regulatory or other independent oversight to help assure that program expenditures indeed result in cost-effective program savings.

RESULTS

Spending per Capita

Nationally, the average electric energy efficiency spending per capita increased from $3.88 to $4.65 from 2000 to 2003, an increase of 20%. The range is zero to $28.26 per capita. A total of 11 states spent more than $10 per capita on ratepayer-funded energy efficiency programs; a total of 18 states spent $5 or more per capita. The top twenty states (in terms of their spending per capita) accounted for 90% of nationwide spending on energy efficiency programs. The top ten states accounted for 39% of total national spending; adding the next five (the top 15) brings this up to 71%. Table 1 presents the top ten states in terms of their spending per capita in 2003.

Table 1. 2003 Electric Energy Efficiency Spending Per Capita: Top Ten

Rank	State	Spending/Capita	2000 Rank
1	Vermont	$28.26	5
2	Massachusetts	$21.49	2
3	New Hampshire	$16.45	16
4	Washington	$15.21	11
5	Rhode Island	$14.13	3
6	Oregon	$13.44	14
7	Wisconsin	$11.33	7
8	New Jersey	$11.31	4
9	Montana	$10.65	15
10	Iowa	$10.17	13
	U.S. Average	$4.65	

Massachusetts, Rhode Island, New Jersey, and Wisconsin all remained in this upper quintile from the 2002 Scorecard due to continued commitments to their respective programs.

Vermont and New Hampshire increased in their rankings as their state-wide public benefits programs became fully implemented and funded during this period. Washington, Oregon, and Montana all increased their rankings, mainly due to BPA's greatly renewed commitment to direct energy efficiency program spending (in 2000, BPA's total program spending was $2.6 million region-wide; in 2003 this was $59.8 million).[6] Also in Oregon, the Energy Trust of Oregon reached full operation and funding during this period, replacing individual utility programs and funding that had been ramped down. Iowa increased its ranking slightly due to an expansion of its DSM programs, which had been decreased while the state investigated and considered industry restructuring.

Some states that had been in the top ten in the 2002 Scorecard fell out of this top ranking with the 2003 data. Connecticut had been 1st; but fell to 11th as the state dealt with an overall state government budget deficit, which resulted in funds being transferred away from the public benefits energy programs.[7] Maine had been 6th; it ranked 15th in 2003 largely due to a transition away from utility-based programs to a non-utility public benefits program, which was just ramping up in 2003 and had not yet attained full funding status. Hawaii and New York experienced modest decreases in spending per capita, but because certain other states greatly increased their per capita spending, the rankings of these states fell out of the top ten into the next quintile (Hawaii from 8th to 13th and New York from 9th to 16th). California also fell out of the top ten in terms of spending per capita (from 10th to 12th), but spending per capita actually increased moderately, and based on recent decisions, is planned to increased significantly over the next few years.[8]

Spending as a Percentage of Utility Revenues

Another indicator of energy efficiency program activity and funding commitment is program spending as a percentage of utility revenues from sales to end-use customers. Nationally in 2003 the average was 0.52%—just slightly higher than in 2000 when this was 0.47%. Eighteen states are above this national average. The range is from 0 to 3%. The range for the top ten states is 1.2 to 3%. Table 2 presents the top ten states in terms of their spending as a percentage of utility revenues in 2003, along with their rankings from 2000 data.

[6] For more information about BPA's recent energy efficiency policies, programs, and budgets, see BPA (2005).
[7] Connecticut is likely to rise in its relative standing in 2004 and beyond as a new mechanism was established for program funding in response to the cuts. Our understanding of the impact is that programs will be funded at about two-thirds the level reached in 2000; the full impact of this change is not yet reflected in the 2003 data.
[8] In 2004, the California Public Utilities Commission ruled that the state needed to significantly increase its commitment to capturing cost-effective energy efficiency resources. Consequently, total spending on energy efficiency is proposed to be over $600 million per year by 2008. For 2006, the proposed total is well over $400 million (CEC and CPUC 2005; CPUC 2005; Rogers, Messenger, and Bender 2005).

Table 2. 2003 Electric Energy Efficiency Spending as a Percentage of Utility Revenues: Top Ten

Rank	State	Spending as a Percentage of Annual Total Revenues	2000 Rank
1	Vermont	3.0%	7
2	Massachusetts	2.4%	2
3	Washington	2.0%	10
4	Rhode Island	1.9%	3
5	New Hampshire	1.8%	18
6	Oregon	1.7%	14
7	Wisconsin	1.4%	5
8	New Jersey	1.4%	4
9	Montana	1.3%	15
10	California	1.2%	6
	U.S. Average	0.5%	

The above results mirror those of spending per capita, reflecting the reasons discussed earlier as to changes in rankings from 2000 to 2003.

Lagging States in Funding for Energy Efficiency Programs

As mentioned earlier, there are still many states where there is little to no funding for ratepayer-funded energy efficiency programs. Tables 3 and 4 show the bottom ten states according to spending per capita (Table 3) and spending as a percentage of utility revenues (Table 4).

Table 3. 2003 Electric Energy Efficiency Spending Per Capita: Bottom Ten

Rank	State	Spending/Capita	2000 Rank
42	Oklahoma	$0.07	43
43	Missouri	$0.06	42
44	Maryland	$0.01	32
45	Nebraska	$0.01	47
46	North Carolina	–	49
47	District of Columbia	–	28
48	Kansas	–	50
49	Delaware[9]	–	20
50	Virginia	–	51
51	Wyoming[10]	–	21
	U.S. Average	$4.65	

[9] Delaware fell dramatically in rankings as it dropped DSM programs without creating public benefit programs as part of its utility industry restructuring.

[10] Wyoming's decline in ranking is the result of assumptions used in prior Scorecard reports that pro-rated reported DSM expenditures among all states served by multi-state utilities. For 2003, we found specific data for Wyoming that showed spending was essentially zero, whereas in the previous reports there appeared to be a small level of spending as a result of our assumptions.

Table 4. 2003 Electric Energy Efficiency Spending as a Percentage of Utility Revenues: Bottom Ten

Rank	State	Spending as a % of Annual Total Revenues	2000 Rank
42	Oklahoma	0.01%	43
43	Missouri	0.01%	42
44	Maryland	–	31
45	Nebraska	–	46
46	North Carolina	–	49
47	Kansas	–	50
48	District of Columbia[11]	–	32
49	Delaware	–	21
50	Virginia	–	51
51	Wyoming	–	23
	U.S. Average	0.52%	

Savings as a Percentage of Total Retail Sales

Energy efficiency programs may have multiple objectives, but a primary objective across programs is to reduce energy use in given applications. Consequently, tracking savings is a way to assess the impacts that ratepayer-funded energy efficiency programs are having on overall energy use. Table 5 presents the 2003 data for the cumulative savings impacts for the top ten states based on this indicator.

Table 5. Cumulative Impacts of Electric Energy Efficiency Programs as a Percentage of Total Retail Sales in 2003

Rank	State	Cumulative Annual Energy Savings as a Percentage of Annual Total Retail Sales	2000 Rank
1	Connecticut	7.8%	1
2	California	7.5%	5
3	Washington	7.2%	7
4	Minnesota	6.7%	3
5	Rhode Island	6.2%	4
6	Oregon	6.0%	10
7	Massachusetts	5.8%	6
8	Vermont	4.8%	12
9	Wisconsin	4.4%	2
10	Montana	3.9%	19
	U.S. Average	1.9%	

[11] A recent (March 2005) decision by the Public Service Commission of the District of Columbia will lift the District out of its low-ranked status for spending on energy efficiency programs. The PSC of DC authorized $15 million in spending over a two-year period (2005–2006) for a variety of energy efficiency initiatives designed to help customers save energy and reduce their utility bills (PSC DC 2005).

The range of values is from 0 to 7.8%. The U.S. average is 1.9%, up slightly from 2000 when this was 1.7%. Twenty-one states are achieving savings of at least 1% of total retail sales; these states account for 95% of national savings from ratepayer-funded programs. The top ten states (above) account for about 60% of national savings. The comparison of 2000 and 2003 rankings in Table 5 shows that these states generally have retained their leadership status for achieving significant levels of energy savings through energy efficiency.

While it is tempting to try to correlate the savings rankings to spending as a rough proxy of cost-effectiveness of programs (e.g., "Are the states that are spending the most also achieving the greatest energy savings?"), we caution against this for several reasons. As we noted earlier, the data accuracy and consistency for reported savings likely varies widely. Another reason is that the state-level spending and savings data are aggregated across multiple programs within each state with multiple providers in many cases. Using such aggregated data would miss a lot of important details in terms of program delivery, impacts, and effectiveness. The most important reason, however, for not attempting this kind of correlation is simply that most programs are routinely evaluated specifically to look at their results, which include some measure of cost-effectiveness. Looking at such specific program evaluations is really the only fair and accurate way of assessing the cost-effectiveness of a given program (or a portfolio of programs). Some of the state-level public benefits programs, in fact, do evaluate and report overall program cost-effectiveness (both individual programs and the entire portfolio of programs) (Kushler, York, and Witte 2004).

With these cautions in mind, we do observe that those states that have shown consistent, high levels of funding support for energy efficiency over time are also those states that are achieving significant energy savings through ratepayer-funded electric energy efficiency programs.

SUMMARY AND CONCLUSIONS

Key observations from this Scorecard Update are:

- Total funding nationwide for ratepayer-funded electric energy efficiency programs—both utility DSM and public benefits programs (either non-utility or utility-based)—has continued its modest rebound since reaching its apparent low point in the late 1990s.
- This upward trend is likely to continue as states such as California have increased their commitment to supporting energy efficiency programs as part of long-term energy resource plans (CEC and CPUC 2005). Other states and regions across the country are looking to increasing energy efficiency as part of their energy, economic, and environmental strategies. The Northwest's latest regional energy plan calls for meeting all demand growth through energy efficiency (NPCC 2005b). Another example is the Western Governors Association's "Clean and Diversified Energy Initiative" that is examining efforts to increase the efficiency of energy use by 20% by 2020 (WGA 2005). Further, several western states—Nevada, Utah, and Colorado—showed relatively large increases in program funding from 2000–2003.

- Ratepayer-funded energy efficiency programs have entered an era of renewed focus and importance after a decade of relative neglect in the wake of electric industry restructuring. This renewal has been driven by a combination of factors, including dramatic increases in fossil fuel prices including significant concerns with natural gas prices and availability; growing concern over electric system capacity; and the emerging recognition of financial risks associated with future environmental costs. Another key driver has been the recognition of the reliability benefits of energy efficiency, demonstrated most clearly in California during its 2000–2001 energy crisis.
- The energy utility industry is once again looking upon energy efficiency as a viable and proven energy resource in terms of meeting customer demand and providing long-term cost-effective resource solutions for system planning and operation.

Energy efficiency programs have gone through a series of adjustments as a result of significant changes occurring within the electric utility industry. In our first Scorecard report (for data through 1998), we observed the precipitous decline in program spending and activity as the role and need for such programs came into question in association with industry restructuring. In our second Scorecard report (for data through 2000), we observed a rebound and reaffirmation of the benefits of ratepayer-funded energy efficiency programs as utilities and public policymakers realized that such programs still made sense regardless of industry structure. Some of this rebound, however, was clouded by the state government budget crises faced in early 2000 in many states, which resulted in some program funding reductions. Now in this third Scorecard report (for data through 2003), we see a continuation of the upward trend in support for ratepayer-funded energy efficiency programs. The industry upheavals have subsided and sufficient time has elapsed for many of the newly created structures for administering and implementing energy efficiency programs to have reached full operation and attained a certain level of maturity in the marketplace. At the same time, a number of states have simply maintained and even expanded utility DSM under a "traditional" regulated structure.

The economic, environmental, and system benefits possible through increased energy efficiency are not being achieved in all states, however. One consistent finding from all our Scorecard reports is that ratepayer-funded energy efficiency spending is heavily concentrated in a relatively small proportion of states. The top twenty states in terms of their spending per capita account for 90% of nationwide spending on energy efficiency programs. We urge utilities and policymakers in states that do not provide significant levels of funding for energy efficiency programs to examine the clear record of benefits achieved by such programs in other states and take action to deliver similar benefits to the utility customers in their states.

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APPENDIX A: 2000 AND 2003 SUMMARY DATA BY STATE

Table A1: 2003 Utility Energy Efficiency Spending and Savings by State

	Energy efficiency spending $1,000	Energy efficiency savings MWh	Electricity sales to consumers GWh	Revenue from sales to consumers $1,000	Population	Energy efficiency spending per capita $/capita	Energy efficiency spending as a percentage of revenues	Electricity savings per capita kwh/capita	Electricity savings as a percentage of electricity sales
Alabama	381	72,123	83,844	4,929,145	4,503,726	$0.08	0.01%	16	0.09%
Alaska	87	3,185	5,564	584,243	648,280	$0.13	0.01%	5	0.06%
Arizona	2,142	104,282	64,080	4,705,515	5,579,222	$0.38	0.05%	19	0.16%
Arkansas	390	31,894	43,108	2,399,480	2,727,774	$0.14	0.02%	12	0.07%
California	331,194	17,752,190	237,901	27,693,886	35,462,712	$9.34	1.20%	501	7.46%
Colorado	8,416	591,122	46,457	3,143,377	4,547,633	$1.85	0.27%	130	1.27%
Connecticut	35,231	2,465,741	31,591	3,216,567	3,486,960	$10.10	1.10%	707	7.81%
Delaware	0	NA	12,600	877,038	818,166	$0.00	0.00%	NA	NA
Dist. of Columbia	2	250,545	10,592	786,215	557,620	$0.00	0.00%	449	2.37%
Florida	61,503	5,715,648	217,281	16,767,202	16,999,181	$3.62	0.37%	336	2.63%
Georgia	1,282	290,391	123,496	7,806,927	8,676,460	$0.15	0.02%	33	0.24%
Hawaii	10,885	77,634	10,391	1,503,926	1,248,755	$8.72	0.72%	62	0.75%
Idaho	7,049	740,730	21,219	1,106,765	1,367,034	$5.16	0.64%	542	3.49%
Illinois	3,000	129,744	135,490	9,330,676	12,649,087	$0.24	0.03%	10	0.10%
Indiana	2,983	803,229	100,451	5,391,287	6,199,571	$0.48	0.06%	130	0.80%
Iowa	29,924	1,156,557	41,207	2,519,303	2,941,976	$10.17	1.19%	393	2.81%
Kansas	6	172	36,735	2,332,531	2,724,786	$0.00	0.00%	0	0.00%
Kentucky	3,676	145,183	85,220	3,763,129	4,118,189	$0.89	0.10%	35	0.17%
Louisiana	548	23,587	77,766	5,386,813	4,493,665	$0.12	0.01%	5	0.03%
Maine	10,515	54,078	11,972	1,172,232	1,309,205	$8.03	0.90%	41	0.45%
Maryland	76	2,220,195	70,797	4,567,149	5,512,310	$0.01	0.00%	403	3.14%
Massachusetts	138,000	3,136,750	54,437	5,807,795	6,420,357	$21.49	2.38%	489	5.76%
Michigan	10,000	1,327	108,874	7,460,550	10,082,364	$0.99	0.13%	0	0.00%
Minnesota	43,801	4,218,770	63,087	3,790,736	5,064,172	$8.65	1.16%	833	6.69%
Mississippi	529	78,215	45,544	2,940,416	2,882,594	$0.18	0.02%	27	0.17%
Missouri	319	8,734	74,240	4,470,188	5,719,204	$0.06	0.01%	2	0.01%
Montana	9,779	492,827	12,691	781,960	918,157	$10.65	1.25%	537	3.88%
Nebraska	10	50,910	25,857	1,458,307	1,737,475	$0.01	0.00%	29	0.20%
Nevada	11,200	48,655	30,132	2,498,806	2,242,207	$5.00	0.45%	22	0.16%
New Hampshire	21,203	277,245	11,006	1,188,294	1,288,705	$16.45	1.78%	215	2.52%
New Jersey	97,785	2,898,675	76,453	7,231,408	8,642,412	$11.31	1.35%	335	3.79%
New Mexico	945	25,891	19,330	1,353,663	1,878,562	$0.50	0.07%	14	0.13%
New York	143,404	4,263,495	141,356	17,667,345	19,212,425	$7.46	0.81%	222	3.02%
North Carolina	33	12,438	121,335	8,329,418	8,421,190	$0.00	0.00%	1	0.01%
North Dakota	986	26,266	10,461	571,873	633,400	$1.56	0.17%	41	0.25%
Ohio	15,614	392,559	151,408	10,212,661	11,437,680	$1.37	0.15%	34	0.26%
Oklahoma	244	88,613	50,428	3,200,631	3,506,469	$0.07	0.01%	25	0.18%
Oregon	47,914	2,718,505	45,179	2,793,922	3,564,330	$13.44	1.71%	763	6.02%
Pennsylvania	3,370	18,850	140,216	11,199,450	12,370,761	$0.27	0.03%	2	0.01%
Rhode Island	15,200	481,694	7,799	816,404	1,076,084	$14.13	1.86%	448	6.18%
South Carolina	4,559	102,804	77,054	4,684,410	4,148,744	$1.10	0.10%	25	0.13%
South Dakota	675	8,252	9,080	576,993	764,905	$0.88	0.12%	11	0.09%
Tennessee	13,721	385,116	97,456	5,686,928	5,845,208	$2.35	0.24%	66	0.40%
Texas	81,368	5,191,248	322,596	24,204,750	22,103,374	$3.68	0.34%	235	1.61%
Utah	10,085	762,399	23,836	1,288,449	2,352,119	$4.29	0.78%	324	3.20%
Vermont	17,500	255,275	5,352	587,704	619,343	$28.26	2.98%	412	4.77%
Virginia	0	157,178	101,338	6,354,352	7,365,284	$0.00	0.00%	21	0.16%
Washington	93,251	5,644,575	78,091	4,577,725	6,131,298	$15.21	2.04%	921	7.23%
West Virginia	752	21,554	28,297	1,450,277	1,811,440	$0.42	0.05%	12	0.08%
Wisconsin	62,000	2,956,248	67,241	4,468,043	5,474,290	$11.33	1.39%	540	4.40%
Wyoming	0	0	13,254	630,270	502,111	$0.00	0.00%	0	0.00%
U.S. total/average	1,353,537	67,353,300	3,481,193	258,267,134	290,788,976	$4.65	0.52%	232	1.93%

Table A2: 2000 Utility Energy Efficiency Spending and Savings by State

	Energy efficiency spending $1,000	Energy efficiency savings MWh	Electricity sales to consumers GWh	Revenue from sales to consumers $1,000	Population	Energy efficiency spending per capita $/capita	Energy efficiency spending as a percentage of revenues	Electricity savings per capita kwh/capita	Electricity savings as a percentage of electricity sales
Alabama	323	99,745	83,524	4,687,257	4,451,493	$0.07	0.0%	22	0.12%
Alaska	215	7,555	5,310	535,246	627,601	$0.34	0.0%	12	0.14%
Arizona	3,693	22,126	61,130	4,431,208	5,165,274	$0.71	0.1%	4	0.04%
Arkansas	147	25,389	41,611	2,399,365	2,678,030	$0.05	0.0%	9	0.06%
California	286,697	11,375,095	244,057	23,105,312	34,000,446	$8.43	1.2%	335	4.66%
Colorado	3,518	494,576	43,020	2,527,778	4,323,410	$0.81	0.1%	114	1.15%
Connecticut	66,417	2,034,484	29,952	2,852,294	3,410,079	$19.48	2.3%	597	6.79%
Delaware	1,500	NA	11,274	684,979	786,234	$1.91	0.2%	NA	NA
Dist. of Columbia	457	249,423	10,616	798,345	571,066	$0.80	0.1%	437	2.35%
Florida	59,293	6,891,235	195,843	13,525,901	16,054,328	$3.69	0.4%	429	3.52%
Georgia	1,100	315,825	119,185	7,403,936	8,229,823	$0.13	0.0%	38	0.26%
Hawaii	10,996	55,123	9,691	1,359,755	1,212,281	$9.07	0.8%	45	0.57%
Idaho	4,946	534,807	22,834	953,202	1,299,258	$3.81	0.5%	412	2.34%
Illinois	4,159	67,550	134,697	9,345,020	12,435,970	$0.33	0.0%	5	0.05%
Indiana	2,093	777,062	97,775	5,068,041	6,089,950	$0.34	0.0%	128	0.79%
Iowa	18,488	846,337	39,088	2,318,828	2,927,509	$6.32	0.8%	289	2.17%
Kansas	7	171	35,921	2,253,725	2,691,750	$0.00	0.0%	0	0.00%
Kentucky	1,276	153,754	78,316	3,276,955	4,047,424	$0.32	0.0%	38	0.20%
Louisiana	206	19,268	80,690	5,229,232	4,469,970	$0.05	0.0%	4	0.02%
Maine	12,608	51,097	12,163	1,178,477	1,276,961	$9.87	1.1%	40	0.42%
Maryland	3,227	2,208,659	60,678	4,088,626	5,310,908	$0.61	0.1%	416	3.64%
Massachusetts	99,193	2,052,554	51,773	4,914,012	6,357,072	$15.60	2.0%	323	3.96%
Michigan	6,072	95,665	104,772	7,448,640	9,952,006	$0.61	0.1%	10	0.09%
Minnesota	32,769	3,262,462	59,782	3,510,679	4,931,093	$6.65	0.9%	662	5.46%
Mississippi	216	62,501	45,336	2,651,567	2,849,100	$0.08	0.0%	22	0.14%
Missouri	600	17,985	72,643	4,370,246	5,603,553	$0.11	0.0%	3	0.02%
Montana	4,710	261,857	14,580	728,813	903,157	$5.21	0.6%	290	1.80%
Nebraska	82	20,635	24,349	1,291,802	1,712,577	$0.05	0.0%	12	0.08%
Nevada	262	9,777	27,792	1,714,709	2,018,723	$0.13	0.0%	5	0.04%
New Hampshire	4,957	162,876	10,159	1,143,051	1,239,881	$4.00	0.4%	131	1.60%
New Jersey	111,251	2,550,835	69,977	6,623,586	8,429,007	$13.20	1.7%	303	3.65%
New Mexico	1,123	26,146	18,801	1,236,731	1,821,282	$0.62	0.1%	14	0.14%
New York	162,800	3,213,457	142,027	16,166,619	18,989,332	$8.57	1.0%	169	2.26%
North Carolina	238	35,356	119,855	7,767,071	8,077,367	$0.03	0.0%	4	0.03%
North Dakota	2,158	22,805	9,413	512,299	640,919	$3.37	0.4%	36	0.24%
Ohio	3,788	916,526	165,195	10,581,388	11,359,955	$0.33	0.0%	81	0.55%
Oklahoma	293	98,392	49,564	2,911,907	3,453,250	$0.08	0.0%	28	0.20%
Oregon	19,130	1,805,984	50,330	2,460,231	3,429,293	$5.58	0.8%	527	3.59%
Pennsylvania	15,721	642,576	133,845	10,236,563	12,282,591	$1.28	0.2%	52	0.48%
Rhode Island	14,000	374,400	7,301	742,982	1,050,236	$13.33	1.9%	356	5.13%
South Carolina	5,495	459,644	77,012	4,331,765	4,023,438	$1.37	0.1%	114	0.60%
South Dakota	174	6,351	8,283	523,468	755,509	$0.23	0.0%	8	0.08%
Tennessee	6,700	1,809,259	95,728	5,346,272	5,702,027	$1.18	0.1%	317	1.89%
Texas	23,298	4,128,402	318,263	20,642,251	20,946,503	$1.11	0.1%	197	1.30%
Utah	2,591	567,525	23,185	1,123,803	2,241,555	$1.16	0.2%	253	2.45%
Vermont	6,282	173,434	5,639	579,087	609,709	$10.30	1.1%	284	3.08%
Virginia	0	347,445	96,715	5,741,668	7,104,016	$0.00	0.0%	49	0.36%
Washington	39,280	3,566,595	96,511	4,179,728	5,908,372	$6.65	0.9%	604	3.70%
West Virginia	656	66,762	27,693	1,405,280	1,807,099	$0.36	0.0%	37	0.24%
Wisconsin	49,188	3,598,606	65,146	3,717,450	5,372,243	$9.16	1.3%	670	5.52%
Wyoming	785	221,650	12,368	537,050	494,001	$1.59	0.1%	449	1.79%
U.S. total/average	1,095,178	56,807,745	3,421,412	233,163,400	282,124,631	$3.88	0.5%	201	1.66%

APPENDIX B: 2003 STATE RANKINGS BY SELECTED INDICATORS

Table B1: 2003 Ranking by Spending per Capita

Rank		Energy efficiency spending per capita
1	Vermont	$28.26
2	Massachusetts	$21.49
3	New Hampshire	$16.45
4	Washington	$15.21
5	Rhode Island	$14.13
6	Oregon	$13.44
7	Wisconsin	$11.33
8	New Jersey	$11.31
9	Montana	$10.65
10	Iowa	$10.17
11	Connecticut	$10.10
12	California	$9.34
13	Hawaii	$8.72
14	Minnesota	$8.65
15	Maine	$8.03
16	New York	$7.46
17	Idaho	$5.16
18	Nevada	$5.00
19	Utah	$4.29
20	Texas	$3.68
21	Florida	$3.62
22	Tennessee	$2.35
23	Colorado	$1.85
24	North Dakota	$1.56
25	Ohio	$1.37
26	South Carolina	$1.10
27	Michigan	$0.99
28	Kentucky	$0.89
29	South Dakota	$0.88
30	New Mexico	$0.50
31	Indiana	$0.48
32	West Virginia	$0.42
33	Arizona	$0.38
34	Pennsylvania	$0.27
35	Illinois	$0.24
36	Mississippi	$0.18
37	Georgia	$0.15
38	Arkansas	$0.14
39	Alaska	$0.13
40	Louisiana	$0.12
41	Alabama	$0.08
42	Oklahoma	$0.07
43	Missouri	$0.06
44	Maryland	$0.01
45	Nebraska	$0.01
46	North Carolina	$0.00
47	Dist. of Columbia	$0.00
48	Kansas	$0.00
49	Delaware	$0.00
50	Virginia	$0.00
51	Wyoming	$0.00
	United States	$4.65

Table B2: 2003 Ranking by Spending as a Percentage of Revenues

Rank		Energy efficiency spending as a percentage of revenues
1	Vermont	2.98%
2	Massachusetts	2.38%
3	Washington	2.04%
4	Rhode Island	1.86%
5	New Hampshire	1.78%
6	Oregon	1.71%
7	Wisconsin	1.39%
8	New Jersey	1.35%
9	Montana	1.25%
10	California	1.20%
11	Iowa	1.19%
12	Minnesota	1.16%
13	Connecticut	1.10%
14	Maine	0.90%
15	New York	0.81%
16	Utah	0.78%
17	Hawaii	0.72%
18	Idaho	0.64%
19	Nevada	0.45%
20	Florida	0.37%
21	Texas	0.34%
22	Colorado	0.27%
23	Tennessee	0.24%
24	North Dakota	0.17%
25	Ohio	0.15%
26	Michigan	0.13%
27	South Dakota	0.12%
28	Kentucky	0.10%
29	South Carolina	0.10%
30	New Mexico	0.07%
31	Indiana	0.06%
32	West Virginia	0.05%
33	Arizona	0.05%
34	Illinois	0.03%
35	Pennsylvania	0.03%
36	Mississippi	0.02%
37	Georgia	0.02%
38	Arkansas	0.02%
39	Alaska	0.01%
40	Louisiana	0.01%
41	Alabama	0.01%
42	Oklahoma	0.01%
43	Missouri	0.01%
44	Maryland	0.00%
45	Nebraska	0.00%
46	North Carolina	0.00%
47	Kansas	0.00%
48	Dist. of Columbia	0.00%
49	Delaware	0.00%
50	Virginia	0.00%
51	Wyoming	0.00%
	United States	0.52%

Table B3: 2003 Savings as a Percentage of Electricity Sales

Rank		Cumulative annual kWh savings as percentage of kWh sales
1	Connecticut	7.81%
2	California	7.46%
3	Washington	7.23%
4	Minnesota	6.69%
5	Rhode Island	6.18%
6	Oregon	6.02%
7	Massachusetts	5.76%
8	Vermont	4.77%
9	Wisconsin	4.40%
10	Montana	3.88%
11	New Jersey	3.79%
12	Idaho	3.49%
13	Utah	3.20%
14	Maryland	3.14%
15	New York	3.02%
16	Iowa	2.81%
17	Florida	2.63%
18	New Hampshire	2.52%
19	Dist. of Columbia	2.37%
20	Texas	1.61%
21	Colorado	1.27%
22	Indiana	0.80%
23	Hawaii	0.75%
24	Maine	0.45%
25	Tennessee	0.40%
26	Ohio	0.26%
27	North Dakota	0.25%
28	Georgia	0.24%
29	Nebraska	0.20%
30	Oklahoma	0.18%
31	Mississippi	0.17%
32	Kentucky	0.17%
33	Arizona	0.16%
34	Nevada	0.16%
35	Virginia	0.16%
36	New Mexico	0.13%
37	South Carolina	0.13%
38	Illinois	0.10%
39	South Dakota	0.09%
40	Alabama	0.09%
41	West Virginia	0.08%
42	Arkansas	0.07%
43	Alaska	0.06%
44	Louisiana	0.03%
45	Pennsylvania	0.01%
46	Missouri	0.01%
47	North Carolina	0.01%
48	Michigan	0.00%
49	Kansas	0.00%
50	Wyoming	0.00%
51	Delaware	NA
	United States	1.93%