A REVIEW AND EARLY ASSESSMENT OF PUBLIC BENEFIT POLICIES UNDER ELECTRIC RESTRUCTURING

VOLUME 2: A SUMMARY OF KEY FEATURES, STAKEHOLDER REACTIONS, AND LESSONS LEARNED TO DATE

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The authors would like to thank two colleagues for their help on this project: Toru Kubo for his assistance in preparing many of the figures and tables, and Renee Nida for her work in editing and producing this report. Finally, we would also like to thank the numerous individuals from the states examined in this project, whose cooperation and assistance in providing information made this report possible.

A Note about Data Quality

Great care was taken in this research and in the preparation of this report to provide accurate information about each state. However, it should be recognized that this is a very complex subject and that circumstances are still evolving and changing. As a result, there is always a possibility of errors, omissions, or material becoming out-of-date. Therefore, if a higher degree of certainty is required, the reader is encouraged to contact appropriate agencies within an individual state if data confirmation, more detailed data, or updated information is desired. (Part of the purpose of this project is to encourage and facilitate communication and information exchange among states.)

If a substantive error is noticed in the tables or the state summaries in this report, ACEEE would appreciate receiving notification and a description of the correct information. We will make every effort to provide corrected information in any subsequent distribution of this report.

EXECUTIVE SUMMARY

This document is the second volume of a two-part study comprising the first comprehensive national review and assessment of public benefit policies and approaches being taken in states that have restructured their electric industry. This report presents a detailed summary of the key features of the public benefits policies that have been established in those states, and a review of the current status of administration and implementation of those policies. It also provides the results of a qualitative assessment of those policies by key interested parties in each of those states, with a focus on major lessons learned. The material in this report is based on information obtained from each state's restructuring legislation and/or regulatory orders, as well as interviews with state officials, utilities, advocates, and other interested parties in those states.

State Scorecard

This study focused on the 23 states that had formally passed an electric restructuring policy as of the end of 1999 (AZ, AR, CA, CT, DE, IL, ME, MD, MA, MI, MT, NV, NH, NJ, NM, NY, OH, OK, OR, PA, RI, TX, and VA), plus two states that had passed specific legislation requiring public benefits funding but had not actually restructured their electric industry (VT and WI).

- Of these 25 states, 19 have included specific policy requirements to support energy efficiency public benefits. A couple of additional states are still investigating the issue, but the remainder have shown no indication of including this type of policy requirement.
- Seventeen of the 25 states have included specific policies supporting renewable energy. A total of 14 states have direct funding of one type or another, and 9 states have a "renewable portfolio standard" (RPS) whereby electricity suppliers are required to have renewable energy sources comprise some minimum percentage of their overall generation supply. (Six states are included in both categories.)
- Lastly, 19 states include specific funding policies supporting low-income programs (typically some type of bill payment assistance and weatherization or other energy efficiency services) in their restructuring legislation and/or regulatory orders.

Although all three types of benefits are addressed in this report, primary emphasis is given to our principal policy concern: energy efficiency.

Funding Mechanisms

By far the most common approach to funding energy efficiency public benefit programs is a mechanism typically referred to as a "system benefit charge" (or "public benefit charge"). This is a non-bypassable charge on the distribution service, usually expressed in "mills per kilowatt-hour (kWh)." A total of 15 states have adopted that type of approach.

Another three states have used an approach where the funding is either embedded in rates or provided through a flat monthly fee, rather than a per kWh charge. Finally, two states have included approaches that are thus far somewhat unique. Illinois (in addition to a very small requirement for utility funding of some state-administered programs) has established a large "Clean Energy Trust Fund" (funded with $250 million from Commonwealth Edison as part of a larger agreement on restructuring-related issues) that will be used, in part, for energy efficiency. Texas did not establish a funding amount but rather established an annual energy savings goal that must be met by the utilities.

Funding Amount

The indicator for which we were able to obtain the best information was mills/kWh, and we were able to find or develop estimates of that indicator for 15 states. For those states, the required funding level for energy efficiency ranged from 0.03 to 3.15 mills/kWh, with a median value of 1.3 mills/kWh. In terms of dollar amounts, the range was $1.5 million to $218 million/year, with a median value of $17.2 million and an average (mean) value of $51 million.

One interesting public policy question in this area is how the level of funding for energy efficiency under these new public benefits approaches compares to historical utility energy efficiency spending. The results indicate that, with a few exceptions, states have tended to set their new energy efficiency funding at a level comparable to recent experience, but significantly below peak utility spending levels of the early to mid-1990s. On the positive side, it appears that the cumulative effect of these public benefit energy efficiency mechanisms may have helped stop the half-decade long slide in national utility energy efficiency spending that has occurred since restructuring first surfaced, and may in fact have helped produce a slight increase in national spending from 1997 to 1998 (from $901 million to $913 million in 1998 dollars).

Administrative Approaches

The mechanisms selected by states for administering their public benefits energy efficiency programs can be sorted into three basic categories: (1) utility administration; (2) independent administration by a government or other non-utility entity; and (3) some type of "hybrid" approach. Of the 18 states that have proceeded far enough to allow an assessment, a total of 7 states can be categorized as having individual utilities administer their energy efficiency programs (albeit often with some type of collaborative advisory process). Six additional states have chosen some type of independent entity (four use a state government agency of some sort and two will use a competitively selected independent contractor). Finally, five states fall into what this study refers to as a "hybrid" category, where utilities have some administrative role but the approach can't really be categorized as simple utility administration.

Although it is possible to sort states into the three general categories mentioned above, most states have various features that make their approach somewhat unique. This is truly an area

where a lot of interesting experimentation is occurring. (See Appendix C for details on each state.)

Funding Duration

The third key issue regarding public benefit energy efficiency policies has been the length of time for which funding has been required. Here again, there has been quite a bit of variability. A total of six states do not set any specific duration for the funding requirement, leaving it essentially open-ended. Another four states set a 10-year funding period. Six states specify 5 years, one state sets 4 years, and two states set 3 years. Most of the states that set a specific time duration indicated that some type of review and determination of future policy would occur as the end of the initial period approached. That process has already begun in several states.

Qualitative Assessment

Telephone interviews with representatives of key organizations (regulatory agencies, state administrative agencies, utilities, environmental groups, etc.) were conducted for each of the 19 states identified as having passed some type of restructuring-related energy efficiency public benefits policy. The respondents had an overall fairly positive regard for the public benefits policies adopted by their state. The modal grade assigned was a 'B' and over 80 percent of respondents assigned a 'B' or an 'A'. With a few exceptions, grades assigned for implementation to date tended to be the same or slightly lower than the "on paper" policy grade. However, respondents in a number of cases assigned an incomplete because they felt it was too early to pass judgement on implementation aspects.

The two most common reasons offered for downgrading the state's policy were a lack of clarity in the legislation (leading to subsequent argument and delays) and that the funding levels were too low. Reasons for downgrading on the implementation side tended to focus on administrative delays, with occasional mention of lack of support for the policy by certain agencies responsible for implementation.

Lessons Learned

The second aspect of qualitative assessment was to ask respondents to identify what they considered to be the key lessons learned thus far in developing their states' public benefits policies. This report presents a number of such lessons that were articulated by the interested parties in these states, as well as a few "blooper highlights" (describing a few classic mistakes states had experienced in designing/implementing their public benefits policies).

Initial Impact Results

For most of the 19 states that have adopted an energy efficiency public benefits policy, it is too soon to assess program impacts. Indeed, for a majority of those states, actual program implementation either has not yet begun or just began this year. However, this report presents highlight results for a few states that began their public benefit energy efficiency programs in 1998 and have had time to do some initial impact assessment. In each of those states, the programs have been found to be well-subscribed by customers, and to be producing substantial and cost-effective energy savings results.

Conclusions

While it is of course too soon to draw firm conclusions about the relative success of public benefit fund policies regarding energy efficiency, the early indications are quite positive. Collection of the fund revenues and actual implementation of the energy efficiency programs have begun in at least ten states, with several states having had their programs "in the field" now for at least 2 years. The early results from those states are very favorable.

The principal public policy lesson learned from this study would seem to be that it is indeed possible to establish a statewide public benefit funding mechanism and achieve practical success in administering and delivering programs funded by that mechanism. The very visible success of such efforts in numerous states clearly demonstrates that fact.

A significant corollary lesson is that there does not appear to be any single "correct approach" for the design of such a system. Some states are having success with utility-administered programs (e.g., Massachusetts, Connecticut, and California) while others are succeeding with programs administered by state agencies (e.g., New York and Illinois) or even by an independent entity selected by a request for proposal (RFP) (e.g., Vermont).

This translates into what might be the primary strategic and tactical lesson of this study—once having met an overall policy threshold of having public benefit funding support for energy efficiency, each state should take advantage of its own strengths and assets in designing the specific details of its energy efficiency policy implementation approach.

Of course, this broad picture of success with public benefit funds does not mean that there haven't been some lessons learned from negative experiences as well. On balance, however, the experience to date with public benefit funds has been quite positive. Most importantly, they have proven to be a very effective strategy for sustaining energy efficiency improvements in restructured electricity markets. While it is still early in the process, and further monitoring and evaluation are necessary, the results thus far indicate that the creation and use of a public benefit funding mechanism can be an effective policy approach.

INTRODUCTION

The term "public benefits" has been used to describe a number of ancillary services and benefits that customers, and society in general, have historically received through the regulated utility industry. Typically, this term is considered to encompass such benefits as energy efficiency, renewable energy, low-income programs, and public interest oriented research and development.

Unfortunately, for a variety of reasons, electric industry restructuring creates economic pressures that tend to cause utilities to abandon these traditional services.[1] (See Kushler and Suozzo [1999] for a discussion of these factors and their consequences.) As a result, policymakers and other interested parties have sought to develop alternative policy approaches for ensuring that these types of benefits continue.

Since the first states began taking formal steps toward electric restructuring in the mid-1990s, the concept of dedicated "public benefits funding" has emerged as the primary new mechanism for supporting utility-related societal benefits such as energy efficiency. (See Eto, Goldman, and Nadel [1998] for a good discussion of the conceptual framework for a public benefits charge policy.) Indeed, as described below, most of the states that have restructured to date have included some type of public benefit funding mechanism in their restructuring package. Not surprisingly, there is a great deal of interest among policymakers, advocates, and other involved parties about how this new policy approach is working.

Context for this Study

In recognition of the importance of this issue, for the past several years ACEEE has been directing a series of studies of public benefits policies and actions under electric industry restructuring. The initial effort culminated in a report (Kushler 1998) describing the status of restructuring in each of the 50 states and briefly summarizing the public benefits policies, if any, in each state that had restructured. Since the publication of that report, ACEEE has maintained on its web site (www.aceee.org) a periodically updated summary table of public benefit policies and funding levels in restructured states (see Appendix B for the most recent version).

The current study evolved from those efforts when, with the assistance of several funding partners (see Acknowledgments), a major research project was launched to provide the first comprehensive national review and early assessment of state public benefit policies under electric restructuring. This document constitutes the second of a two-volume set of reports to be produced under that project. The first report (*Volume 1: A State-by-State Catalog of Policies and Actions*) provided a collection of somewhat detailed (2-4 pages/state) objective descriptions of any public benefit policies that had been established as a part of state restructuring, including citations to appropriate legislation and/or regulatory orders. This Volume 2 provides the results

[1] For example, national utility energy efficiency spending has declined by 50 percent since 1994. The decline is even greater (68 percent) when compared to spending levels that had been projected by the utilities back in 1993. (See Appendix A for a graphical illustration of these spending trends.)

of a qualitative assessment of both the policy development process and the early implementation experience in those states that have enacted public benefits policies.

Purpose

The restructuring of the electric industry is an enormously complex task, and presents policymakers and regulators with a great number of difficult political and technical challenges. The premise of this research project is that those involved in developing and/or implementing public benefits policies in this evolving industry can benefit from learning what policies and approaches have been adopted in other states, how they were developed, and how they are faring thus far. The intent of this project is to provide policymakers, regulators, and other interested parties with information that will assist them in designing and implementing effective public benefits policies.

Organization

The next two sections of this report provide a brief overview of the scope and methodology of this study. Following that, the results of the research are presented in four major components. First, a comprehensive overall summary of the descriptive characteristics of public benefits policies in the states is provided. Second, an overall summary of the qualitative assessment of the design and implementation of these public benefits policies is presented, including key lessons learned. (This assessment is based on interviews with representatives of key parties in each of the states.) Third, a brief discussion of program impacts is provided. Although only a few states have had their programs in operation long enough to report any results, these states are featured here. Finally, Appendix C presents a brief state-by-state description (where applicable) of the public benefit policy, administrative process, and implementation status in the state. A discussion of the qualitative assessment of the policy and its implementation, by key parties in the state, is also included.

Scope

This project took as its focus the universe of states that had formally passed an electric restructuring policy as of the end of 1999, plus two states that had passed specific public benefits fund legislation but had not formally restructured. Those states are:

> *Arizona, Arkansas, California, Connecticut, Delaware, Illinois, Maine, Maryland, Massachusetts, Michigan, Montana, Nevada, New Hampshire, New Jersey, New Mexico, New York, Ohio, Oklahoma, Oregon, Pennsylvania, Rhode Island, Texas, Vermont, Virginia, and Wisconsin*[2]

[2] All of those states have formally adopted electric restructuring with the exception of Vermont and Wisconsin, which passed separate public benefits legislation without restructuring. See Volume 1 (Kushler and Witte 2000) for a description of the public benefits policies and approaches in each of those 25 states.

Figure 1 on the following page presents a map illustrating the states included in this study.

Two additional aspects of the scope of this report are worthy of note. First, the primary focus of this component of the project is on the public benefit area of energy efficiency policies and funding.[3] Although some information is provided regarding the public benefit areas of renewable energy and low-income programs, the major emphasis is on energy efficiency.

Second, it is important to keep in mind that this is indeed a very early initial assessment of public benefit programs. In a number of states, these programs have either not yet begun, or just begun, actual implementation. Therefore, an important part of the focus of this initial assessment is on such things as the processes by which the public benefit policies were designed and established, and on the administrative procedures leading up to implementation.

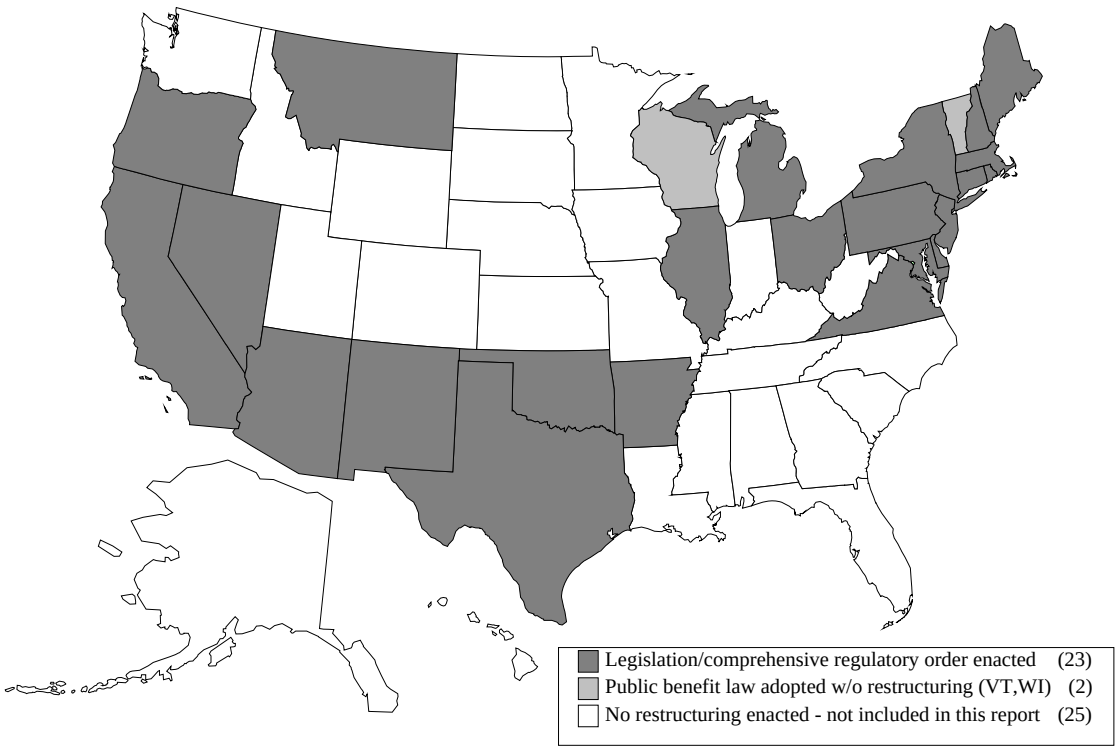
METHODOLOGY

For each of the 25 states in this study, the project obtained and reviewed copies of the pertinent legislation and regulatory orders to extract descriptive information about their public benefits policies and funding. This information was presented in some detail for each individual state in Volume 1. In this Volume 2 report, that data is compiled and overall patterns and trends are summarized in the next section.

Included in that summary is an additional type of data: historical utility energy efficiency spending in each state. That data was obtained from the Energy Information Administration (EIA) and initially analyzed for a previous ACEEE report, Nadel, Kubo, and Geller (2000). It is also presented in this report to provide a context for assessing the new public benefit funding levels under restructuring.

[3] The Volume 1 report was able to be more comprehensive in scope, due to its more straightforward focus on descriptive information regarding state policies. In Volume 2, resource constraints necessitated that we focus most of the in-depth qualitative assessment on our highest priority public benefit area: energy efficiency.

Figure 1: States Included in this Study
(Numbers and Restructuring Status Indicated Below)



After collecting the descriptive data on state public benefit policies and funding, the project proceeded to acquire qualitative information from various stakeholders. For each state where some type of energy efficiency-related public benefit policy had been adopted, several key parties (e.g., regulatory staff, other state agency personnel, utility staff, and energy efficiency advocates) were interviewed. The interviews were semi-structured telephone interviews designed to obtain the respondent's perceptions of the public benefits policies and actions in their state. This included a description of the origin of the public benefits policies (the process, key players, etc.) as well as their qualitative assessment of both the policy as written and the administrative implementation of that policy to date. This information is summarized on an overall basis in the section Qualitative Results and presented individually for each state in the state-by-state descriptions in Appendix C.

DESCRIPTIVE RESULTS

The first segment of results presented in this report focuses on an objective description of the public benefits policies and approaches adopted by the 25 states examined in this project.

The State Score Card

Among the 25 states addressed during the time frame of this study, 20 had passed electric restructuring legislation (Arizona, California, Connecticut, Delaware, Illinois, Maine, Maryland, Massachusetts, Montana, Nevada, New Hampshire, New Jersey, New Mexico, Ohio, Oklahoma, Oregon, Pennsylvania, Rhode Island, Texas, and Virginia), three had adopted restructuring through regulatory orders (Arizona, Michigan,[4] and New York), and two had passed specific legislation requiring public benefits funding but had not actually restructured their electric industry (Vermont and Wisconsin).[5]

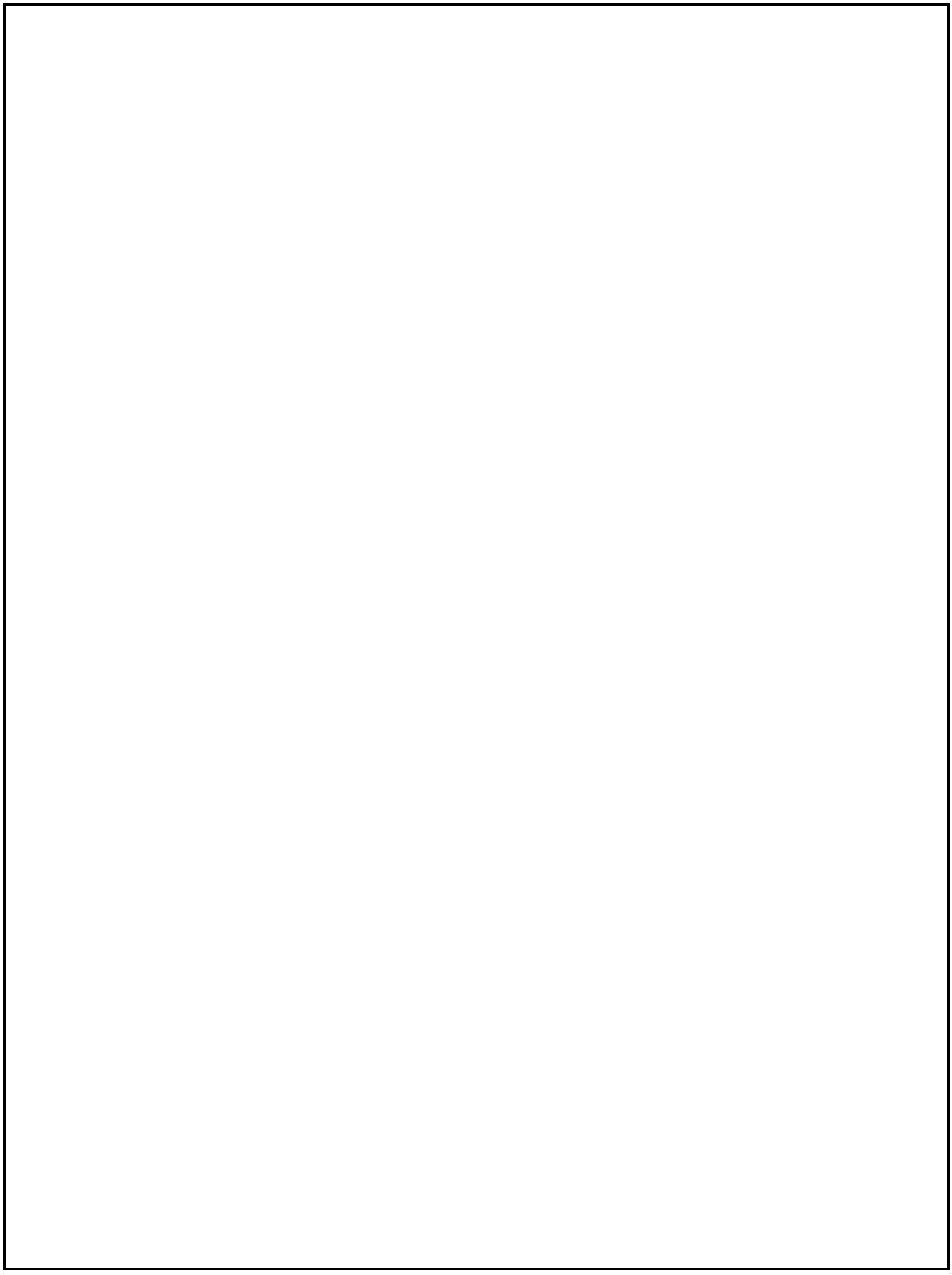
Of these 25 states, 19 have included specific policy requirements to support energy efficiency in their legislation and/or regulatory orders. These states are marked for identification in Figure 2. Beyond those 19 states, a couple of additional states are still investigating the issue while the remainder have shown no indication of including this type of policy requirement.

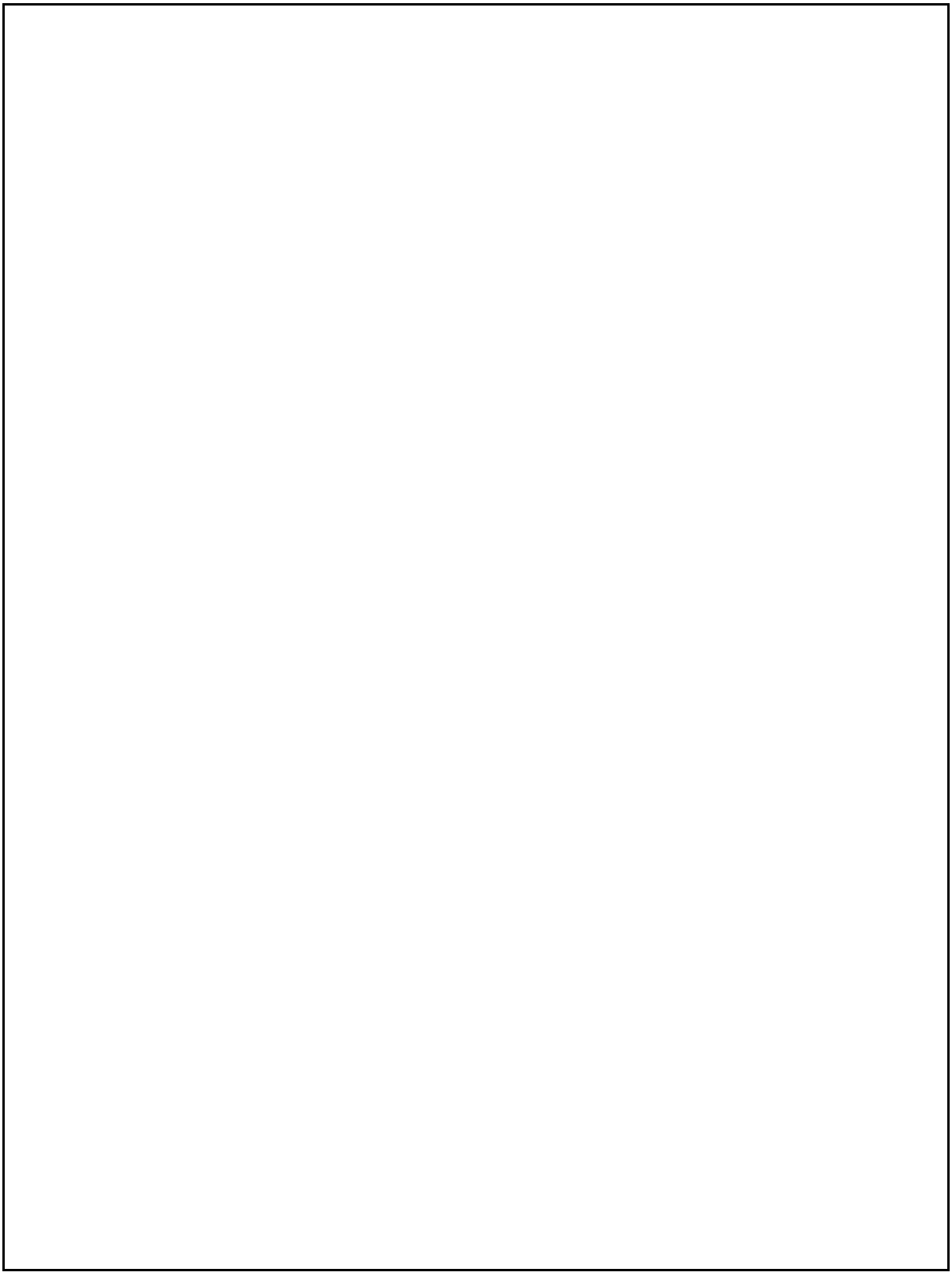
With regard to renewable resources, 17 of the 25 states have included specific policies supporting renewable energy. A total of 14 states have direct funding of one type or another, and 9 states have a "renewable portfolio standard" (RPS), whereby electricity suppliers are required to have renewable energy sources comprise some minimum percentage of their overall generation supply. (The total of 17 states results from the fact that six of those states have both direct funding and an RPS mechanism.) States with public benefits policies regarding renewable energy are indicated in Figure 3.

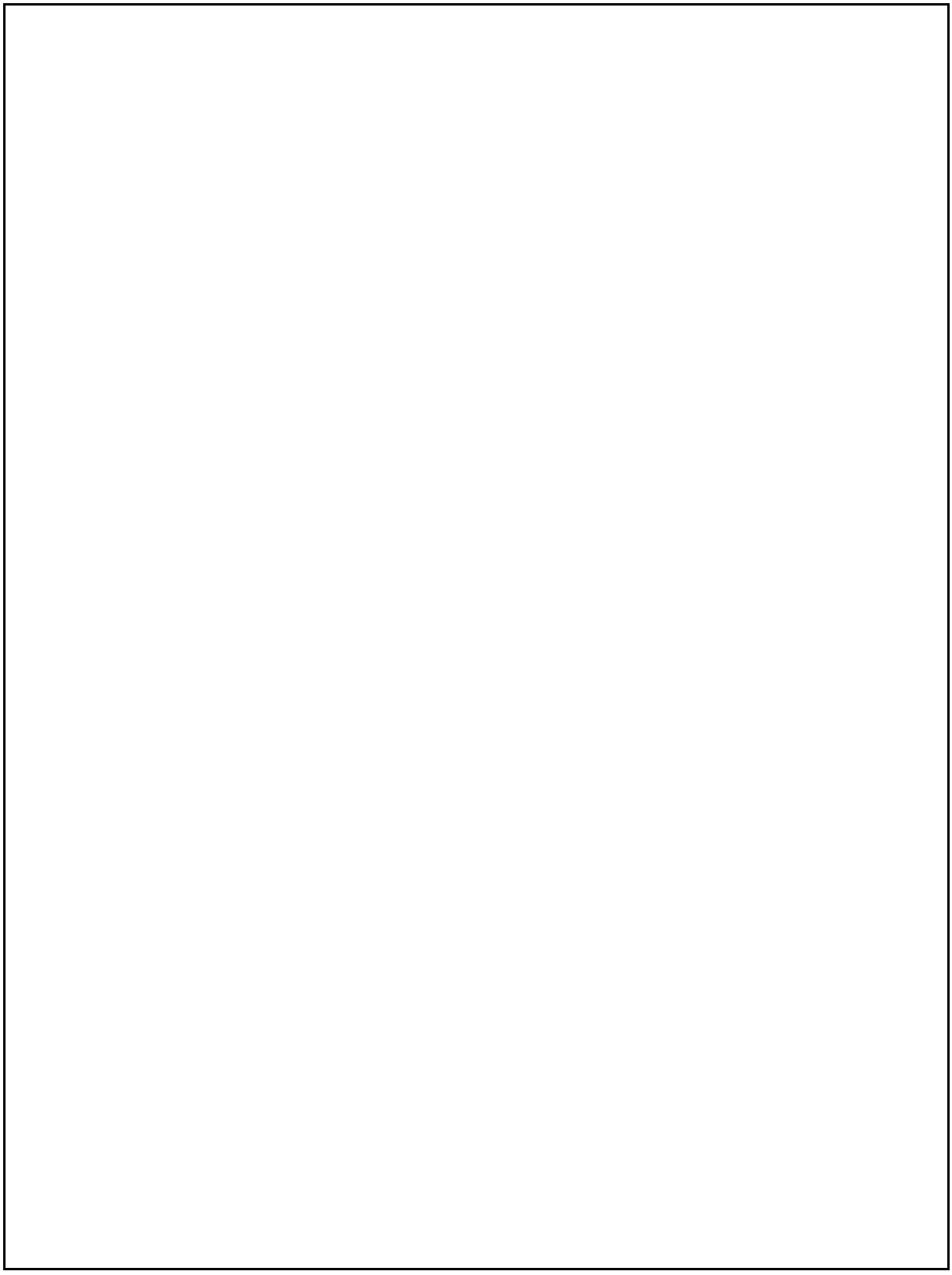
Lastly, a total of 19 states include specific funding policies supporting low-income programs (typically some type of bill payment assistance and some support for weatherization or other energy efficiency services) in their restructuring legislation and/or regulatory orders. Those states are indicated in Figure 4. For a convenient overview, a summary table of descriptive data on public benefits policies and funding, on a state-by-state basis, is presented in Appendix B.

[4] Subsequent to the data collection time frame of this study, Michigan also passed restructuring legislation (in June 2000). That legislation expressed nominal support for energy efficiency, renewable energy, and low-income programs but provided no certain funding for any of those items. Therefore, the count of restructured states providing specific support for public benefits is not affected by this late development.

[5] At the time of this writing, the only other new addition to the ranks of restructured jurisdictions was Washington, D.C. Their restructuring policy does include specific support for energy efficiency, renewable energy, and low-income programs. However, due to the lateness of this policy development, Washington, D.C. was not included in the data collection for this study.







Key Decision Areas in Energy Efficiency Public Benefits Policy

Although restructuring is a very complex undertaking, and legislation/regulatory orders can be very detailed, it was possible to identify a few key issues that were core subjects of debate in just about every state. These include: (1) funding (i.e., the mechanism, sources, and the amount); (2) administration (i.e., who will administer and operate these programs); and (3) the duration of any policy/funding requirement. The following material briefly summarizes the approaches taken by the states on these issues.

Funding mechanisms. By far the most common approach to funding energy efficiency public benefit programs is a mechanism typically referred to as a "system benefit charge" (or "public benefit charge"). This is a non-bypassable charge on the distribution service (thus being "competitively neutral" because customers pay the charge no matter who their generation supplier is), usually expressed in "mills per kilowatt-hour (kWh)."[6] A total of 15 states have adopted that type of approach.

Another three states have used an approach where the funding is either embedded in rates or provided through a flat monthly fee, rather than a per kWh charge. Finally, two states have included approaches that are thus far somewhat unique. Illinois (in addition to a very small requirement for utility funding of some state administered programs) has established a large "Clean Energy Trust Fund" (funded with $250 million from Commonwealth Edison as part of a larger agreement on restructuring-related issues) that will be used, in part, for energy efficiency efforts. Texas, in contrast to virtually every other state, did not establish a funding amount. Rather, it set a requirement for utilities to achieve energy savings each year equivalent to 10 percent of projected load growth.

Funding sources. One policy concern embedded within the broader issue of funding mechanisms is the question of whether all customers would pay to support these funds or would some customers or customer classes be excluded. Large industrial customers and their advocate organizations have frequently argued that they do not need or want these "public" programs and therefore should not be required to pay for them. Although a good argument can be made that energy efficiency benefits all customers in a number of ways,[7] these large customers often have significant political clout and in some cases have succeeded in achieving full or partial exemptions.

At least three states have included some preferential treatment for very large industrial customers (typically those in excess of 1 megawatt [MW] of demand) in their restructuring legislation. Montana provides for a smaller per kWh charge for customers of 1 MW demand or greater, and also allows for "credits" against that charge for documented self-spending on energy efficiency projects. Oregon allows a similar partial credit for large customer (>1 MW)

[6] One "mill" is equal to one-tenth of a cent.

[7] For example: environmental benefits from reduced electricity generation; reductions in peak demand that benefit system reliability; general downward pressure on rates from reducing overall demand; etc.

documented self-spending, plus has a special discounted per kWh charge for aluminum smelters. Vermont has a "C&I Customer Credit Program," whereby large business customers that meet several conditions (including being certified under ISO Standard 14001 and becoming a partner in the Climate Wise program sponsored by the U.S. Department of Energy [DOE] and Environmental Protection Agency [EPA]) can receive a refund of up to 70 percent of the cost they would otherwise pay to support the statewide energy efficiency utility. This is based on the amount of documented "qualified" expenditures they make on energy efficiency improvements in their facilities. Despite a few such examples, however, the vast majority of states have required their energy efficiency public benefit funding to come from an equal per kWh charge applied for all customers.

Funding amount. In order to provide common bases for comparison, this research has attempted to determine estimates of energy efficiency funding using three standard indices: millions of dollars; mills per kWh; and percent of utility revenue (see the table in Appendix B). Typically, a state's legislation and/or regulatory orders might only clearly specify one of those indices, so this project developed estimates of the remaining indicators from other available data (e.g., EIA data on utility sales and revenues, etc.)

The indicator for which we were able to obtain the best information was mills per kWh, and we were able to find or develop estimates of that indicator for 15 states. For those states, the required funding level for energy efficiency ranged from 0.03 to 3.15 mills/kWh, with a median value of 1.3 mills/kWh. Table 1 provides a listing of the level of public benefit funding in each state, expressed in terms of mills/kWh, for each of the three major public benefit areas. (Note that the values in the table only represent funding that was specifically identified in restructuring or public benefits legislation and/or regulatory orders. Some of the states have other miscellaneous ongoing funding from pre-existing utility programs, particularly in the low-income area, which are not reflected in the table.)

Finally, one interesting public policy question in this area is how the level of funding for energy efficiency under these new public benefits approaches compares to historical utility energy efficiency spending. The results indicate that, with a few exceptions, states have tended to set their new energy efficiency funding at a level comparable to recent experience, but significantly below peak utility spending levels of the early to mid-1990s. This pattern is well-illustrated by the data in Figure 5. For the 15 states with clearly identifiable public benefit funding levels for energy efficiency, the project compared those levels to their historical utility energy efficiency spending levels (using EIA data). Figure 5 presents average historical spending and projected public benefits funding levels across those 15 states. (Individual spending graphs for each state are provided in Appendix C.)

Table 1. Public Benefit Funds by State (mills/kWh)[1,2]

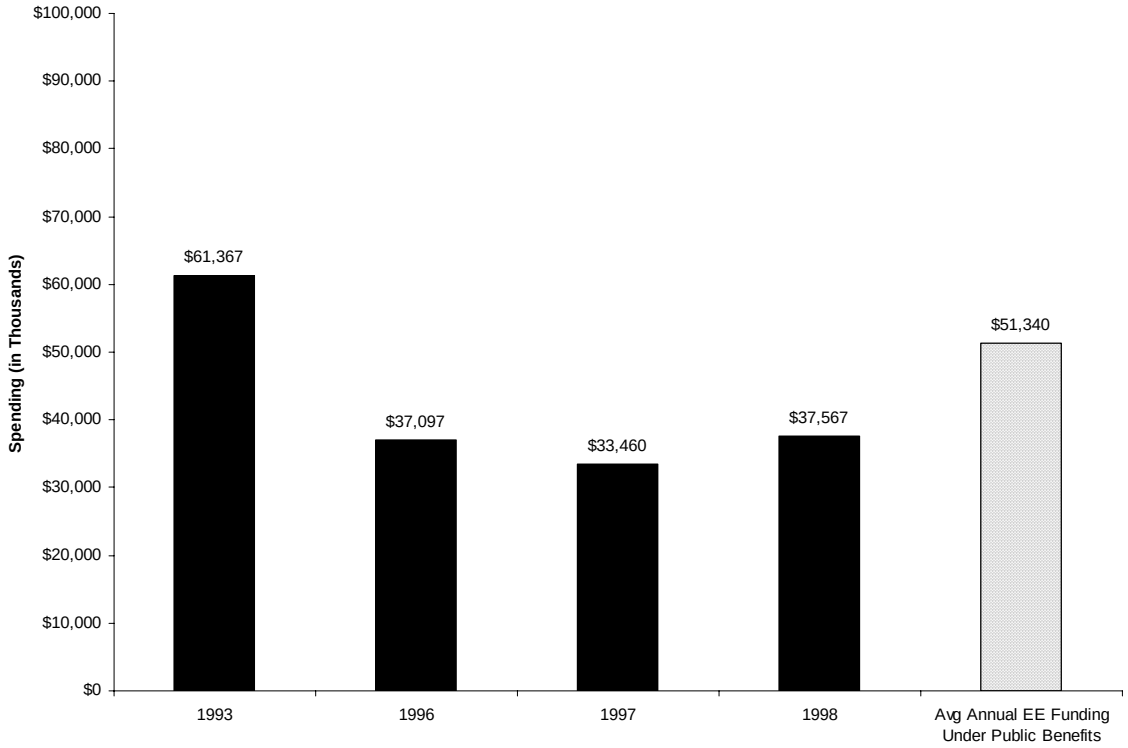
Source: Values in the table are in many cases reported directly in state legislation and/or regulatory

Total Fund [3]		**Energy Efficiency**		**Low Income**		**Renewable Energy**	
State	mills [4]	State	mills	State	mills	State	mills
Connecticut	4.05	New Jersey	3.15	New Hampshire	1.50	California	0.80
New Jersey	3.76	Connecticut	3.00	Wisconsin	0.92	Connecticut	0.75
Massachusetts	3.70 +	Massachusetts	3.00	Ohio	0.70	Massachusetts	0.70
California	3.00 +	Vermont	2.50	Pennsylvania	0.70	Rhode Island	0.50
Rhode Island	2.60 +	Rhode Island	2.10	Illinois	0.60	New Jersey	0.45
Vermont	2.50 +	Maine	1.50	Maryland	0.60	Oregon	0.30
Maine	2.30	California	1.30 +	Oregon	0.60	New Mexico	0.24 +
Wisconsin	2.20	Wisconsin	1.20	California	0.50	Montana	0.14
New Hampshire	2.00 +	Oregon	1.00	Maine	0.50	Wisconsin	0.07
Oregon	1.90	Montana	0.70	Connecticut	0.30	Illinois	0.04
Montana	1.10	New York	0.60 +	Montana	0.26	Delaware	0.03
Pennsylvania	0.82	Delaware	0.18	New Jersey	0.16	New York	0.03
New York	0.80 +	Ohio	0.10	Delaware	0.10	Pennsylvania	0.02
Ohio	0.80	Pennsylvania	0.10	New York	0.10	Maine	Dona-tions
Illinois	0.67 +	Illinois	0.03 +	Texas	0.07 +		
Maryland	0.60 +	Arizona	TBD	New Mexico	0.03 +	Arizona	TBD
Delaware	0.31	Maryland	TBD	Massachusetts	Current levels	Nevada	TBD
New Mexico	0.30	New Hampshire	TBD			Vermont	TBD
Texas	0.07 +	Nevada	TBD	Rhode Island	In rates		
Arizona	TBD	Texas	TBD	Arizona	TBD		
Nevada	TBD			Nevada	TBD		
				Vermont	TBD		

orders. In other cases they are estimated using inputs from those sources, interviews with state agencies, and other available data (e.g., EIA data on electricity sales, etc.).

Notes: [1] Mills = tenth of a cent. This unit is commonly used in the utility sector.
[2] TBD = To be decided.
[3] The total is the sum of energy efficiency, low-income, renewable energy, and other programs not specifically listed, such as research and development.
[4] A plus sign next to a value means that additional funding may be added due to administrative determinations or public utility programs.

Figure 5: Energy Efficiency (EE) Spending
Average EIA Data vs. Public Benefits Funding (PBF) Projections
For the 15 States with PBF Amounts Available



While many advocates would like to see higher levels of funding for energy efficiency, it appears that at least the policy direction has been stabilized. A recent study by ACEEE suggests that the cumulative effect of these public benefit energy efficiency mechanisms may have helped stop the half-decade long slide in national utility energy efficiency spending that has occurred since restructuring first surfaced, and may in fact have helped produce a slight increase in national spending from 1997 to 1998.[8]

Administrative approaches. Table 2 provides a state-by-state listing of the administrators of the various public benefit programs. Of particular interest for this report are the administrative approaches for the energy efficiency (EE) programs. The mechanisms selected by states for

[8] Nadel, Kubo, and Geller (2000) estimate that while national utility energy efficiency spending declined by nearly 50 percent in real terms from 1993 to 1997, the inclusion of public benefit fund energy efficiency spending helped lead to an approximately 1 percent increase in such national spending from 1997 to 1998 (from $901 million to $913 million, in 1998 dollars).

Table 2: State Administrative Approaches for Public Benefits Programs

Table 2: State Administrative Approaches for Public Benefits Programs (cont'd)

administering their public benefits energy efficiency programs can be sorted into three basic categories: (1) utility administration; (2) independent administration by a government or other non-utility entity; and (3) some type of "hybrid" approach. (That numerical code is incorporated into the table.)

Of the 18 states that have proceeded far enough to allow an assessment, a total of 7 states can be categorized as having individual utilities administer their energy efficiency programs (albeit often with some type of collaborative advisory process). Six additional states have chosen some type of independent entity (four use a state government agency of some sort and two will use a competitively selected independent contractor).

Finally, five states fall into what this study refers to as a "hybrid" category,[9] where utilities have some administrative role, but the approach can't really be categorized as simple utility administration. In that group, approaches range from utility administration within a system of substantial planning and direction from a regulatory-appointed body and requirements for certain "statewide" programs, to a system whereby utilities get "credit" for any programs they run themselves and only need to remit any remaining portion of the total spending requirement to a state agency for administration.

It should be noted that although it is possible to sort states into three general categories, most states have various elements and features that make their approach somewhat unique. This is truly an area where a lot of interesting experimentation is occurring. (See Appendix C for details on each state.)

Funding duration. The third key issue regarding public benefit energy efficiency policies has been the length of time for which funding has been required. Here again, there has been quite a bit of variability. A total of six states do not set any specific duration for the funding requirement, leaving it essentially open-ended. Another four states set a 10-year funding period. Six states specify 5 years, one state set 4 years, and two states set 3 years. It is interesting to note that some of the earlier restructuring states tended to specify shorter time periods (e.g., California 4 years, New York 3 years, etc.), whereas the more recent restructuring states tended to specify longer or open-ended periods. This may reflect an emerging recognition that transforming markets to be energy efficient is not a simple or quick process, and that there is an ongoing need for these public benefits programs.

Most of the states that set a specific time duration indicated that some type of review and determination of future policy would occur as the end of the initial period approached. That process has already begun in several states.

[9] This study categorizes California, Connecticut, Maine, Montana, and Pennsylvania as being in the "hybrid" group. Each state's particular approach is described in Appendix C.

QUALITATIVE RESULTS

The second segment of results presented in this paper focuses on a qualitative assessment of the policy mechanisms and early implementation experience in states that have adopted public benefits policies. This information is based on telephone interviews with representatives of several key interested parties in each state. The ultimate set of respondents was almost equally divided among five groups: state regulators; other state agencies; utilities; advocacy groups; and "other" (e.g., customer groups, suppliers, etc.). These ratings are of course subjective, and come from groups involved in the issue rather than "neutral parties." Still, the nature of the groups interviewed provides a good range of perspectives.

These qualitative results are summarized below using three different mechanisms: (1) interviewee "ratings" of their state's public benefit policies and implementation; (2) key "lessons learned" as identified by the individuals interviewed; and (3) a brief description of some of the key mistakes ("bloopers") made thus far in developing state public benefits policies, again as noted by the interviewees.

Grading Public Benefit Policies and Implementation

Telephone interviews with representatives of key organizations (see above) were conducted for each of the 19 states identified previously as having passed some type of restructuring-related energy efficiency public benefits policy. Typically, three to five interviews were conducted in each state. As a part of the interview, in order to provide a general indicator of their degree of satisfaction, respondents were asked to assign a letter grade ('A' to 'F') to two aspects of the situation in their state: (1) the adequacy/quality of the "on paper" policy that their state had adopted; and (2) the administrative execution/implementation of that policy thus far.

Among the results from those ratings, a few aspects are worthy of note. First, the respondents in these states had an overall fairly positive regard for the public benefits policies adopted by their state. The modal grade assigned was a 'B', and over 80 percent of respondents assigned a 'B' or an 'A'.

With a few exceptions, grades assigned for implementation to date tended to be the same or slightly lower than the "on paper" policy grade. However, respondents in a number of cases assigned an incomplete because they felt it was too early to pass judgement on implementation aspects.

The two most common reasons offered for downgrading the state's policy were a lack of clarity in the legislation (leading to subsequent argument and delays) and that the funding levels were too low. Reasons for downgrading on the implementation side tended to focus on administrative delays, with occasional mention of lack of support for the policy by certain agencies responsible for implementation.

For confidentiality and other reasons, this report avoids going into detail about individual raters and their states. However, for those looking for a good model for state legislation, the most consistently positive ratings for the "on paper" policy were received for Vermont, Rhode Island, Connecticut, and Massachusetts. (The qualitative assessment results for each state are discussed in Appendix C.)

Lessons Learned

The second aspect of qualitative assessment was to ask respondents to identify what they considered to be the key lessons learned thus far in developing their state's public benefits policies. For brevity and clarity, the major lessons identified are simply listed below. In viewing these responses, it is useful to keep in mind that most states had not yet actually implemented their public benefits programs (many are tied to the schedule for opening up retail choice of generation suppliers). Therefore, many of the lessons at this point relate to developing and passing the public benefits policies in the first place, rather than in-the-field implementation experience.

Key lessons cited include the following.

Developing and Passing a Policy

- Advocates need to get organized early in the process and make sure they have a seat at the table as restructuring policies are initially discussed. Advocates in many states expressed regret at having entered the process too late to achieve optimal results.
- If possible, form coalitions, especially including business interests. It has been particularly helpful to include businesses that are directly involved in program delivery (contractors, suppliers, etc.) to make clear the positive impact on jobs and local economic activity.
- It is very important to try to find a legislative and/or regulatory "champion" for the policy—someone who will take ownership of the issue and work within the system to make sure that the policy remains intact throughout the process.
- In communicating on this issue to policymakers, make clear all the benefits of the policy. Don't let the debate focus just on the costs. In particular, there is often a tendency for policymakers to focus inordinate attention on minimizing rates, thus ignoring all the economic and other benefits resulting from providing funding for energy efficiency.
- Make sure the legislative language is specific and clear (especially regarding the funding amount and mechanism). This helps avoid arguments and delays later.
- Every state is unique. There is no single solution for all situations.
- Work with existing assets in your state. If some approaches/organizations have worked well, incorporate them into the policy approach.

- Be diligent throughout the process. Make sure final legislative language is correct. Don't just assume that the original verbal deal is correctly translated into actual language. Details matter. (This also applies to subsequent rulemaking and orders.)

Designing the Approach

- Set up a dedicated fund to support the public benefits, rather than relying on general revenues and/or annual appropriations. Clear dedicated funding is crucial.
- Programs take time to implement properly (especially market transformation). Be sure to allow sufficient time for policies to work. A number of parties expressed concern that a 3- or 4-year time frame for public benefits funding was not sufficient.
- Central statewide administration, or at least close coordination among different utilities in a state, is crucial for market transformation strategies.
- Also need to think about regional (in addition to intra-state) cooperation for certain strategies (especially things like market transformation and renewable portfolio standards).
- Need to develop an infrastructure and renewables industry if renewable mandates are going to succeed. A number of parties expressed concern that there is presently an inadequate infrastructure for renewable energy to meet the renewable energy market penetration objectives being established in some states.

Implementation

- If programs are to be administered by an independent entity rather than the utilities, try to select an organization with experience and demonstrated capability in this field. This will be much quicker and more effective than trying to create a new organization.
- In delivering programs, try to take advantage of existing experienced delivery channels, while still allowing some opportunity for testing creative new approaches. There is room to incorporate both strategies.
- Don't commit all available program dollars immediately at the outset. Retain some flexibility to direct funds to good program ideas that emerge as experience unfolds.
- Use of multiparty collaboratives for program guidance and oversight can be an effective mechanism for avoiding litigation and other challenges and delays, and can be done in a reasonably efficient manner.

Finally, additional lessons from the experience to date with public benefits can perhaps be best illustrated by briefly describing what appear to be some of the major mistakes or oversights encountered thus far in public benefit policy development.

Blooper Highlights

In the hope that states enacting future policies can learn from the mistakes of others, this section of the report presents a few of what might be termed highlight "bloopers" in public benefits policy formation to date. These examples were identified during the interviews done for

the qualitative assessment portion of this study. The names of the respondents and the states are omitted in order to protect the innocent.

The "stranded cost" trap. In setting the level of public benefit funding for energy efficiency, one issue faced by several states was the question of what to do with ongoing cost obligations from prior program activities (e.g., payments for savings from previously installed measures, such as under a "standard performance contracting" type of program). In some cases, these cost obligations were explicitly excluded from the new energy efficiency charge (e.g.,Oregon). In other cases, the new energy efficiency charge was set at a high enough level to assure sufficient funds for new programs as well as covering the cost obligations from prior programs (e.g., New Jersey). However, at least one state has discovered that their new system benefits charge (SBC) will be almost entirely used up to pay for prior energy efficiency program costs (rather than covering those prior obligated costs in some other manner, such as including them in the stranded cost recovery area).

The "legislative definition" exclusion. As discussed previously, the details of legislative and regulatory language are crucial. In a textbook example, one state passed a very aggressive RPS but discovered that the fine print of the legislation exempted "default" (otherwise known as "Standard Offer") service from the RPS. Since experience under restructuring thus far has shown that almost all residential and small commercial customers have stayed on default service, the potential impact of the RPS would be largely negated.

The "bureaucratic roadblock." In most states the legislature can create policy, but it is up to other agencies of government to implement that policy. In more than one state, the restructuring legislation contains favorable language "authorizing" a SBC for energy efficiency and renewable energy but non-supportive regulatory commissions have not yet approved any funding.

The "procedural gridlock." Even without deliberate obstruction, the complexity of overlapping rules and procedural requirements can impede implementation. In what is perhaps a classic example, one large state has become infamous for its administrative meltdown, where an overly complex process and lack of coordination among different government entities has hindered its goal of statewide administration of the public benefits energy efficiency funds.

In contemplating the lessons learned from these "bloopers," one additional aspect is worthy of note—that these policy miscues are not always mistakes. In the political process, there are often powerful opponents to public benefits funding (e.g., large industrial customers, independent electricity suppliers, sometimes the utilities themselves). In this context, one party's "blooper" oversight may be another party's carefully conceived strategy for minimizing the costs and/or effectiveness of the public benefits policy. This just heightens the importance of careful planning and constant vigilance on the part of those advocating for a public benefits policy.

INITIAL IMPACT RESULTS

For most of the 19 states that have adopted an energy efficiency public benefits policy, it is too soon to assess program impacts. Indeed, for a majority of those states, actual program implementation either has not yet begun or just began this year.[10]

However, there are three states (California, Massachusetts, and New York) that began their public benefit energy efficiency programs in 1998 and have had time to do some initial impact assessment. Each of those states is briefly addressed below.[11]

California

The state of California was unquestionably a prominent pioneer in this area, for both electric restructuring in general and the concept of public benefit funding in particular. California was among the first states to pass comprehensive restructuring legislation and one of the first to create a specific non-bypassable wires charge to support energy efficiency. (They also included a wires charge to support other public benefits, including renewable energy, research and development, and low-income programs.)

California created an initial 4-year period for its "Public Goods Charge" (PGC) and specified a funding level for energy efficiency that is nominally the largest in the nation, with an average annual funding of approximately $218 million/year. (On a per kWh basis, this charge is equivalent to approximately 1.3 mills/kWh, about in the middle range of states with energy efficiency public benefit funding.)

The initial intention in California was to "bid out" the administration of the energy efficiency programs. However, after encountering a variety of legal and administrative obstacles, the California Public Utilities Commission eventually decided to allow the individual utilities to continue administering the programs through the initial 4-year authorization period.

California began its PGC energy efficiency programs in 1998 and has implemented a wide variety of energy efficiency approaches. Market transformation in particular has been emphasized and in pursuit of that objective there are a number of state-wide programs being coordinated among the major utility companies. The California Board for Energy Efficiency (CBEE) reported that total electric energy efficiency PGC spending for 1999 was $200 million, with estimated annualized savings of 825 million kWh and 156 MW of peak demand, producing

[10]Most states tied the implementation of their public benefits funding and programs to the start date for retail competition in their state.

[11] One other example of a new energy efficiency policy approach that deserves mention, but that does not neatly fit into the state restructuring public benefits focus of this study, is the multi-state market transformation effort known as the Northwest Energy Efficiency Alliance (NEEA). Although its funding is not driven by state "public benefit funds" created under restructuring, it has had extensive success in implementing market transformation programs, an approach that many believe is a key energy efficiency strategy for the new restructured electricity industry. (Note that a similar market transformation organization [NEEP] has had great success in the Northeast but its funding is more directly tied to state restructuring public benefit funds in that region. Therefore, it is implicitly included in the state public benefits focus of this report.)

net benefits (benefits in excess of program and customer costs) of about $140 million (CBEE 2000).[12]

Massachusetts

Massachusetts passed restructuring legislation in 1997, which included public benefits funding for energy efficiency, renewable energy, and low-income programs. In Massachusetts, the PBF, which began operating in 1998, is administered by distribution utilities in accordance with plans filed with and approved by state agencies. Energy efficiency programs include a mixture of traditional demand-side management (DSM) programs operated by individual utilities and regional market transformation programs in which many utilities from New England hire a single program contractor to serve many utility service areas.

In the first year of PBF operation, nearly 150,000 customers participated in direct PBF programs, spanning all customer classes. According to an analysis by the Massachusetts Division of Energy Resources (DOER, the state energy office), energy efficiency programs reduced participating customer energy use by 6-13 percent (varying by customer class), saving customers $19 million annually in electricity costs. Over the lifetime of these measures, benefits are projected to be $265 million, exceeding the cost to achieve these savings (including investments by participating customers and the PBF) by about $140 million. The DOER calculated that the cost to conserve energy from those programs will be about 60 percent less than the cost to buy electricity over the life of these efficiency measures, and that the overall benefit-cost ratio of the energy efficiency programs is 1.8 to 1. The DOER also reports substantial job creation benefits and environmental emissions reductions from the programs (DOER 2000).

New York

New York started its PBF in July 1998. The program is largely administered by the New York State Energy Research and Development Authority (NYSERDA), a semi-independent organization established by the state government in 1975. NYSERDA developed a plan calling for about 30 complementary energy efficiency programs addressing different sectors, measures, and market niches. Over the past 2 years, NYSERDA has been steadily launching these new programs, which are run by independent contractors selected by NYSERDA through competitive solicitations. The programs fall into five categories—energy efficiency, renewable energy, low-income, research and development, and environmental protection. Energy efficiency accounts for 70 percent of the budget and is divided into market transformation, standard performance contracting, and technical assistance programs. Some highlight results of an initial analysis (NYSERDA et al. 2000) of the New York efforts are presented below.

[12] Note that California also has natural gas energy efficiency programs funded through gas rates rather than a separate PGC. In 1999 the gas programs spent about $43 million, saved 14 million therms, and also produced benefits in excess of program and customer costs.

After nearly 2 years of work, NYSERDA has gotten 25 programs operational, with additional programs set to begin this year. Measures already installed are projected to save consumers and businesses $12.5 million annually, providing a 1.4 year payback on the $17 million spent to date. Furthermore, experience to date is that for each $1 NYSERDA invests, customers, energy service companies, and others are investing $3, providing good leveraging of the public fund. By the end of Year 3, NYSERDA expects the programs that are already in operation to reduce energy bills by more than $100 million annually, providing an approximately 0.7 year payback on public funds invested.

Some programs have been particularly successful. For example, the commercial new construction program is assisting 70 different buildings in reducing energy use and expects to exhaust its initial budget shortly; additional funds are now being allocated to the program. The residential lighting and appliances program has recruited 270 retailers in the state to participate and is now running an award-winning public service and advertising program to increase consumer interest in ENERGY STAR® products. And the technical assistance program is working with 29 different private service providers to assist in the development of nearly 300 energy-saving projects. On the other hand, the standard performance contracting (SPC) and premium-efficiency motors programs were initially under-subscribed and program enhancements were introduced to try to increase participation.[13] Based on these initial successes, regulatory and legislative proceedings are now pending to extend the program and increase its annual funding.

CONCLUSION

While it is of course too soon to draw firm conclusions about the relative success of public benefit fund policies regarding energy efficiency, the early indications are quite positive. Collection of the fund revenues and actual implementation of the energy efficiency programs has begun in at least ten states, with several states having had their programs "in the field" now for at least 2 years. The early results from those states are very favorable, as discussed above.

In addition, these public benefit policies regarding energy efficiency received high marks from various stakeholders in the respective states. ACEEE interviewed multiple parties (i.e., administrators, utilities, advocate groups, etc.) in each of the states with such policies in place. The results indicate that respondents had an overall quite positive regard for the public benefits policies adopted by their state, and in most cases, for the implementation efforts to date.

Key Lessons

The principal public policy lesson learned from this study is that it is indeed possible to establish a statewide public benefit energy efficiency funding mechanism and achieve practical

[13] NYSERDA staff just recently reported that Year 2 of the SPC program saw a major increase in participation, such that the entire original 3-year budget was nearly exhausted after 2 years. Efforts were underway to secure additional funding for Year 3.

success in administering and delivering programs funded by that mechanism. The very visible success of such efforts in numerous states clearly demonstrates that fact.

A significant corollary lesson is that there does not appear to be any single "correct approach" for the design of such a system. Some states are having success with utility administered programs (e.g., Massachusetts, Connecticut, and California) while others are succeeding with programs administered by state agencies (e.g., New York and Illinois) or even by an independent entity selected by an RFP (e.g., Vermont).

This translates into what might be the primary strategic and tactical lesson of the study—once having met an overall policy threshold of having public benefit funding support for energy efficiency, each state should take advantage of its own strengths and assets in designing the specific details of its energy efficiency policy implementation approach.

Of course, this broad picture of success with public benefit funds does not mean that there haven't been some lessons learned from negative experiences as well. One of the major lessons in that respect has been the importance of writing clear legislative language regarding the funding and operation of public benefits programs. More than one state has experienced significant delays due to arguments over the meaning of ambiguous wording in their legislation. Similarly, there have been times where policy conflicts between different branches or agencies of government have held up public benefit program implementation.

On balance, however, the experience to date with public benefit funds has been quite positive. Most importantly, they have proven to be a very effective strategy for sustaining energy efficiency improvements in restructured electricity markets. While it is still early in the process, and further monitoring and evaluation are necessary, the results thus far indicate that the creation and use of a public benefit funding mechanism can be an effective policy approach.

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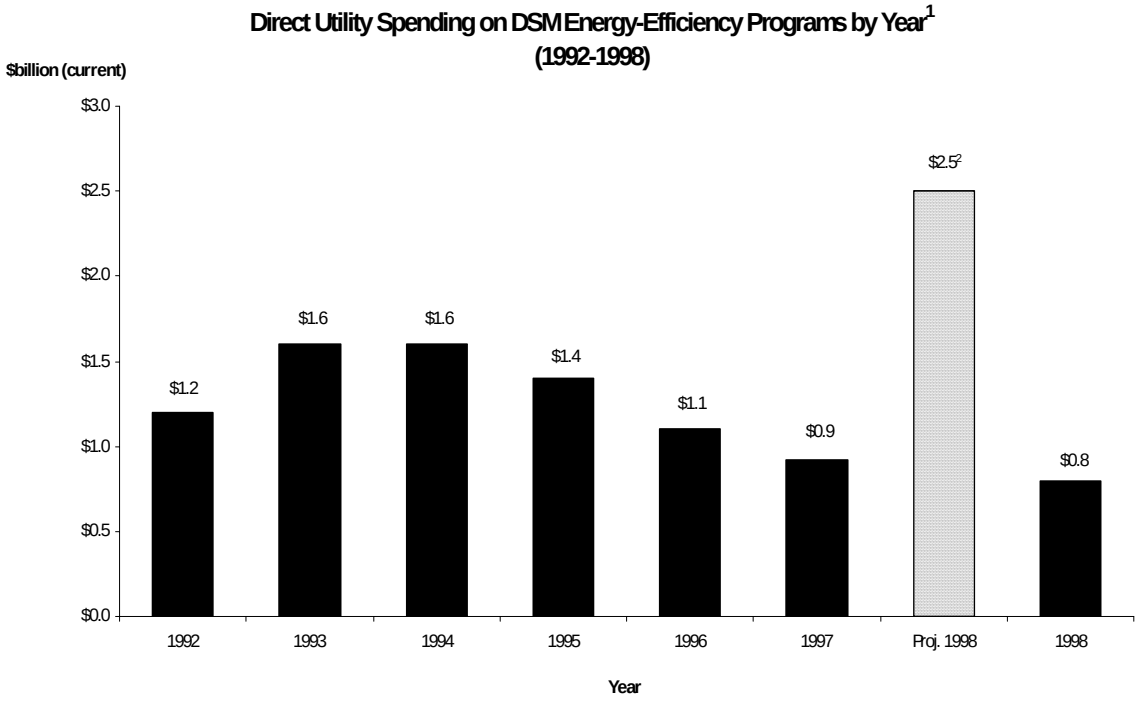
APPENDIX A: NATIONAL ELECTRIC UTILITY SPENDING ON ENERGY EFFICIENCY



1 The U.S. direct annual utility spending on energy efficiency for 1992 - 1998 is based on data obtained from the Energy Information Administration (EIA), Form EIA-861, "Annual Electric Utility Report" .

2 As part of the EIA data collection, utilities were asked to project their future spending levels five years out. This is the spending level projected by utilities in 1993, prior to the onset of restructuring.

APPENDIX B: STATE-BY-STATE SUMMARY TABLE OF PUBLIC BENEFITS POLICIES AND FUNDING

APPENDIX B: STATE-BY-STATE SUMMARY TABLE OF PUBLIC BENEFITS POLICIES AND FUNDING (CONT'D)

APPENDIX B: STATE-BY-STATE SUMMARY TABLE OF PUBLIC BENEFITS POLICIES AND FUNDING (CONT'D)

APPENDIX B: STATE-BY-STATE SUMMARY TABLE OF PUBLIC BENEFITS POLICIES AND FUNDING (CONT'D)

APPENDIX C: BRIEF STATE SUMMARIES OF PUBLIC BENEFIT MECHANISMS—CURRENT STATUS AND QUALITATIVE ASSESSMENT

This appendix presents additional brief summary information for those states covered in this study that have passed specific energy efficiency public benefits policy mechanisms. Those states include: *Arizona, California, Connecticut, Delaware, Illinois, Maine, Maryland, Massachusetts, Montana, New Hampshire, New Jersey, New York, Ohio, Oregon, Pennsylvania, Rhode Island, Texas, Vermont, and Wisconsin.*

Each state summary provides: (1) a short description of the public benefits **policy mechanism**,[1] including funding levels where available; (2) a quick notation of the current **status** of implementation of the public benefits policies; (3) a brief summary of the **qualitative assessment** of the public benefits policies, and their implementation, as provided by representatives of key involved parties in that state; and (where data is available[2]) (4) a bar graph showing historical utility energy efficiency spending levels[3] compared with projected public benefits energy efficiency funding.[4]

[1] Much more detailed information about each state is provided in the Volume 1 report of this project *(Volume 1: A State-By-State Catalog of Policies and Actions*).

[2] In other words, for the states for which it was possible to estimate the new public benefits energy efficiency funding level.

[3] Data on historical energy efficiency spending was taken from EIA data bases. In a few cases, other estimates of spending were available from other sources (e.g., regulatory staff) and they typically differed somewhat from the EIA figures (albeit usually by a relatively minor amount). This study did not attempt to reconcile those differences. In order to be able to make reference to a consistent source of information, and have data available for all states, the spending figures for each state in this appendix are based on EIA data.

[4] As discussed earlier in this report, although some information is provided in these summaries about other categories of public benefits (e.g., renewable energy and low-income programs), greater attention is given to the area of energy efficiency. The provision of just energy efficiency spending data reflects in part that orientation and in part the fact that no comparable available source of data exists for historical spending in the other areas.

ARIZONA

Policy Mechanism

On May 29, 1998, legislation (HB 2663) was signed to implement electric utility restructuring in the public power sector in Arizona. The public utility Salt River Project (SRP) is the second largest supplier in the state. Full retail access in SRP's service territory is expected by December 31, 2000. A system benefits charge was not mandated in HB 2663 although SRP is committing a minimum of $6-7 million annually towards an Environmental Portfolio Standard (EPS).

Electric restructuring of investor-owned utilities (IOUs) was not included in HB 2663. Restructuring of the IOUs in Arizona has been based on regulatory decisions of the Arizona Corporation Commission (ACC). In Decision No. 61969, Rule 14-2-1608, the ACC instructed utilities to include an SBC charge in their restructuring plans to fund Commission-approved low-income, demand-side management, consumer education, environmental, renewable energy, long-term public benefit research and development, nuclear fuel disposal, and nuclear power plant decommissioning programs. The companies' estimated annual contributions for public benefit programs (not including low-income programs) total $8 million—approximately $2 million for Tucson Electric Power (TEP) and $6 million for Arizona Public Service (APS). In addition, APS and TEP have committed $1 million/year and $2.9 million/year respectively to low-income programs.

Decision No. 62506, regarding an EPS, signed by the Commissioners in May 2000, recommended that the utilities produce 0.2 percent of their power from renewable resources in 2001, with at least 50 percent of that from solar electric. It was proposed that the EPS funding consist of a separate line item surcharge of approximately $0.000875/kWh, with a maximum of $0.35/month for residential customers, $13/month for most business customers, and $39/month for business customers using 3 MW or more. Total annual contributions toward the EPS are estimated to be approximately $16 million ($2 million from TEP, $6 million from APS, $1 million from the cooperatives, and $6-7 million for SRP).

Status

ACC Decision No. 62506 proposed that the Commission allow all public benefit funds (with the exception of low-income funding) to be shifted into the EPS budget. It is very likely that both TEP and APS will shift most or all of their energy efficiency and renewable program funding into the EPS. This shift would result in a total annual EPS budget of approximately $24 million, including Salt River Project (SRP) and cooperative utility funding.

The EPS rulemaking proceeding, initiated by Decision No. 62506, is expected to begin in August 2000 and will include a public comment hearing that is tentatively planned for October 19, 2000. ACC staff hope to see a Commission vote on the final EPS rules by the end of the

year. If so, retail access for all customers will commence on January 1, 2001, as scheduled, as will the collection of the surcharge to cover the EPS. In the meantime, TEP and APS will continue offering their current energy efficiency and renewable programs.

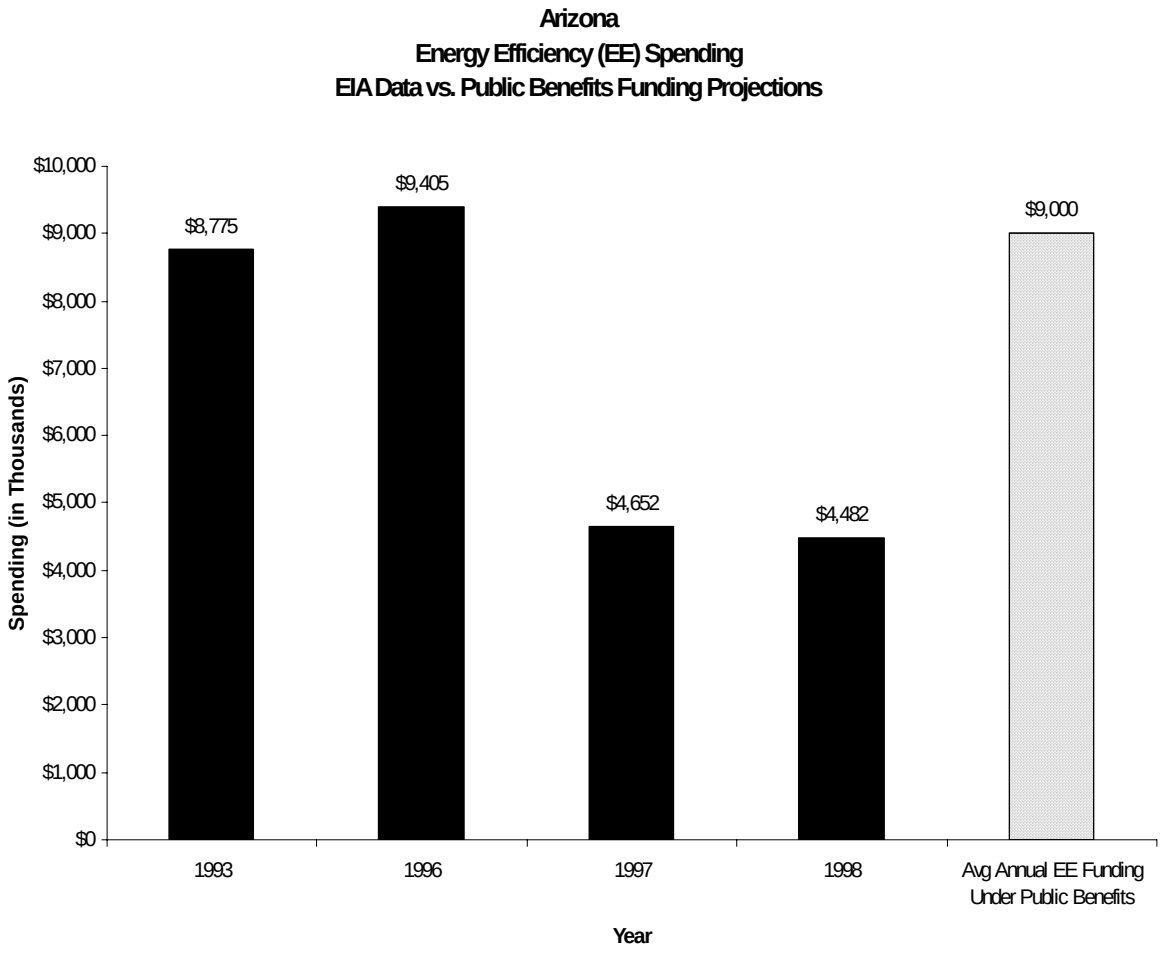
Qualitative Assessment

The overall design of the public benefits approach in Arizona was rated fairly positively by each of the parties interviewed (state regulatory agency, utility, and environmental group), with assigned grades ranging from 'B+' to 'A'. In general, the parties felt that the process of incorporating public benefit programs into the restructuring process went relatively smoothly. The proposed programs were primarily a continuation of previously approved energy efficiency programs at similar funding levels. As a result, most parties supported the programs. The lowest grade was assigned by the environmental group representative, who expressed some disappointment that most of the energy efficiency funds were likely to be shifted into the EPS when it is formally established.

More controversy tended to focus on the use of the SBC for nuclear decommissioning, stranded costs, and to some extent, on the strong solar requirement in the EPS. One ACC representative felt that a primary obstacle in the EPS settlement process was keeping the electric solar technologies the primary fuel source in the portfolios. The utilities and industrials viewed solar as more expensive compared to other renewable fuel sources and were concerned about its effect on the rates. These two parties felt that there are better, less expensive options such as wind, geothermal, and gas. One of the interviewed ACC staff members felt that there needs to be more education on solar technologies and their costs. Apparently, there was a lot of conflicting information cited in the discussions (some of it very dated), making it difficult to determine the actual cost of a particular technology.

The rationale for the solar requirement on the part of the ACC was based on the desire to move further toward "Sustained Orderly Development" and it therefore didn't want to see the portfolio diversified into too many types of technologies. If, for example, the utilities buy photovoltaic technologies in mass quantities, the photovoltaic plant will be paid for over time, making it possible for reinvestment in research and development, which will reduce the cost of the technology.

As for implementation, the parties declined to assign a grade because the programs had not yet been finalized and put into place.


Arizona
Energy Efficiency (EE) Spending
EIA Data vs. Public Benefits Funding Projections
$10,000
$9,000
$8,000
$7,000
$6,000
$5,000
$4,000
$3,000
$2,000
$1,000
$0
Spending (in Thousands)
$8,775
$9,405
$4,652
$4,482
$9,000
1993
1996
1997
1998
Avg Annual EE Funding Under Public Benefits
Year

CALIFORNIA

Policy Mechanism

In September 1996, the governor signed California's restructuring legislation (AB 1890) into law. AB 1890 provides funding for four public interest programs: (1) cost-effective energy efficiency and conservation; (2) public interest research, development, and demonstration (RD&D) to advance science or technology not adequately provided for by competitive and regulated markets; (3) California-based renewable energy resources; and (4) low-income services. AB 1890 requires that investor-owned utilities in California provide funding for the above programs through a non-bypassable wires charge based on usage. Publicly owned utilities (i.e., municipal utilities) are also required by AB 1890 to establish a non-bypassable wires charge to fund any or all of these four programs at not less that the lowest expenditure level of the IOUs on a percent of revenue basis.

Funding levels for the public benefit programs have been established for 1998-2001. The California Public Utilities Commission's (CPUC) authority to collect funds for the renewable energy account expires on March 31, 2002. The authority to collect monies for RD&D, energy efficiency, and low-income programs is open-ended per AB 1890. As of June 2000, legislation is being drafted to extend funding beyond 2001 for all programs.

The total authorized program cost is approximately $500 million/year on average (about 3.0 percent of revenues or 3.0 mills/kWh). Funds are allocated as follows: energy efficiency—$218 million/year (about 1.3 percent of revenues or 1.3 mills/kWh); renewable energy—approximately $135 million/year (0.8 percent of revenues or 0.8 mills/kWh) (45 percent existing, 30 percent new, 10 percent emerging, and 15 percent consumer-side); RD&D—$61.8 million/year (0.4 percent of revenues or 0.4 mills/kWh); and low-income—$81 million (0.5 percent of revenues or 0.5 mills/kWh).[5]

Status

The CPUC initially sought to pursue independent non-utility administration of the state's public benefit programs, and established the California Board for Energy Efficiency to oversee and facilitate that transition in the energy efficiency area. After encountering considerable legal, administrative, and procedural obstacles, however, the CPUC ultimately determined that the utilities will continue administering the energy efficiency and low-income programs at least through 2001. Oversight of energy efficiency functions relating to program planning, market assessment, program evaluation, etc. was assumed by the CPUC's Energy Division in March 2000 after the CPUC dissolved the CBEE in February. In spite of this administrative turmoil,

[5] This funding for energy efficiency does not include small IOUs and municipal utilities, which will be substantial (e.g., the Los Angeles Department of Water and Power has a $20 million program). Also, it does not include approximately $45 million/year for natural gas energy efficiency programs or the $700,000 that the utilities retained for annual transmission and distribution-related public interest RD&D.

however, the public benefit fund energy efficiency programs have been in operation since 1998. (Some of the highlight results were discussed earlier in this report.)

Also in February 2000, the Low-Income Governing Board (LIGB) experienced a name change and a change in responsibilities. The group, now referred to as the Low-Income Advisory Board (LIAB), has among other responsibilities the task of advising the Commission on the standardization of program design and delivery for low-income residents across utilities.

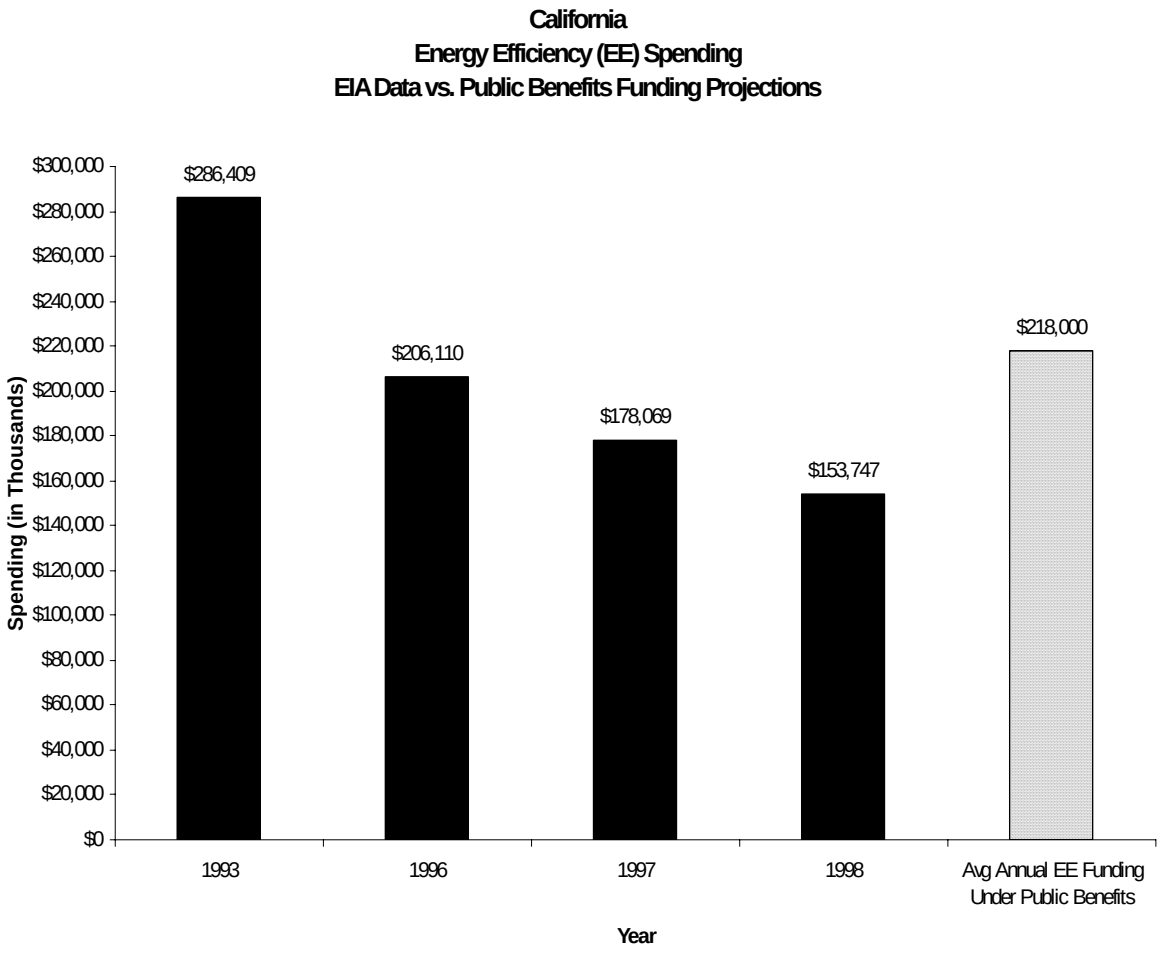
CEC administers the renewable energy and RD&D programs. A wide variety of programs and projects have been funded through these mechanisms, ranging from direct funding of projects to per-kWh subsidies for the purchase of green power.

Qualitative Assessment

Achieving consensus on anything in California is a monumental feat, yet the representatives of the sectors interviewed for this project (state government, utility, and environmental groups) were remarkably consistent in their assessment of the state public benefit policy approach, each rating it a 'B' overall. Positive comments focused on the fact that the legislation was fairly clear and straightforward, particularly in the funding categories and amounts, and that each of the major categories (energy efficiency [EE], renewable energy [RE], low-income [LI], and research and development [R&D]) were reasonably well funded. One area of weakness in hindsight was that the legislation didn't clearly specify the role of the utilities in administration of the energy efficiency programs, and considerable time and resources have been "wasted" in subsequently arguing over that issue.

When moving to the implementation category, the assessment of the parties was much less positive. With the exception of a utility respondent who graded the implementation as a 'B' (citing particularly that a lot of good hard work had gone into implementing the programs), the other grades were in the 'C' to 'D' range.[6] Noted as problems were the major difficulties over the administration issue and the lack of clarity over whether energy efficiency programs were to be market transformation or resource acquisition in nature (with the result that they didn't seem to do either one very well).

[6] The other exception was one of the environmental group representatives, who distinguished the renewable energy area of public benefit implementation as worthy of an 'A," in contrast to the energy efficiency area rating a 'C-.'


California
Energy Efficiency (EE) Spending
EIA Data vs. Public Benefits Funding Projections
Spending (in Thousands)
$300,000
$280,000
$260,000
$240,000
$220,000
$200,000
$180,000
$160,000
$140,000
$120,000
$100,000
$80,000
$60,000
$40,000
$20,000
$0
$286,409
$206,110
$178,069
$153,747
$218,000
1993
1996
1997
1998
Avg Annual EE Funding Under Public Benefits
Year

CONNECTICUT

Policy Mechanism

The restructuring legislation in Connecticut (PA 98-28), signed in April 1998, established specific line charges for energy efficiency (3.0 mills/kWh), renewable energy (0.5 mills/kWh ramping up to 1.0 mills/kWh), and low-income programs (approximately 0.3 mills/kWh[7]). The charges began January 1, 2000 and had no specified ending date.

The administration of the energy efficiency programs in Connecticut features what this study has referred to as a "hybrid" approach. The programs are administered by the distribution utilities, but with substantial direction and oversight from a Connecticut Department of Public Utility Control (DPUC)-appointed Management Board. The Board sets guidelines (program designs and budget allocations), reviews and approves the utility plans, and sends them to the DPUC for final approval.

Renewable energy funds are administered on a statewide basis by a quasi-public agency (Connecticut Innovations, Inc.), using line charge funds deposited by the distribution utilities into the Renewable Energy Investment Fund.[8] Low-income programs are overseen by the DPUC.

Status

The distribution utilities developed their first energy efficiency program plans under the new mechanism and had them approved by the Management Board and filed with the DPUC by late 1999. The DPUC held contested case hearings, resulting in a few minor modifications, and approved the plans early in 2000. The utilities are now in the field with their first year public benefit energy efficiency programs.

Funds started flowing into the Renewable Energy Investment Fund in January 2000. The Advisory Board has been meeting periodically and has approved two renewable energy investment projects as of June 2000: one involving a "cooperative" approach to green energy procurement and another relating to portable solar technology.

Qualitative Assessment

The assessment of the public benefits policy in Connecticut was quite positive, generally in the 'B+' to 'A-' range. This was the fairly consistent opinion of the representatives of the utility, state government, and energy efficiency/environmental advocacy sectors that were interviewed.

[7] The low-income program support is part of a larger SBC covering several items, including nuclear decommissioning and certain restructuring-related employment costs.

[8] There is also a two-tiered Renewables Portfolio Standard established in the legislation. See the Volume 1 report for details.

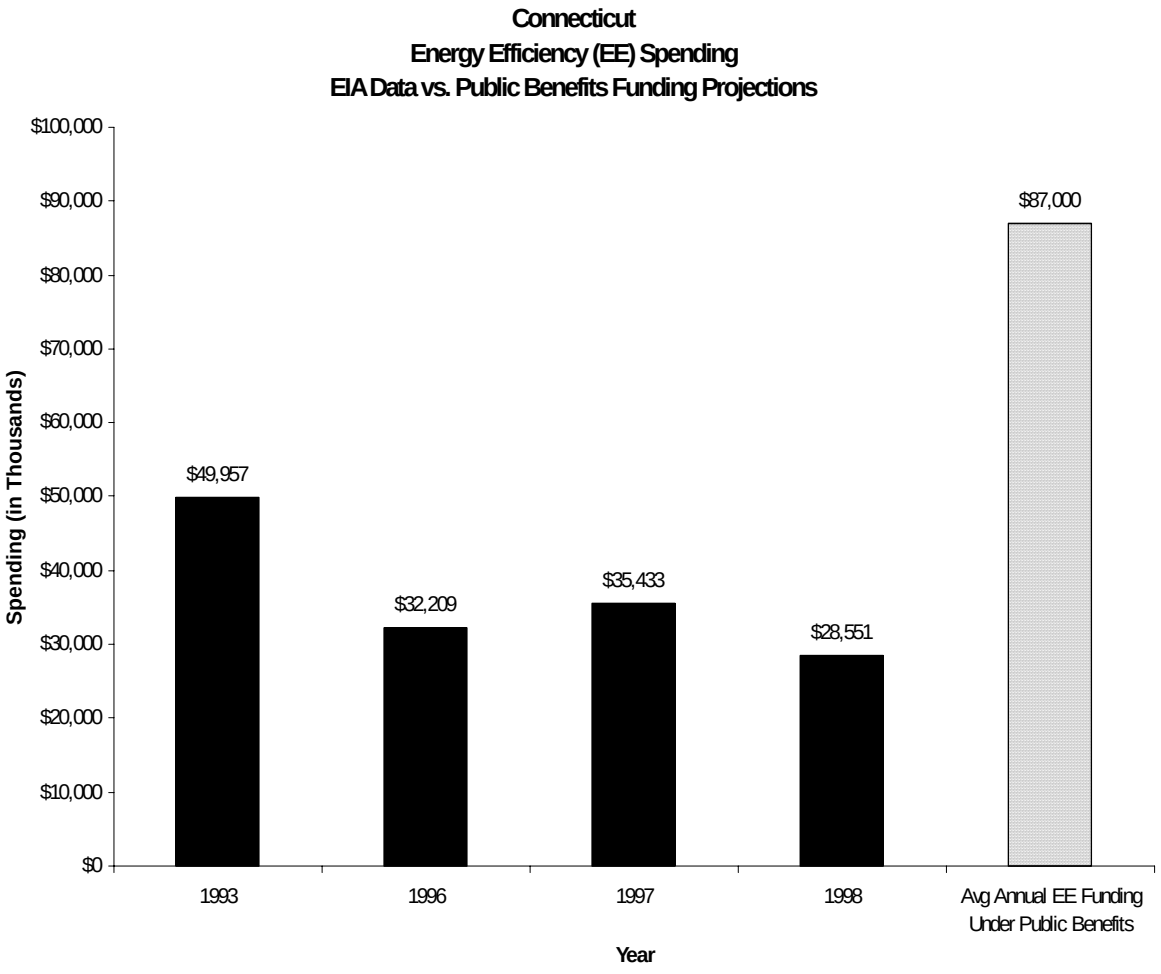
Receiving particular mention were the positive aspects of being comprehensive (i.e., specific support for EE, RE, and LI, plus an RPS), having a good, broad-based advisory and oversight process, and being well-funded.[9] Also receiving positive mention was the fact that the legislation specifically opened up some new areas of energy efficiency attention, including market transformation.

In terms of the implementation process, the opinions regarding the Management Board and the associated procedures were quite positive. Despite some "acrimonious" moments early in the effort, the process seems to have worked well. Similarly, despite some early concerns, the DPUC approval process seems to have gone fairly well. As for actual program implementation, it was too soon to make an assessment.

One particular negative aspect of the broader public benefits policy (which actually made it to the "bloopers" list earlier in this report) was in regard to the Renewables Portfolio Standard. The wording in the legislation had some details that caused the DPUC to determine that the RPS would not apply to the "Standard Offer" service provided by the distribution utilities.[10] This is very significant because experience with restructuring around the nation has shown that the vast majority of customers stay with the standard offer provider. If uncorrected, this wording would mean that the impact of the RPS will be greatly diminished.

[9] Connecticut was one of the few states where energy efficiency funding under restructuring was actually set higher than historical levels.

[10] This had to do with the distribution utility not having to be "licensed as a supplier," whereas the RPS language referred to licensed suppliers.


Connecticut
Energy Efficiency (EE) Spending
EIA Data vs. Public Benefits Funding Projections
Spending (in Thousands)
$100,000
$90,000
$80,000
$70,000
$60,000
$50,000
$40,000
$30,000
$20,000
$10,000
$0
$49,957
$32,209
$35,433
$28,551
$87,000
1993
1996
1997
1998
Avg Annual EE Funding Under Public Benefits
Year

DELAWARE

Policy Mechanism

Delaware's restructuring legislation (The Electric Utility Restructuring Act of 1999—HB 10) was signed into law in March 1999. The prescribed public benefit programs include low-income weatherization and fuel assistance programs and energy efficiency programs within Conectiv's service territory.

The low-income and energy efficiency funds are financed by Conectiv customers through the transmission and distribution rates of each rate class. The charge for low-income programs is 0.95 mills/kWh (approximately $800,000 annually). Revenues from the charge are deposited each month by Connectiv into a low-income fund. Approximately two-thirds of the funding will be spent on low-income weatherization with the remaining one-third going towards energy bill payment assistance. The charge for energy efficiency is 0.178 mills/kWh (approximately $1.5 million annually), with revenues to be deposited each month into an environmental incentive fund.

The low-income fund is administered by the Department of Health and Social Service's Division of State Service Centers (which currently administers similar federally funded programs). The environmental incentive fund is to be administered by the Delaware Economic Development Office, in consultation with the Division of the Public Advocate. Funding for the programs begins October 1, 1999. Currently there is no end date; HB 10 does not sunset.

Status

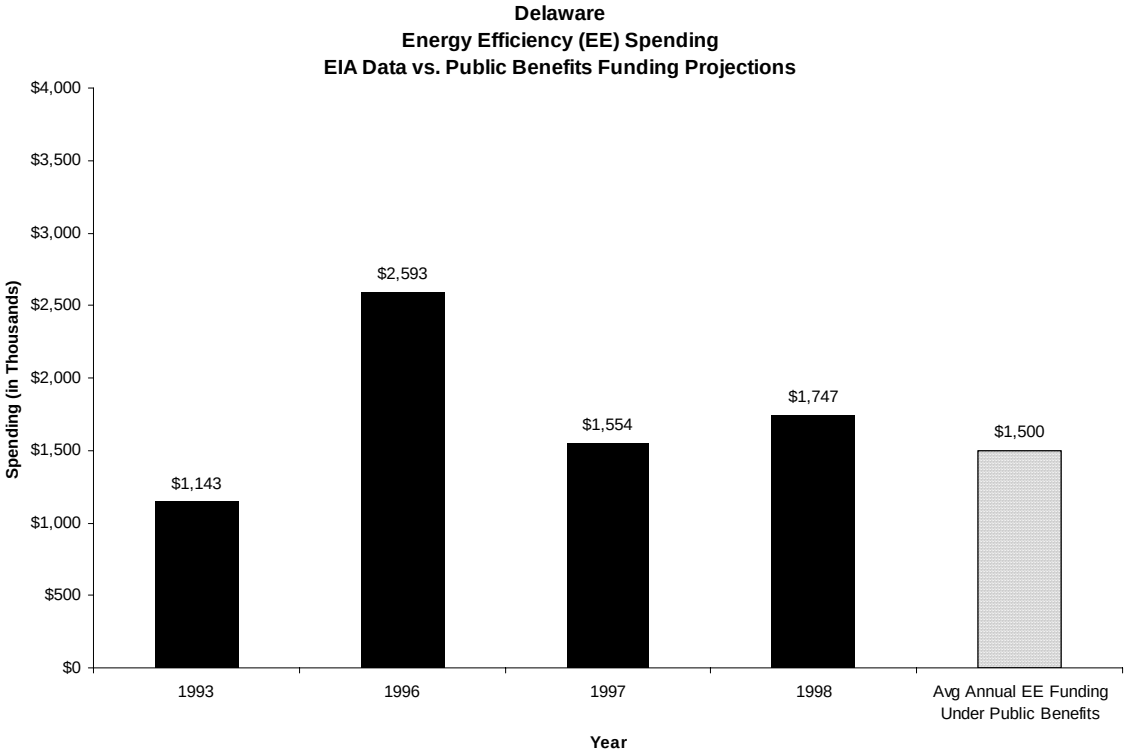
The low-income portion of the public benefits mechanism has gotten underway. The collection of funds started as scheduled in October 1999, and the programs are being administered by the Division of State Service Centers. The weatherization component of the program is "in the field," having started with a pilot phase in April 2000.

The environmental incentive fund revenue collection also started in October 1999. However, it was determined that additional legislation was required to set up a process for administering and distributing the funds. Legislation to accomplish that had passed one chamber of the legislature by the end of June, but the legislative session ended before it could pass the other chamber. That legislation laid out a 3 year allocation of $1 million/year for renewable energy projects and $0.5 million/year for energy efficiency programs. The legislation was reportedly not controversial, but simply was not addressed as planned in the closing days of the session. It is expected to be taken up when the new legislative session begins in January 2001. In the interim, funds for the program are accumulating in an interest bearing account overseen by the Delaware Economic Development Office.

Qualitative Assessment

The assessment of the public benefits approach by involved parties in Delaware (the state regulatory agency, the state low-income administrative agency, and the state energy office as an efficiency advocate) was fairly positive in most respects, other than the funding level, which was perceived as too low. One respondent, for example, assigned a 'B+' to the basic design, but only a 'C' overall because of low funding. Similarly, the representative from the state energy office lauded the funding mechanism itself as a crucial counter-step to what had been a trend toward utility abandonment of energy efficiency programs, but also rated the overall policy as a 'C' due to the low funding level.

The parties all indicated that it was too soon to assign a grade to implementation, although the failure to pass the legislation regarding disbursement of the environmental incentive fund was seen as a major disappointment.


Delaware
Energy Efficiency (EE) Spending
EIA Data vs. Public Benefits Funding Projections
Spending (in Thousands)
$4,000
$3,500
$3,000
$2,500
$2,000
$1,500
$1,000
$500
$0
$1,143
$2,593
$1,554
$1,747
$1,500
1993
1996
1997
1998
Avg Annual EE Funding Under Public Benefits
Year

ILLINOIS

Policy Mechanism

Illinois' electric restructuring legislation (PA 90-561), signed in December 1997, established funding for renewable energy, energy efficiency, and low-income programs. Renewable energy is funded through a flat per-customer monthly charge of $0.05 for residential, $0.50 for non-residential, and $37.50 for large businesses with at least 10 MW of demand. The funds are split equally between the Renewable Energy Trust Fund and the Coal Technology Development Assistance Fund. This mechanism is expected to raise $4-5 million/year for renewable energy projects (equivalent to about 0.04 mills/kWh).

Energy efficiency is funded through a requirement for electricity suppliers to provide a total of $3 million/year, divided on a sales-weighted basis. (This is equivalent to approximately 0.03 mills/kWh.) The energy efficiency program is to be directed at residential customers. A low-income energy assistance fund was also created, to be funded by a flat per-customer monthly charge of $0.40 for residential, $4.00 for non-residential, and $300.00 for customers with at least 10 MW of demand. This is expected to yield about $75 million/year (equivalent to approximately 0.6 mills/kWh). The money is to be used for payments to eligible electric or gas utilities, municipalities, or electric coops for provision of weatherization services.

All three public benefit programs are administered by the Illinois Department of Commerce and Community Affairs (DCCA). There is also some input and oversight from a Policy Advisory Council created by the legislation, made up of representatives of government, the utilities, and various other parties.

Finally, in a related development subsequent to restructuring, Commonwealth Edison was required to fund a $250 million Illinois Clean Energy Community Trust. This fund will be overseen by six trustees and will be able to provide support to energy efficiency and renewable energy projects.

Status

All three public benefit programs (EE, RE, and LI) have been up and running since early 1999. Projects are identified through open solicitation of proposals as well as through ideas developed by the DCCA. The energy efficiency fund has supported a variety of program efforts, including efficiency upgrades in low- and moderate-income apartments, high-efficiency refrigerators for housing authorities, a torchiere replacement program, and energy efficiency "kits" for residential customers. The renewables program has also funded several projects including some "solar schools" efforts and some methane landfill projects.

At the time of this study, the Illinois Clean Energy Community Trust was not yet in operation.

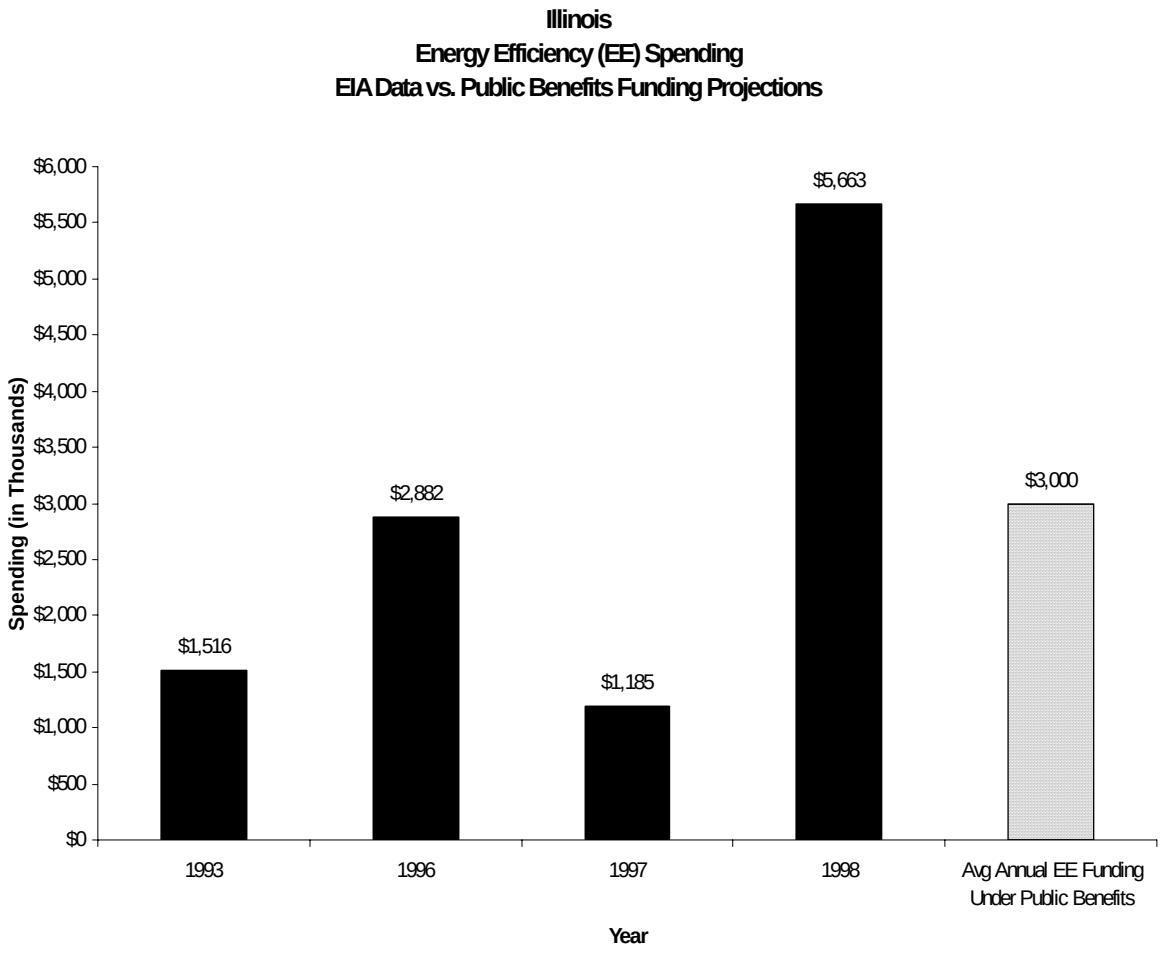
Qualitative Assessment

There was a fairly positive assessment of the overall public benefits policy approach among the representatives interviewed, with the major issue of concern being the very low funding level for energy efficiency and renewable energy. Overall ratings were mostly in the 'A' to 'B' range, with the representative from the low-income program sector rating it an 'A' because the low-income funding was much more substantial and an increase over historical levels. Although the representative of the energy efficiency advocate sector couldn't overcome the low funding problem and thus rated the overall policy as "terrible," he did indicate that the subsequent creation of the Illinois Clean Energy Community Trust was sufficient to allow an overall positive rating of the Illinois public benefits approach.

There was also fairly consistent positive opinion on the choice of the DCCA to administer the energy efficiency, renewable energy, and low-income programs, with comments noting that this selection did a good job of taking advantage of existing program structures and administrative capabilities. One respondent did cite as a negative feature the fact that the flat monthly charge funding mechanism was regressive compared with other options that might have been considered.

As for implementation, there was general satisfaction that the process was working well thus far, and a good level of confidence in the agency structure chosen for administration. However, most respondents declined to assign a grade because it was still too soon to gage actual results.[11]

[11] The first annual report was due in July 2000, but was not available in time for this study.


Illinois
Energy Efficiency (EE) Spending
EIA Data vs. Public Benefits Funding Projections
Spending (in Thousands)
$6,000
$5,500
$5,000
$4,500
$4,000
$3,500
$3,000
$2,500
$2,000
$1,500
$1,000
$500
$0
$1,516
$2,882
$1,185
$5,663
$3,000
1993
1996
1997
1998
Avg Annual EE Funding Under Public Benefits
Year

MAINE

Policy Mechanism

The Governor signed LD 1804 (The Act to Restructure the State's Electric Industry) in May 1997. The legislation provides for funding of low-income and energy efficiency programs.[12] In September 1999, the Commission approved the rules for the Energy Conservation Program. The rules were amended and enacted into law (LD 790, LD 1398) in October 1999.

The funding for the low-income and energy efficiency programs is provided through the rates charged to end-users by the transmission and distribution utilities. As required by LD 1804, the funding level for the conservation programs is comparable to the funding level for similar programs in place in 1999. Energy efficiency program expenditures for each utility will be a minimum of 0.5 percent of its total transmission and distribution revenues. However, the Commission can establish higher spending levels up to $0.15/kWh. The amount of additional funding for low-income programs will also be funded at current levels, which are approximately $5 million/year (0.5 percent of revenues or 0.5 mills/kWh).

Administration of the public benefits programs in Maine falls into the category described by this report as a "hybrid" approach. The transmission and distribution utilities will implement the low-income and energy efficiency programs through service providers selected using a competitive bid process. However, the State Planning Office has been directed to develop the overall energy efficiency plan and to design and monitor the programs.

Status

The State Planning Office has hired a staff person to develop the statewide plan. The goal is to have a plan developed and approved by early in 2001. The utilities will be involved in the plan development process and will each have a spending target that they will implement according to the plan. In the interim, the utilities are maintaining some of their previously existing programs.

Qualitative Assessment

There was a fair amount of consistency across the various parties interviewed (state regulatory agency, utility, environmental group, energy efficiency advocacy group, and independent power association) in their assessment of Maine's public benefits policies, with grades ranging from 'B-' to 'A'. Several parties commented positively on the good range of public benefits included (energy efficiency, low-income programs, and a renewable portfolio standard). There was also positive comment on the move to a statewide approach, which would make utility requirements more equitable by requiring funding from some utilities that had been

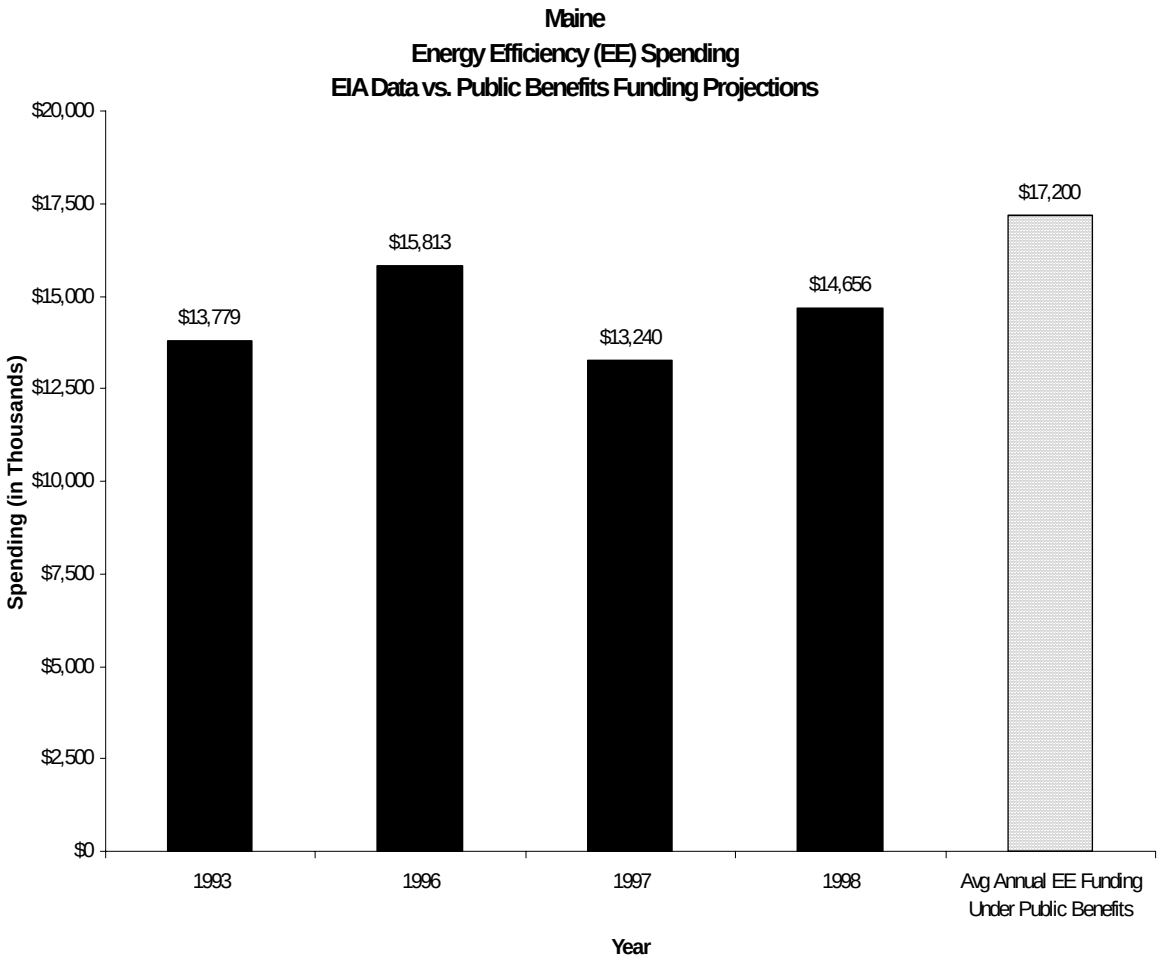
[12] The Act also included a requirement for a Renewable Portfolio Standard. See Volume 1 for details.

relatively inactive previously. Similarly, several parties applauded the new involvement of the State Planning Office and noted that this would be particularly helpful in facilitating statewide programs and achieving coordination across utility service territories. On the negative side, several parties commented that the funding for energy efficiency was not really high enough.[13]

The lowest overall grade ('B-') was assigned by an independent power producers' organization due to concerns over the renewable energy portion of the legislation. Problems noted included that the 30 percent RPS level was actually lower than current renewables production (due to heavy biomass power production associated with the state's lumber industry), renewable energy did not have to come from in-state sources, and no special "shopping credits" were provided for customers to purchase renewable energy.

The parties generally were consistent in the feeling that it was too soon to assign a grade to "implementation" in Maine.

[13] At the time of these interviews, several of these respondents were not really aware that, due to the fact that these new public benefit funds would be used to pay for prior energy program obligations (e.g., standard performance contract payments over time), very little money would be left for "new" programs. When alerted to this situation in subsequent call-backs, the concern over the energy efficiency funding level was much stronger.


Maine
Energy Efficiency (EE) Spending
EIA Data vs. Public Benefits Funding Projections
Spending (in Thousands)
$20,000
$17,500
$15,000
$12,500
$10,000
$7,500
$5,000
$2,500
$0
$13,779
$15,813
$13,240
$14,656
$17,200
1993
1996
1997
1998
Avg Annual EE Funding Under Public Benefits
Year

MARYLAND

Policy Mechanism

In July 1999, the Governor signed SB 300, the Electric Customer Choice and Competition Act of 1999. The legislation is permissive, rather than prescriptive, regarding energy efficiency public benefits. The Act specifies that on or before February 1, 2001, after reviewing the existing programs and studying the issue, the Maryland Public Service Commission (PSC), in consultation with the Maryland Energy Administration, shall report to the General Assembly on the status of programs and services to encourage energy efficiency and provide a recommendation on the desirability of, and appropriate funding level for, an system benefits charge for energy efficiency programs.

The legislation did create a separate utility rate mechanism to fund the Universal Service Program, which includes bill assistance, weatherization, and arrearage retirement for charges incurred prior to the implementation of retail access. Customers with incomes at or below 150 percent of the federal poverty level are eligible to participate in the Universal Service Program.[14]

The Universal Service Program will be funded at $34 million/year for 3 years after the retail access implementation date. Subject to the approval of the General Assembly, the Commission will recommend the annual level of funding after the first 3 years. The Act states that the Commission may not assess the universal service surcharge on a per kWh basis. The revenues will be collected via a special utility charge, transferred to the comptroller, and put into the Universal Service Program Fund.

The Department of Human Resources (DHR) will administer the universal service programs through the Maryland Energy Assistance Program with oversight by the Commission. With input from a panel of interested parties, the DHR may contract with a Maryland corporation to help administer the universal service programs. Subject to review and approval by the Commission, each electric company would develop and implement its own energy efficiency programs. If the Commission deemed that certain programs are particularly effective, it would require companies to establish those programs.

Status

The situation regarding public benefits energy efficiency funding in Maryland is rather confused and uncertain. Initially, two of the state's four electric utilities signed restructuring settlement agreements that included a system benefit charge of 1 mill/kWh (residential class

[14] The Act also directed the Public Service Commission and the Energy Administration to study the issue of a Renewable Portfolio Standard. In the spring of 2000, a report was filed with the legislature indicating that an RPS was feasible but stopped short of a full recommendation. The legislature is expected to consider the issue in 2001.

only) for support of energy efficiency and renewable energy programs for residential customers. However, implementation of those programs has been delayed pending statewide resolution of the broader energy efficiency system benefit issue.

The PSC held hearings on that subject during the summer of 2000, but rather than issue a decision they have requested the parties to meet and see if they can work out a settlement position. It is hoped that some kind of overall settlement can be reached and included in the PSC/Energy administration report to the legislature, due in February 2001.

The situation regarding the low-income Universal Service Program is a bit more positive. The low-income funding mechanism and associated programs are in place and operating, with the exception of the low-income weatherization component, for which there is still some dispute over which organization should administer the program.

Qualitative Assessment

Not surprisingly, the qualitative assessment of the public benefits situation in Maryland by representatives of several interested parties (state regulatory agency, state energy office, and environmental advocacy group) was not very favorable. The legislative policy was rated in the range of 'C' to 'D'. Some respondents commented that their assessment of the low-income component was a little more favorable, particularly because it called for explicit funding and clearly identified benefit categories to be provided. The energy efficiency component was criticized for being very weak (essentially a "permissive" mention of a system benefit charge possibility), with no identified funding or required funding mechanism. This set the stage for the ongoing delays and uncertainty that have been experienced.

The assessment of implementation to date was equally poor, with grades in the 'C' to 'D' range. The failure thus far to implement any actual energy efficiency funding mechanism or programs has been disappointing, and the process was criticized as being unfocused and frustrating. The low-income implementation has gone much better in two areas (arrearage payment and bill payment assistance) but the bureaucratic infighting over the weatherization component was singled out for criticism.

MASSACHUSETTS

Policy Mechanism

Restructuring legislation for Massachusetts (GL c. 164) was signed in November 1997. The legislation provided funding through a non-bypassable wires charge for energy efficiency (3.3 mills/kWh for 1998, ramping down to 2.5 mills/kWh in 2002), low-income efficiency programs (funded out of the energy efficiency wires charge at no less than 0.25 mills/kWh and no less than 20 percent of residential EE spending), and renewable energy (between 0.75 and 1.25 mills/kWh each year for 1998 through 2002).[15] Renewable energy is then to be funded at 0.5 mills/kWh for 2003 and beyond.[16]

Energy efficiency programs are administered by the individual distribution utilities, under the oversight of the Massachusetts Division of Energy Resources and with the assistance of multi-party collaboratives. The low-income programs are delivered through the existing weatherization and fuel assistance network. Renewable energy funds are deposited in the Massachusetts Renewable Energy Trust Fund, to be administered by the Board of Directors of the Massachusetts Technology Park Corporation, a state authority with experience managing and distributing technology funds.

Status

The energy efficiency wires charge began in March 1998. The utilities each have their own Advisory Board, comprised of numerous interested parties, which helps oversee the development of multi-year plans. The Department of Telecommunications and Energy (DTE) approved the initial plans in 1998, and the utilities have been operating programs under the public benefits mechanism since that time. (Some of the initial results were summarized earlier in this report.)

The renewable energy wires charge also began in 1998, but a lawsuit challenging the constitutionality of the public benefits charges was filed in 1998, and resulted in the Renewable Energy Trust Fund essentially suspending operations.[17] On May 1, 2000, the Massachusetts Supreme Judicial Court upheld the constitutionality of the restructuring law and its funding mechanisms, and the Renewable Energy Trust Fund subsequently began full operation.

The low-income program, delivered through the existing weatherization and fuel assistance program network, has been in operation since 1998.

[15] Note: 0.25 mills of that amount is set aside for pollution control equipment on municipal solid waste facilities, and hence not included in the RE amounts listed in the tables in this report (e.g., Appendix A).

[16] The Massachusetts legislation also established the requirement for a renewable portfolio standard. See the Volume 1 report for details.

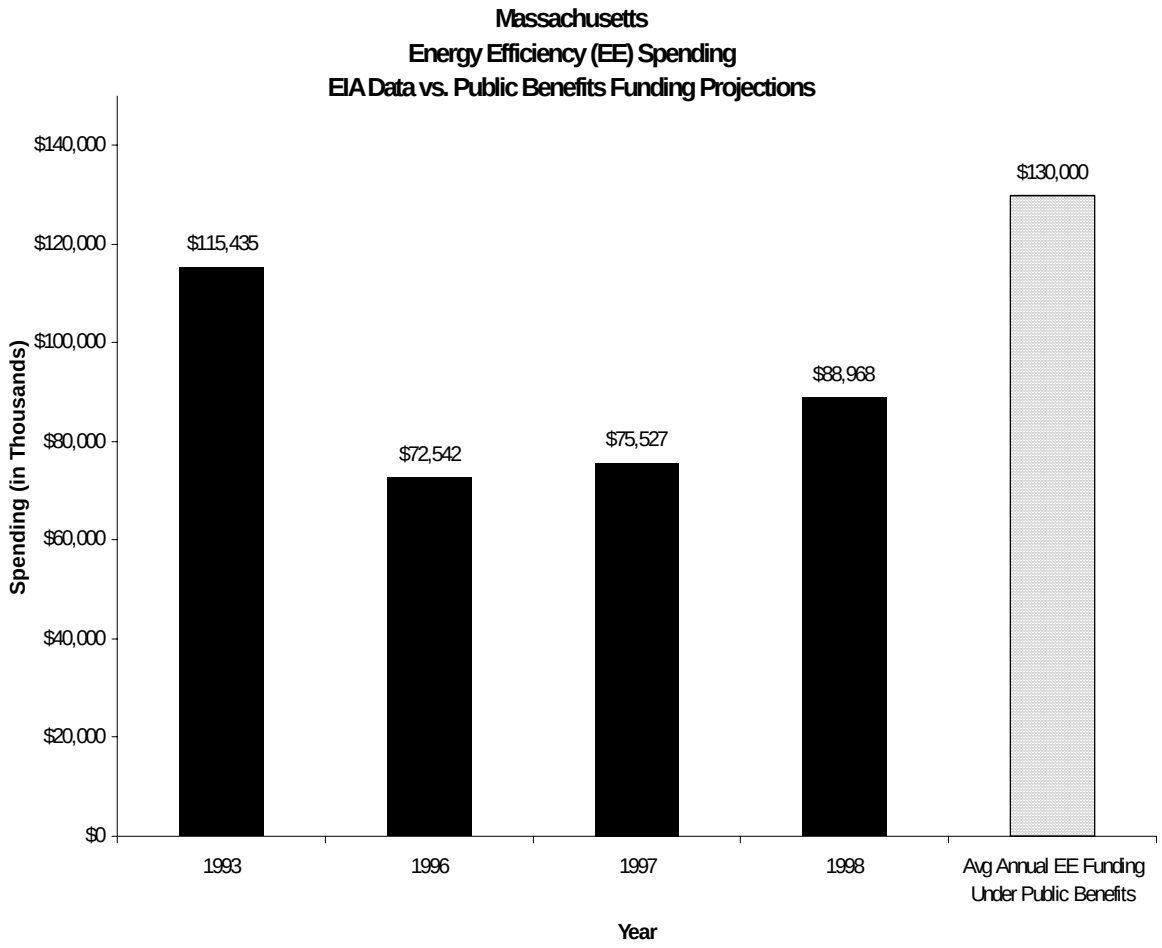
[17] Technically, the suit also challenged the energy efficiency charge. However, due to the long and well-established utility energy efficiency delivery system, it was decided to continue operation of the energy efficiency programs, pending the result of the lawsuit.

Qualitative Assessment

The overall assessment of the Massachusetts public benefits policy under restructuring was quite positive (ranging from 'B' to 'A') by the representatives of all the sectors interviewed (state government, state regulatory, utility, energy service company [ESCO], and environmental). Positive comments focused on the relatively simple approach and clear specification of the funding amount and mechanism, and also on the use of well-established existing administrative structures (e.g., the utilities and their collaboratives, the Massachusetts Technology Park Corporation, and the weatherization and fuel assistance network). Several parties did comment that they gave less than the maximum grade because the energy efficiency funding level declines over time, and they questioned the underlying assumption that this was all right because "private" energy efficiency providers would take over the function. One respondent specifically commented that there had been no evidence of such private entity offerings to date.

Ratings of the implementation of public benefits were also quite high. Although a couple of respondents declined to assign a grade because it was too soon to tell (e.g., especially in the renewable energy area), those who did chose grades in the 'B+' to 'A-' range. Several parties remarked positively on the continuing administration of energy efficiency by the utilities, that the system of collaborative input was working well, and that the choice of this implementation mechanism had helped the transition to the new system to be quite "seamless." A couple of parties also mentioned that utility "divestiture" and the transition to a "distribution only" function seemed to have helped the utilities to be more willing to work together effectively (e.g., on statewide market transformation efforts), and that some utilities previously not as engaged were now doing more. The primary implementation problem noted was the lawsuit and the resulting 2-year delay in the renewable energy program, but that has since been resolved.

On the whole, Massachusetts appears to have one of the most highly regarded public benefits policy approaches.


Massachusetts
Energy Efficiency (EE) Spending
EIA Data vs. Public Benefits Funding Projections
Spending (in Thousands)
$140,000
$120,000
$100,000
$80,000
$60,000
$40,000
$20,000
$0
$115,435
$72,542
$75,527
$88,968
$130,000
1993
1996
1997
1998
Avg Annual EE Funding Under Public Benefits
Year

MONTANA

Policy Mechanism

The Montana Utility Industry Restructuring and Consumer Choice Act (SB 390) was signed into law in May 1997. Per the Act, a non-bypassable system benefits charge was established, to be assessed at the meter for each utility customer. The amount of funding was set at the level of 2.4 percent of the utilities' 1995 retail revenues, and would cover state-wide low-income weatherization and assistance programs, cost-effective energy efficiency programs, renewable resource projects and applications, market transformation programs, and R&D programs related to energy efficiency and renewable energy. The legislation requires a minimum of 17 percent of the funds be allocated to low-income programs, with the remaining allocation up to the utilities.

As required by SB 390, Montana utilities choosing to offer system benefits programs included descriptions of their proposed universal system benefits programs in their transition plans. Investor-owned utilities also filed their program plans with the Montana Public Service Commission for approval.

HB 337, effective May 1999, modified the SBC funding plan specified in SB 390 by slightly altering the 2.4 percent allocation of the utilities' 1995 retail revenues.[18] Based on these funding levels, the Commission established rates ($/kWh) for the utilities, and the governing boards of cooperatives established rates ($/kWh) for the cooperatives.[19] Customers with an average monthly load of 1,000 kW or greater pay the lesser of $500,000 per year or 0.9 mills/kWh minus any credits received for self-spending on public benefits-qualifying activities. Montana utilities started collecting the SBC in January 1999. The charge will continue until July 2003, at which point its level and need will be re-evaluated.

Montana has a unique approach to administering its public benefit funds, which resulted in a "hybrid" classification in this study. The process begins with the allowance for utility administration, if the utility wishes to provide such programs. However, as indicated in HB 337, at the beginning of each new year, the utilities must file annual reports summarizing their universal system benefits activities for the previous year. The Department of Revenue is responsible for the assessment of credits based on each utility's or large customer's annual report. If a utility's or large customer's credit for internal activities does not satisfy the annual funding provisions, then the utility/customer is required to make a payment to the universal

[18] Originally, Montana SB 390 allocated 2.4 percent of 1995 retail revenues for the 1999 system benefits programs. Under SB 390, the annual funding was to be constant year to year but the rate charged to the customer would change annually. With SB 337, the annual funding for the system benefits programs changes but the customer's rate for the programs stays the same. Although both funding levels are based on 2.4 percent of the utilities' 1995 retail revenues, it was believed that HB 337 would simplify the collection of the funds.

[19] On a statewide basis, the 2.4 percent requirement is equivalent to approximately 1.1 mills/kWh.

system benefits fund for any difference. These funds will go towards the universal system benefits programs to be administered by the state.

Status

Collection of the SBC and the implementation of programs began as scheduled in 1999. Programs have been operating since that time, and the first "annual reports" were filed in March of 2000. (One policy note of interest: in their annual reports the utilities all claimed spending sufficient to meet their funding obligations, so no money was remitted to the universal system benefits fund for state administration of public benefit programs.) A special Advisory Committee has been established for Montana Power (which serves about two-thirds of the customers in the state), and they have been meeting to develop program plans for 2001.

Qualitative Assessment

The assessment of the public benefits policy mechanism in Montana varied quite a bit across the interested parties interviewed (state regulatory agency, utility, and environmental group). The utility representative graded it an 'A', feeling that it well-represented the intent of the Northwest Power Planning Council (NWPPC), resulted in better benefits for low-income customers, and allowed large customers to have self-directed programs. It also provided a more level playing field by requiring other utilities to catch up to the level of effort that Montana Power had always exhibited.

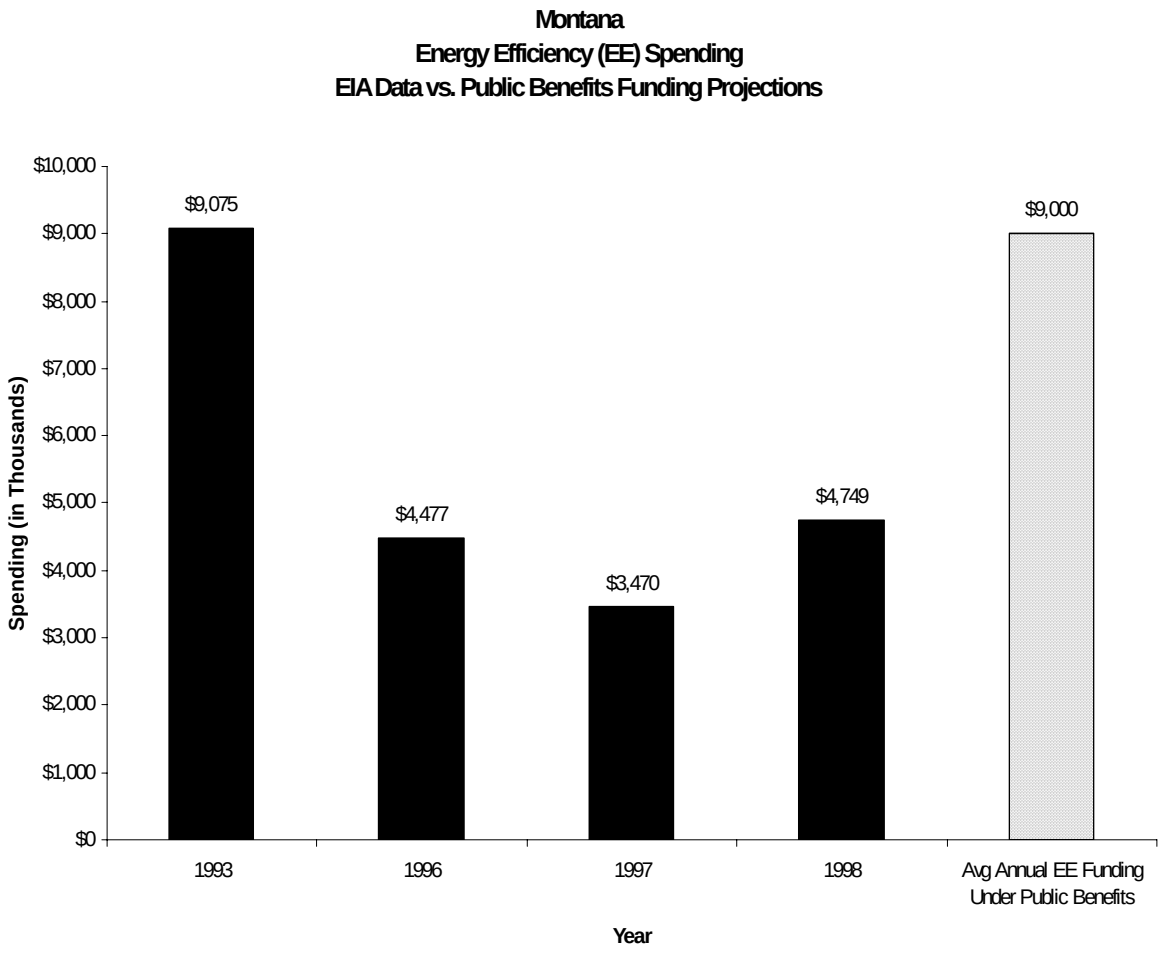
The other two parties were much less positive, each assigning an overall grade of 'C'. The regulatory agency representative noted in particular that there were a lot of missing details and ambiguities in the legislation that have "caused headaches" in moving toward implementation (e.g., no allocation requirements, or even criteria for judging allocation, among the various categories of public benefits—other than the 17 percent minimum for low-income).

The environmental group representative was even more critical. That person also noted the lack of allocation criteria, lamenting that it sets up battles between public purposes and that it failed to meet the spirit of the NWPPC Comprehensive Review. Other criticisms included that the overall funding was too low (less than the 3 percent of revenues identified in the Comprehensive Review), the industrial "self-directing" of spending can be abused, and ambiguities in the law had allowed certain utilities and coops to dodge their spending commitments (e.g., by claiming that amortization payments for prior year's programs, embedded in rates for power purchased from the Bonneville Power Administration [BPA], can count toward their spending requirement under the new public benefits charge). (As of January 2000, that latter loophole has supposedly been closed.)

In terms of implementation, both the utility and regulatory agency representative assigned fairly high marks (in the 'B' to 'A' range). However, the utility respondent made clear that this assessment was only with regard to her company, and she would not want to generalize to

others. Positive comments focused on the fact that administrative procedures and rules have been passed and that programs are up and operating.

The environmental representative was still quite critical, assigning an overall grade of 'C-'. This was due in particular to abuses of the spirit of the legislation, such as: (1) the above-mentioned use of old DSM program "debt service" in purchased power rates from the BPA as an offset to spending requirements under the new SBC—a maneuver used by several utilities and coops in 1999; and (2) the tactic of some large industrial customers to meet their spending requirement by "self-directing" funds outside of their own facilities—in many cases to groups that used the money to help pay low-income customer energy bills. This was seen as particularly objectionable because it completely misses the energy efficiency and environmental purposes of the system benefit charge. In contrast to the overall performance, however, the environmental representative made clear that one utility had done an exemplary job (Montana Power), and that the grade for implementation for that company would be closer to an 'A'.


Montana
Energy Efficiency (EE) Spending
EIA Data vs. Public Benefits Funding Projections
$10,000
$9,000
$8,000
$7,000
$6,000
$5,000
$4,000
$3,000
$2,000
$1,000
$0
Spending (in Thousands)
$9,075
$4,477
$3,470
$4,749
$9,000
1993
1996
1997
1998
Avg Annual EE Funding Under Public Benefits
Year

NEW HAMPSHIRE

Policy Mechanism

The restructuring legislation in New Hampshire (NH RSA 374-F), signed in May 1996, stated that a wires-based SBC "may be used to fund public benefits...", including low-income programs, energy efficiency programs, and R&D for new technologies. Subsequent amendments to that legislation have established funding caps on the amount of the SBC, the most restrictive being for the state's largest utility (PSNH) at 2.0 mills/kWh for the first 33 months of competition.

Status

The situation in New Hampshire is one of the most confusing of any of the states. Despite the statutory language permitting (even encouraging) an SBC for energy efficiency, the New Hampshire Public Utilities Commission (PUC) issued its final Restructuring Plan in February 1997, stating: "... ratepayer funded programs for delivering energy efficiency is no longer appropriate." However, in response to requests for rehearing, the PUC backed off from its proposed 2-year phase-out of existing programs, and revised its approach to encompass the possibility of ongoing support for energy efficiency (Rehearing Order No. 22,875 in Case DR 96-150). It also set up a multi-party working group to develop recommendations on this issue.

The working group produced a report in July 1999, calling for an SBC to support energy efficiency and recommending certain funding levels. Nevertheless, as of July 2000, the PUC had still not issued an Order establishing a public benefits energy efficiency program. In the interim, most of the state's utilities are still operating their previous energy efficiency programs under the prior rate structure.[20]

Qualitative Assessment

Not surprisingly, the assessment of the situation in New Hampshire has been rather negative. Representatives from the utility, state government, and energy efficiency advocate sectors were interviewed, and their responses were fairly consistent. The legislation was rated in the 'B' to 'C' range, with its primary fault being that it was just permissive with respect to the public benefits wires charge, rather than requiring specific funding. Each of the parties expressed disappointment (with varying degrees of intensity) that the public benefits funding had not yet been finalized by the PUC.

With regard to implementation, the respondents commented quite positively on the collaborative process that led to the July 1999 report and recommendations, but again expressed

[20] The situation in New Hampshire is further complicated by ongoing litigation between some of the utilities and the PUC over various aspects of restructuring.

frustration that nothing had yet resulted from that. Since there is of yet no PUC- approved public benefits funding mechanism or programs, there is nothing to summarize on those aspects of implementation.

In summary, New Hampshire appears to be a textbook example of the problems that can occur when there are conflicting perspectives between the primary policymaking institutions within a state (i.e., the legislature and the PUC). Moreover, the problem has been exacerbated by procedural delays resulting from restructuring-related litigation.

NEW JERSEY

Policy Mechanism

In February 1999, the Governor signed SB 7, the Electric Discount and Energy Competition Act. The New Jersey Board of Public Utilities (BPU) is authorized by the Act to establish an adjustable societal benefits charge as a non-bypassable charge on all electric utility customers. The SBC will recover costs associated with societal benefit programs approved by the BPU prior to April 30, 1997, such as consumer protection, nuclear plant decommissioning, DSM, and consumer education.[21] The Act stipulates that within 4 months of the effective date of the Act, and every 4 years thereafter, the BPU should initiate a proceeding and undertake a comprehensive analysis of energy programs. As part of this process, each of the state's utilities are required to submit: a proposed DSM and renewables plan; a proposed funding plan for new programs for energy efficiency and renewable energy resources over the next 4 years; and a proposed implementation and administration plan. The first round of this procedure is currently in process. The Act also established the option of a Universal Service Fund for programs for customers with low incomes.

The Act specifies that "social programs" (chiefly low-income programs) and energy efficiency programs should be funded at the same levels as in effect at the date of the legislation. For energy efficiency, the best available estimate of this total is approximately $256 million/year. However, that figure includes a substantial amount that is used for paying off the costs of prior programs. Therefore, one-half of the total is to be spent on paying for prior incurred costs and one-half on new programs. Also, 25 percent of the amount for new programs is to go for Class I renewables, with the remainder for energy efficiency. BPU proceedings are underway to determine exactly what the funding levels should be for new energy efficiency and renewable energy programs. Ultimately, the minimum amount of funding dedicated to new programs could be up to $140 million, as prior program costs are paid off. After the eighth year, the BPU will determine the appropriate level of funding for these programs. The programs funded by the SBC will continue to be provided by the utility until otherwise determined by the BPU.

Status

Through the last half of 1999 and early 2000, the BPU conducted hearings and took filings in the "Comprehensive Resource Analysis" (CRA) proceeding in order to address the issues surrounding energy efficiency and renewable energy administration and funding. Two major settlement agreement proposals have been submitted. Originally, an Order was due by February 9, 2000. However, as of early August there was still no BPU decision. In the interim, utilities continue to administer their prior energy efficiency programs.

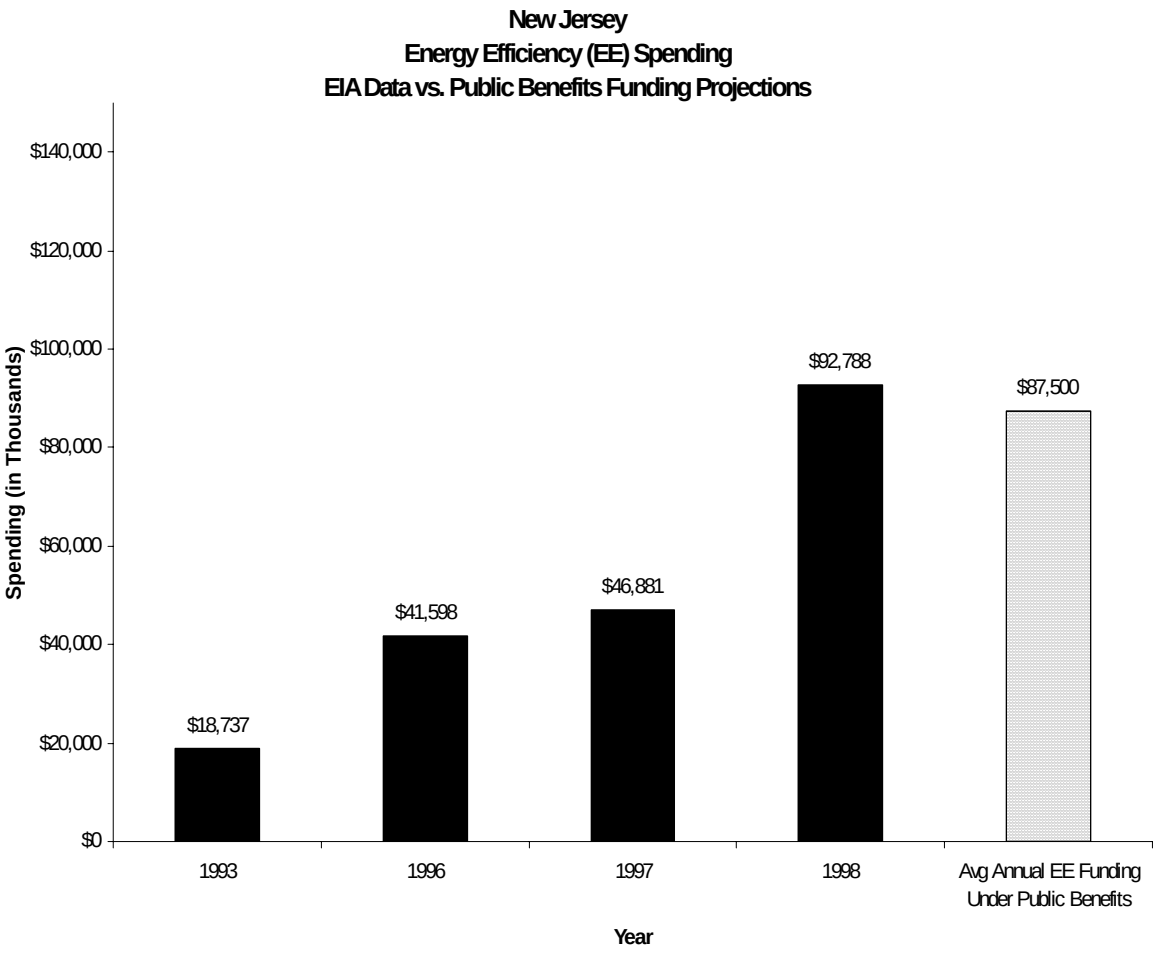
[21] The Act also calls for a renewable portfolio standard for electric suppliers. See the Volume 1 report for details.

Qualitative Assessment

There was some variability of opinion among the representatives of the four interested parties interviewed (state regulatory agency, utility, environmental group, and energy efficiency advocate group) regarding the "on paper" public benefits policies in the legislation (grades ranged from 'C' to 'A-'). Major concerns included the complex and sometimes ambiguous language in the legislation (which has contributed to arguments and delays) and the fact that there was only a very short (2-month) time frame allowed for utilities to develop and file their CRA plans. There was fairly good agreement that the legislation did provide strong support for energy efficiency and renewable energy, and that New Jersey would be among the national leaders when it implements these provisions.

One key issue around which there is substantial disagreement in New Jersey is the question of who should administer the energy efficiency public benefit programs. One of the submitted settlement agreements calls for utility administration while the other calls for an independent administrator.

As for implementation, respondents were reluctant to assign a grade since implementation has not yet proceeded. However, it was clear that there was growing frustration at not having yet received a BPU order in this case.


New Jersey
Energy Efficiency (EE) Spending
EIA Data vs. Public Benefits Funding Projections
Spending (in Thousands)
$140,000
$120,000
$100,000
$80,000
$60,000
$40,000
$20,000
$0
$18,737
$41,598
$46,881
$92,788
$87,500
1993
1996
1997
1998
Avg Annual EE Funding Under Public Benefits
Year

NEW YORK

Policy Mechanism

New York accomplished its restructuring through regulatory orders rather than legislation. The initial Order (96-12) requiring the utilities to file restructuring plans was issued in May 1996. In February 1997, the New York Public Service Commission established a separate proceeding to address SBC issues in Case 94-E-0952. In January 1998 it issued Opinion No. 98-3 proposing a 3-year SBC and designating the New York State Energy Research and Development Authority as the independent administrator of the programs. The wires charge was capped at 1 mill/kWh and was initially established for the period of July 1, 1998 until July 1, 2001. In July 1998 the PSC approved NYSERDA's proposed plan, with slight modifications, and authorized a total of $234.3 million in funding over 3 years[22] ($161.6 million for energy efficiency, $40 million for research and development—including renewable energy projects, $29.3 million for low-income programs, and $3 million for environmental disclosure-related purposes). The utilities were allowed to use some of those funds to complete some existing programs, with the balance ($172 million) going to fund statewide programs administered by NYSERDA. An SBC Advisory Group, comprised of a wide variety of interested parties, was established to provide input into program design.

Status

The public benefits programs administered by NYSERDA have been up and operating now for approximately 2 years. In July 1999 NYSERDA issued its first annual report on the SBC programs, and at the time of this study had nearly completed its second annual report. (Some of the highlights from New York were presented earlier in our report.) Energy efficiency programs are in full-scale operation, run by independent contractors selected through competitive solicitation wherever possible, and a number of renewable energy projects have been selected for funding.

Qualitative Assessment

There was both some consistency and some variation among the representatives of the various sectors in their assessment of the public benefit policy approach in New York. For example, there was almost total agreement that moving to a statewide approach was a good policy (the utility sector being the only segment expressing some uncertainty), and unanimous agreement that the selection of NYSERDA to be the statewide administrator was the proper choice. Several parties also commented that the 3-year time frame was too short and that it necessitated too much haste in implementing the public benefits programs. Similarly, several parties commented that the funding level was too low, and well below New York's historical commitment level.

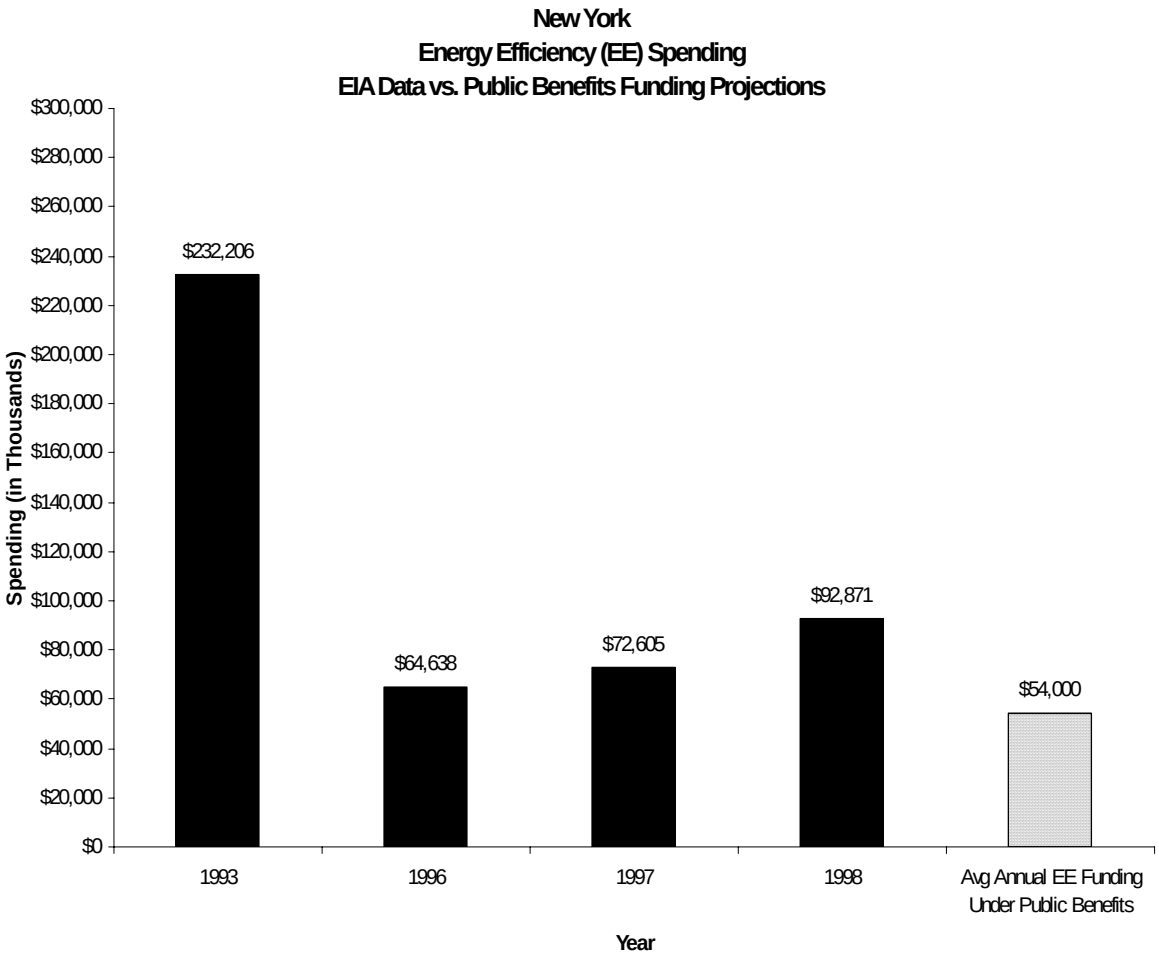
[22] This works out to an SBC equivalent of approximately 0.8 mills/kWh.

However, it was the strength of their opinion on the funding issue that led some parties to diverge from the others in their overall rating of New York's public benefit policy. The two representatives of environmental groups rated the overall policy as 'C' and 'D' largely because of that "inadequate" funding level, whereas most of the rest of the respondents rated the overall policy an 'A' or 'B'. (The other exception was one utility representative that rated it a 'D' because "there should have been a larger role for utilities, a more formal advisory role."[23])

Interestingly, New York was one of the few states where ratings of the implementation actually exceeded the ratings for the policy itself. Representatives of state government (both the PSC and NYSERDA), the utilities, and environmental advocacy organizations all rated the implementation to date very positively (in the 'A' to 'B' range). There was virtually uniform agreement that NYSERDA had done an excellent job of implementation, particularly given the very ambitious time frame they faced.[24] Many respondents commented that it was very fortunate that New York had an existing, highly experienced organization like NYSERDA to turn to in order to accomplish the independent administration, and that it probably could not have been done in this short time frame if they would have had to create a new organization and bring it up to speed.

One other interesting aspect of the New York approach that received positive comment is the fact that the utilities were allowed to be eligible to bid to deliver energy efficiency programs, and in fact they have participated as a subcontractor in some programs.

[23] Note: utilities comprise three seats on the 15- to 20-member SBC Advisory Group.
[24] New York's SBC was only initially approved for a 3-year time period, so implementation proceeded on a very accelerated schedule.


New York
Energy Efficiency (EE) Spending
EIA Data vs. Public Benefits Funding Projections
Spending (in Thousands)
$300,000
$280,000
$260,000
$240,000
$220,000
$200,000
$180,000
$160,000
$140,000
$120,000
$100,000
$80,000
$60,000
$40,000
$20,000
$0
$232,206
$64,638
$72,605
$92,871
$54,000
1993
1996
1997
1998
Avg Annual EE Funding Under Public Benefits
Year

OHIO

Policy Mechanism

On July 6, 1999, the governor signed SB 3, Ohio's electric restructuring act. The legislation includes specific public benefits provisions for energy efficiency programs and low-income programs. Two separate funds were created: the Universal Service Fund and the Energy Efficiency Revolving Loan Fund. Under the Universal Service Fund, the low-income assistance program will include low-income assistance, energy efficiency education, and a weatherization program targeted at eligible customers with the goal of reducing their electric bills. The Energy Efficiency Revolving Loan Program will include financial assistance to customers for eligible energy efficiency products, technologies, or services. Groups targeted include residential, small commercial, small industrial business and agricultural customers, local governments, educational institutions, nonprofit organizations, and low-income housing. Financial assistance will be obtained through approved financial institutions in the form of below market loans.

The Universal Service Rider is to replace the existing Percentage of Income Payment Plan (PIPP) Rider and any electric utility rates used to fund low-income customer energy efficiency programs. The Act moves the PIPP to the Department of Development to consolidate the administration of low-income programs into one agency. The rules for the PIPP will remain the same. The revenues for the Universal Service Fund are to be collected by the electric distribution companies beginning July 1, 2000. These funds will then be remitted to the director of Development. Money from the Fund shall be dispersed to electric or energy efficiency service suppliers that provide service to eligible low-income customers.

The Energy Efficiency Revolving Loan Fund will be made up of all energy efficiency revenues collected by electric distribution utilities on a temporary rider for the Energy Efficiency Revolving Loan Program beginning January 1, 2001. The rates will be calculated by the Public Utilities Commission of Ohio (PUCO) based on a uniform, statewide amount determined by the director of Development. These funds will then be remitted to the director on a quarterly basis. The target amount shall not exceed more than fifteen million dollars in any year through 2005 and shall not exceed more than five million dollars in any year after 2005. The rider will terminate at the end of 10 years from January 1, 2001 or after the Energy Efficiency Revolving Loan Fund reaches one hundred million dollars, whichever is first.

The PUCO and the Public Benefits Advisory Board, created through Ohio's restructuring act, have been directed to advise the director of Development in the administration of the Universal Service and Energy Efficiency Revolving Loan funds and programs. The Advisory Board will consist of 21 members including the director of Development, the chairperson of the PUCO, the Consumers' Counsel, the director of the Air Quality Development Authority, two members of the House of Representatives, two members of the Senate, and thirteen governor appointees.

Intended start dates were July 2000 for the Universal Service Fund and January 2001 for the Energy Efficiency Revolving Loan Fund. There is no end date for the Universal Service Fund, while the end date for the Energy Efficiency Revolving Loan Fund is 10 years from the start date or when the Fund gets up to one hundred million dollars, whichever comes first.

Status

The Public Benefits Advisory Board was formed in late 1999 and has been meeting regularly since then. Although there has been some delay in the original schedule (e.g., due to motions filed at the Commission by an industrial customer group), the public benefits programs appear to be on their way to implementation. On August 17, 2000, the PUCO approved the rate riders for the Universal Service Fund and the Revolving Loan Fund. The Universal Service Fund charge will begin September 1, 2000 (vs. the July 1, 2000 original goal). The Universal Service charge varies by company and is designed to produce approximately $65 million/year for electric low-income programs.[25]

The Energy Efficiency Revolving Loan Fund rider was also approved on August 17, 2000. The amount was set at an equivalent level for all utilities (0.10758 mills/kWh for 5 years, to be re-set after 5 years to reach the $100 million grand total). Collection of these funds will begin January 1, 2001, with the actual program to begin later in the year.

In the meantime, the Public Benefits Advisory Board continues to work with the Department of Development on strategies for the effective administration of the low-income and energy efficiency programs.

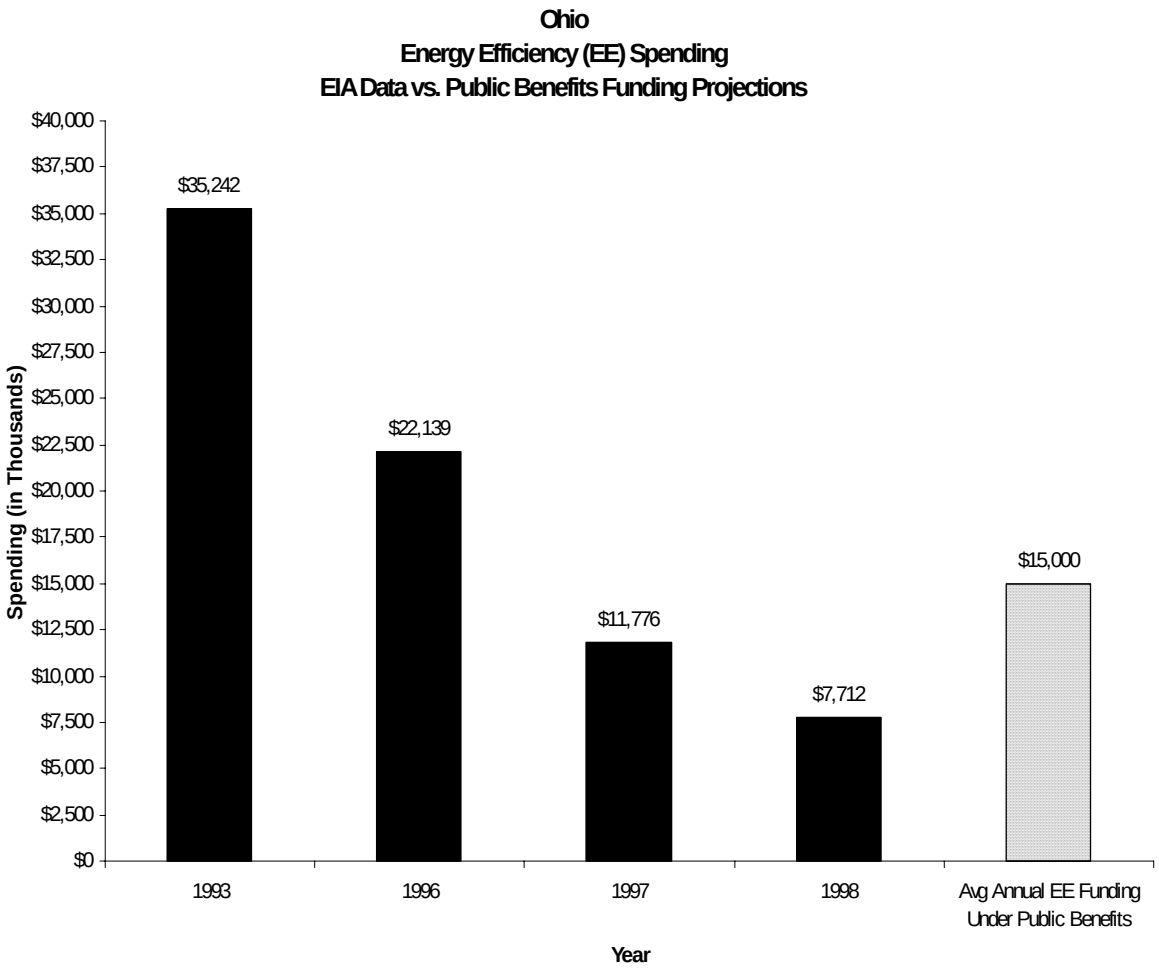
Qualitative Assessment

The public benefits policies passed in Ohio were rated very positively by the representatives of the interested parties interviewed for this study (state administrative agency, customer coalition group, and environmental advocacy organization), with grades ranging from 'B' to 'A'. Positive comments focused on the "very comprehensive" approach to low-income programs (i.e., includes bill payment assistance, customer education on saving energy, and funding for energy efficiency/weatherization work) and the creative and sustained approach to energy efficiency represented by the Revolving Loan Fund. It was noted that these were particularly significant accomplishments given the political landscape in Ohio. One respondent noted that it would have been helpful if the legislation would have identified a specific amount for low-income weatherization, rather than go through the uncertainty, arguments, and delays of the hearing process to try to ensure adequate funding for that component.[26]

[25] The $100 million/year figure for Ohio low-income programs in Appendix A includes the revenues from natural gas utilities.

[26] Eventually the efforts were successful and approximately $10 million/year of the low-income public benefit funds have been allocated for weatherization.

The implementation to date was rated somewhat less favorably, with grades in the 'B' to 'C' range. Criticisms focused primarily on the delays encountered (although there was relief that they appear to have been largely overcome now) and on some divisions among various low-income associated organizations that has made progress more difficult than it might have been. Of course the final assessment must await the actual implementation of the programs supported by the new Funds.


Ohio
Energy Efficiency (EE) Spending
EIA Data vs. Public Benefits Funding Projections
Spending (in Thousands)
$40,000
$37,500
$35,000
$32,500
$30,000
$27,500
$25,000
$22,500
$20,000
$17,500
$15,000
$12,500
$10,000
$7,500
$5,000
$2,500
$0
$35,242
$22,139
$11,776
$7,712
$15,000
1993
1996
1997
1998
Avg Annual EE Funding Under Public Benefits
Year

OREGON

Policy Mechanism

Oregon's restructuring legislation (SB1149) was signed in July of 1999. Consistent with the recommendations of the 1996 "Comprehensive Review of the Northwest Energy System" commissioned by the governors of the four Northwest states, the legislation includes substantial support for public benefits. It establishes a public purpose charge to be collected by the utilities, equivalent to 3 percent of total revenues.[27] The first 10 percent of funds collected will go to education service districts in the state—for audits, weatherization, education, or green resources. The remaining funds are then allocated as follows: to conservation and market transformation (63 percent); renewable resources (19 percent); low-income weatherization (14 percent); and Housing and Community Services grants (5 percent).

The collection of the public purpose funds is scheduled to begin with the onset of retail access, expected in October 2001. With regard to administering the energy efficiency and renewable energy components, the legislation indicated that the Oregon Public Utilities Commission (PUC) could either direct the funds to be administered by a non-governmental organization or allow the utilities to administer the funds.

Customers with loads greater than 1 MW may receive "credits" against the corresponding portions of the public purposes charge for expenditures they make on new energy efficiency measures and/or above-market costs of purchases of new renewable resources. Credits must be pre-certified through the state Office of Energy. Also, the public purpose charge is limited to 1 percent for large aluminum smelters.

Finally, the legislation also created a special charge for low-income payment assistance, beginning January 1, 2000 at the level of $5 million/year. Once retail access begins (scheduled for October 2001), the amount increases to $10 million/year.

Status

The PUC is in the process of considering the administrative structure and other procedural details for the public purpose programs. Its staff have put forward a draft recommendation for moving to a separate non-governmental entity (nonprofit) to administer the energy efficiency and renewable energy programs, under "guidelines" set by the PUC. Comments were being taken on that proposal through July 2000. In the meantime, the utilities are continuing their prior energy efficiency programs under the current rate structure. In addition, both major IOUs in Oregon started "green power" programs this year.

[27] This is estimated to produce approximately $50 million/year for public benefits.

Qualitative Assessment

There was a fair amount of variability among the three interest areas interviewed (sate regulatory, citizen advocate, and utility). Interestingly, the utility and regulator each graded the overall policy a 'C' but for very different reasons. The utility representative felt that the public benefit funding level was much too high, and would "lead to a rate increase right off the bat" (especially since the funding was now all "pay as you go," rather than being amortized over time). He graded that aspect a 'D' but counter-balanced it with a 'B' for the "public benefit charge" approach.

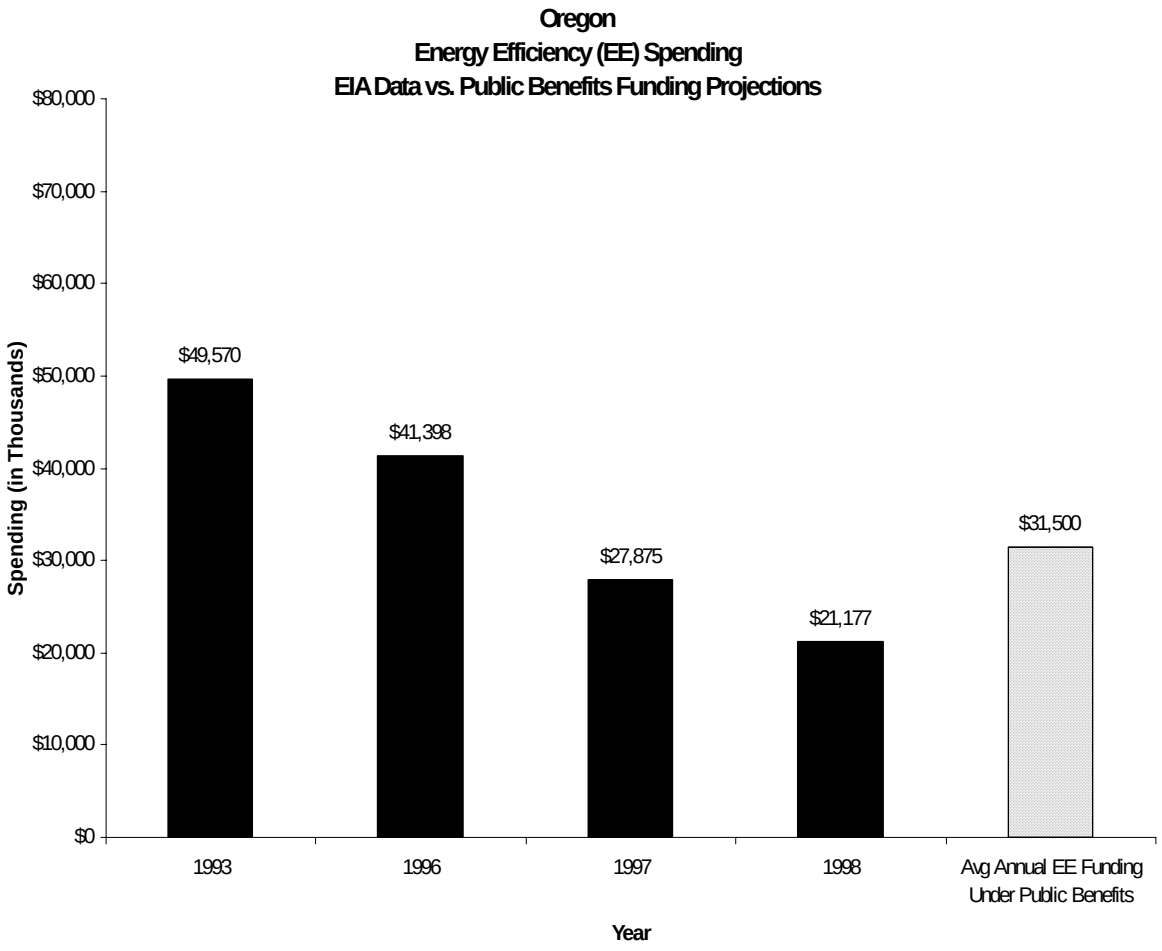
In contrast, the regulatory representative was quite satisfied with the funding level (3 percent of total revenues) but downgraded the overall policy due to his feeling that a number of aspects of the legislation were unclear (e.g., criteria for spending accountability in the various categories, the large customer self-direction aspects, etc.), and that this "makes it difficult to do rule-making."

The citizen advocate representative was quite pleased with the public benefits policy, giving it an overall grade of 'B+'. He was pleased with the overall funding level and with the broad range of benefit areas. One negative aspect was the feature that allows large industrial customers to "self-direct" a portion of their public purpose charge requirements, but he acknowledged the political realities behind that compromise.

One other policy assessment worthy of note was that the utility representative was quite comfortable with the thought of having an independent organization administer the energy efficiency and renewable energy programs, calling it "a good concept."[28] However, he added that an important part of that assessment was that utilities be allowed to participate as a delivery mechanism in those areas for which they have an interest. He felt that was important to allow utilities to stay involved where interested and that this would help assure that existing capability that has been developed over time wouldn't just be tossed away.

In terms of implementation, all of the parties pointed out that it was still early in the process, but they had favorable reactions thus far. Grades assigned ranged from 'B' to 'A'. Positive comments tended to focus on the good job being done thus far with rule-making, and that interested parties were receiving an ample opportunity to have input into the process.

[28] He did acknowledge that the other major utility in the state might not share that point of view.


Oregon
Energy Efficiency (EE) Spending
EIA Data vs. Public Benefits Funding Projections
Spending (in Thousands)
$80,000
$70,000
$60,000
$50,000
$40,000
$30,000
$20,000
$10,000
$0
$49,570
$41,398
$27,875
$21,177
$31,500
1993
1996
1997
1998
Avg Annual EE Funding Under Public Benefits
Year

PENNSYLVANIA

Policy Mechanism

In December 1996, the governor signed the Electric Generation Customer Choice and Competition Act (HB 1509). The Act mandates the implementation of policies, protections, and services that help low-income customers maintain electric service. Energy efficiency, termination of service protection, customer assistance programs, consumer education, and renewable energy programs for low-income customers were cited as examples of universal service and energy conservation programs that could be supported by the system benefits charge. Programs are utility service territory-specific rather than statewide.

Although the law mandates that each Electric Distribution Company (EDC) offer universal service programs that are funded "at minimum at existing levels" and are "appropriately funded and available," the Act sets no specific spending levels. A full recovery of costs is permitted. For some EDCs the costs are recovered in base rates. For the remainder, the costs are recovered through a charge assessed per kWh delivered. These mechanisms came about as a result of individual EDC restructuring settlement agreements approved by the Public Utilities Commission (PUC).

Specific funding levels for the public benefit programs were also determined in each EDC's restructuring plan settlement agreement for 1999-2002. Total funding for the eight EDCs for the Low-Income Usage Reduction Program (LIURP—energy conservation) starts at $14,830,791 in 1999 and increases to $18,817,041 in 2002. Likewise, the funding for the Customer Assistance Program (CAP—payment assistance) increases from a total of $57,576,000 in 1999 to $78,482,125 in 2002.

The restructuring settlement agreements for the five EDCs required to participate resulted in a budget for a Renewables Pilot Program as well as a Sustainable Energy Fund. The Renewables Pilots, involving solar water heating and photovoltaic applications in low-income homes, were funded for a total of $3,860,000 for 1999 and 2000. The Sustainable Energy Fund, which was designated to promote renewable energy, energy efficiency, and economic development projects that promote clean energy or have job impacts, was funded at approximately $11,300,000/year for 5 years.

The PUC's "Guidelines for Universal Service and Energy Conservation Programs" recommend leaving administration of low-income programs with individual utilities for the foreseeable future. The Act specified that the Commission should encourage the use of experienced community-based organizations to directly provide the programs. The PUC is to have administrative oversight of the programs to ensure that the programs are run cost-effectively. Funding for SBC programs has been provided for until at least 2010, at which time the programs will be revisited.

For the energy efficiency public benefits area, Pennsylvania is one of the states characterized in this study as having a "hybrid" approach to administration. The individual utilities are each nominally responsible for their own Sustainable Energy Fund. However, they each have a local community economic development organization and an associated "Board of Directors" to manage the fund and administer the Sustainable Energy Fund programs in their service territory. These Boards can use a variety of mechanisms to fund the projects, including grants, loans, equity investments, etc.

Status

The individual utilities have each established their Sustainable Energy Funds, selected the appropriate community organizations, created program management Boards, and started collecting funds. At least some of the Boards began funding projects in the summer of 2000.

In the renewable energy area, the renewable energy low-income pilots have experienced some delay. The PUC issued an Order with program guidelines in April 2000, and the utilities were required to produce program plans. However, the utilities requested a time extension, and at the time of this study had not yet completed their plans.

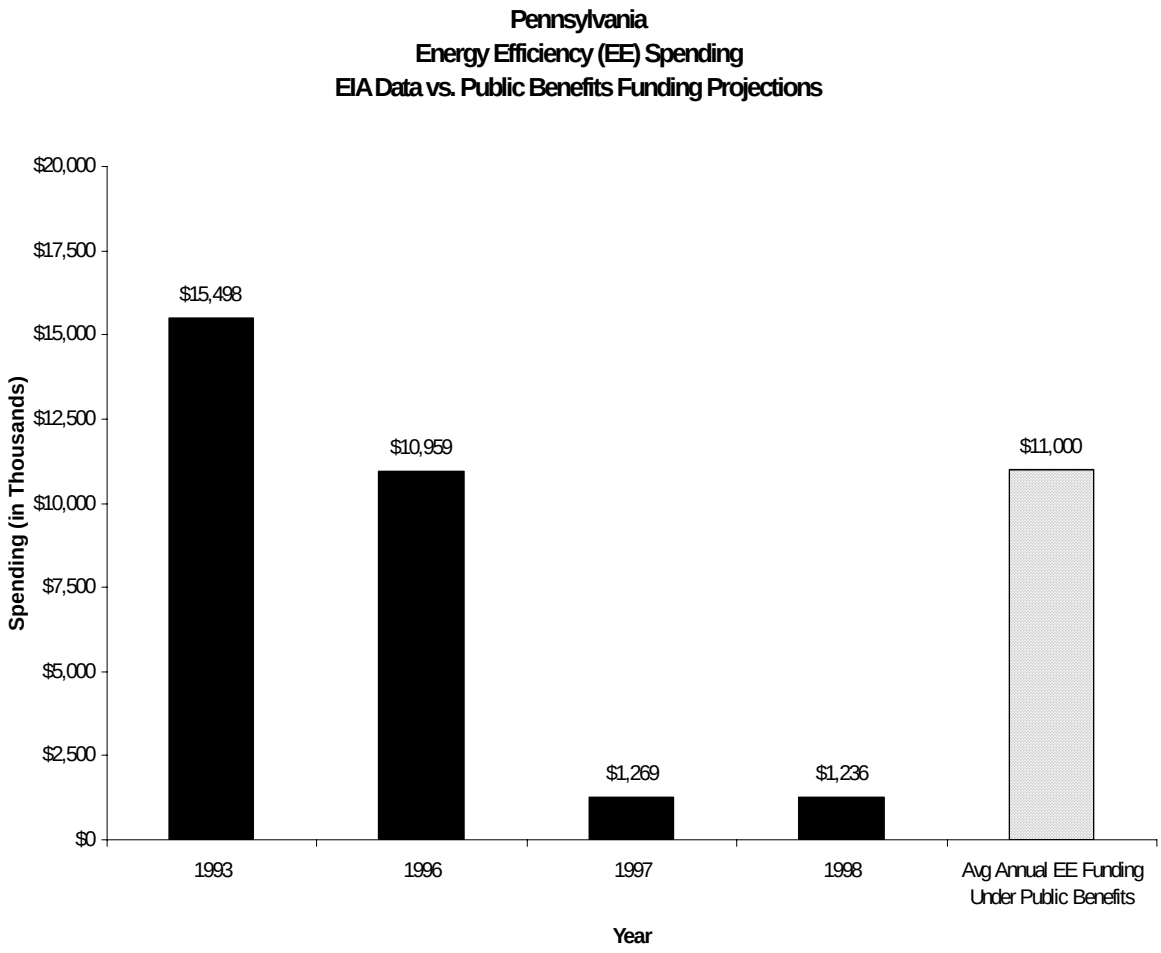
In the low-income area, the funding mechanism has been well established (it was patterned after a previously existing charge, only at an increased level) and programs are well underway.

Qualitative Assessment

The assessment of the public benefit approach in Pennsylvania by the representatives of the interested parties interviewed (state regulatory, state administrative, and community organization) was quite positive, with grades in the 'B' to 'B+' range. Positive comments focused on the breadth of benefits addressed (energy efficiency, renewable energy, and low-income programs) and on the innovativeness of the use of community-based organizations and management boards to direct the Sustainable Energy Funds.

There was also positive comment on the flexibility of project funding approaches enjoyed by the management boards, and in particular, on the ability to promote sustainable efforts in this area through mechanisms such as equity investment. Although that approach is new and unproven, it was regarded as a very interesting concept.

On the negative side, some expressed the opinion that the funding levels for energy efficiency should have been higher, but recognized that funding in this area has historically been low in Pennsylvania. In contrast, on the low-income side, some praised the increased funding substantially above historical levels. Implementation was generally regarded as satisfactory thus far, but too soon to assign specific grades.


Pennsylvania
Energy Efficiency (EE) Spending
EIA Data vs. Public Benefits Funding Projections
$20,000
$17,500
$15,000
$12,500
$10,000
$7,500
$5,000
$2,500
$0
Spending (in Thousands)
$15,498
$10,959
$1,269
$1,236
$11,000
1993
1996
1997
1998
Avg Annual EE Funding Under Public Benefits
Year

RHODE ISLAND

Policy Mechanism

In August 1996, the governor signed the Utility Restructuring Act (URA) of 1996. The legislation included a wires charge designated for energy efficiency and renewable energy. The Public Utilities Commission (PUC) was charged with developing the details for implementation. Renewable energy is defined as wind, solar, sustainable biomass, and hydro from already existing dams under 100 MW. Fuel cells are an acceptable expenditure of energy efficiency funds along with more traditional approaches. The PUC's tentative approach was to divide the renewable energy portion between (1) buy-down programs for marginally economic renewable development efforts and (2) R&D aimed at "very near commercialization" renewable energy technologies. The Act requires a minimum floor of 2.3 mills/kWh surcharge (approximately 2.2 percent of revenues) for energy efficiency and renewables. This would raise approximately $76 million over 5 years. The Commission may increase the wires charge during the first 5 years but may not decrease the charge. After 5 years, the Commission will re-evaluate the need for, and size of, the charge.

Under this approach, energy efficiency programs will continue much as in prior years. Energy efficiency programs will be administered through utility-based collaboratives and use several allocation methods, including an RFP process, to select contractors. In addition to utility representatives, these collaboratives include members from PUC staff, The Energy Council-Rhode Island (TEC-RI), and the Conservation Law Foundation (CLF).

Administration of the renewable energy funds will be by the statewide Renewables Collaborative. Allocation of funds will be done through several methods, including an RFP process. The statewide Renewables Collaborative includes representatives of the participating utilities, PUC staff, TEC-RI, CLF, and the State Energy Office.

Low-income programs will continue to be funded in the same manner as currently and are unaffected by restructuring. Consumer education is also being funded through the public benefits charge.

Status

The initial public benefit programs under restructuring began in 1997. The process has been operating fairly smoothly since that time. Actual budgeting has been somewhat higher than the minimum set in legislation, due in part to carryover of unspent funds from prior years. In the latest round, in December 1999, the PUC approved Blackstone Valley Electric Company's (BVE) (Docket No. 2153), Newport Electric Corporation's (NEC) (Docket No. 2152), and Narragansett Electric Company's (Docket No. 1939) proposed stipulations (signed by the companies, the Division of Public Utilities and Carriers, CLF, and TEC-RI) approving the companies' Conservation and Load Management Programs for the year 2000. The approved

budgets were $5,020,884 for BVE, $2,416,333 for NEC, and $18,692,429 for Narragansett Electric.

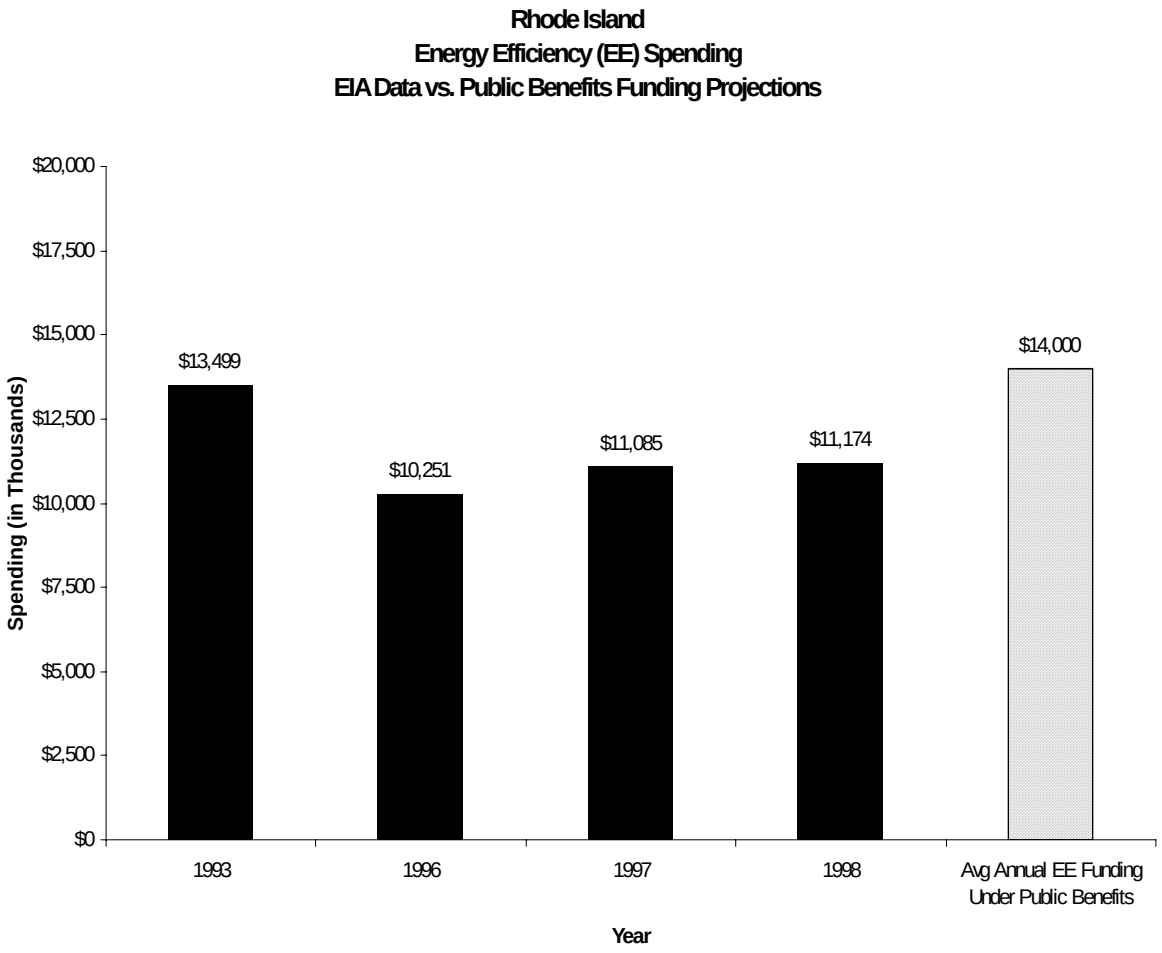
The renewable energy portion of the public benefits approach has proceeded much more slowly and has received only a small portion (roughly 5 percent) of the budget. The main activities have been studies to help identify the potential and a few small projects to raise public awareness.

Qualitative Assessment

The approach to public benefits in Rhode Island received very high marks (one 'B' and three 'A's) from the representatives of interested parties that were interviewed (state agency, utility, efficiency advocate, and environmental advocate). All parties praised the simple, straightforward approach and language in the legislation, and several specifically noted the wisdom of essentially sticking with a process for energy efficiency administration (i.e., utility administration with collaborative input and oversight, under PUC approval) that had been well-proven in Rhode Island. The funding level was viewed as appropriate and consistent with historical levels. One criticism noted was that the public benefits funding mechanism was only specified for 5 years (through 2001) in the legislation, and that this sunset will require additional processes and effort to be expended to continue these programs—effort that could have been avoided.

As for implementation, the assessment was not quite as high, but still quite good (one 'B', two 'B+'s, and one 'A'). There was general agreement that the decision to keep a very similar approach to the pre-restructuring administrative framework had contributed to a very "seamless" transition to the new public benefits paradigm. Also cited for praise in the renewables area were the procedure of first doing a study of what renewable energy approaches were viable for Rhode Island, and the use of RFPs to select projects. (On the other hand, one respondent noted the slow pace in the renewable energy area and commented that "their hearts may not be in renewable energy").

Negative comments included a criticism that the use of a 1-year plan makes for kind of a "stop and start" environment, and that multi-year plans would be preferable. Also, one party criticized the PUC for occasionally being overly skeptical and "nit-picking" regarding collaborative approved plans. Finally, one party noted that "we're not thrilled" with the concept of continued utility administration, but that "we're staying with them for now." (They did acknowledge that there were probably some efficiency savings due to Rhode Island utilities also running similar programs in Massachusetts.) The other parties seemed fairly satisfied with how the utility/collaborative administrative approach was working.


Rhode Island
Energy Efficiency (EE) Spending
EIA Data vs. Public Benefits Funding Projections
$20,000
$17,500
$15,000
$12,500
$10,000
$7,500
$5,000
$2,500
$0
Spending (in Thousands)
$13,499
$10,251
$11,085
$11,174
$14,000
1993
1996
1997
1998
Avg Annual EE Funding Under Public Benefits
Year

TEXAS

Policy Mechanism

Restructuring legislation for Texas (SB 7) was signed in July 1999. The Act includes a system benefit fund to support programs to assist low-income customers, customer education programs, and a school funding loss compensation mechanism. Support for low-income includes the requirement for a reduced rate 10-20 percent below the standard retail price offered by the provider of last resort.

Texas took a unique approach to designing its energy efficiency policy. Rather than a specified funding level, the Act requires the investor-owned utilities to achieve energy efficiency savings equivalent to at least 10 percent of their projected annual growth in demand, to be accomplished by January 1, 2004 and continued on an annual basis thereafter. The Act indicates that the utilities will administer "market-neutral, nondiscriminatory" programs that provide incentives to retail electric providers and energy service companies to acquire the savings, and that both standard offer and market transformation-type programs are to be provided. The best current estimate is that the savings goal for 2004 will be around 120 MW. Funding for the programs will be included in the transmission and distribution rates filed with the Commission by each utility.[29]

Status

In response to the requirements in the legislation, the utilities have filed (June 2000) their proposed plans for the energy efficiency programs. They were filed in the context of broad restructuring cases, which are expected to take quite some time to complete. In the interim, the utilities are using funds in their current frozen rates to transition from their old in-house programs to the new types of programs specified in the legislation, and a couple of these programs have just started. With regard to the low-income programs, the Public Utilities Commission (PUCT) was still working on rule-making for that area as of this writing.

Qualitative Assessment

The public benefits policy approach in Texas received a fairly positive assessment from the representatives of a wide range of interested parties (state regulatory agency, environmental group, utility, low-income advocate, energy efficiency advocate, and an ESCO). Most parties assigned a grade of 'B', with comments like "pretty good, especially for Texas." There was praise for having fairly good coverage of several benefit areas (energy efficiency, renewables, and low-income). One environmental advocate gave the overall approach an 'A', due especially to the very aggressive renewable energy requirements.

[29] The legislation also included a very large renewable energy requirement (2000 MW of new renewable resources by 2009). See Volume 1 for details.

On the other hand, a couple of the parties downgraded their rating slightly because they felt that the "10 percent of new load" savings requirement from energy efficiency was not aggressive enough (an earlier draft of the legislation had 25 percent). There was also some concern that the energy efficiency provisions were somewhat vague and poorly defined, opening the door for delays and potential weakening of their effectiveness. The utility representative expressed concern that the utilities were not being allowed enough (5 percent of total budget) for administering the energy efficiency programs.

The grades for implementation to date were notably lower than for the general policy (ranging from 'C' to 'D-'). Several parties commented negatively on the process of developing the energy efficiency rule, feeling that it had been unpleasant and that the energy efficiency program had been weakened. The ESCO representative was particularly upset at the low payment levels allowed for the standard offer program. The low-income advocate also was disappointed with the low-income process, and discussed the uncertainty created by some conflicting priorities that had emerged. A couple of the parties pointed to the renewable energy component as an area where implementation progress to date has been much more positive.

VERMONT

Policy Mechanism

Vermont has not passed electric restructuring. However, in June 1999, the governor signed legislation (S 137) giving the Vermont Public Service Board (PSB) authority to approve the creation of an Energy Efficiency Utility (EEU), a state-sponsored nonprofit to offer statewide efficiency services to residential, commercial, dairy, and industrial customers. On September 30, 1999, the PSB approved the EEU after the PSB and the state's 22 electric utilities reached consensus in a Memorandum of Understanding (MOU, Docket No. 5980). The EEU will satisfy the distribution companies' energy efficiency program obligations, although companies may implement their own programs in addition to the core programs offered by the EEU if they wish.

The EEU budget will be funded through a separately stated, non-bypassable, volumetric system benefits charge on the customers' electric bills. S 137 stipulates that the charge shall not exceed a total of $17,500,000/year. The MOU states that at no time over the 5-year period (2000-2004) should the customer contribution exceed the equivalent of 2.9 mills/kWh on total statewide sales. The amount paid by individual customers varies by utility. The charge paid by Central Vermont Public Service and Green Mountain Power customers, for example, will be approximately 1.5 percent of their bills. The charge for customers of most other utilities will be approximately 2 percent of their bills. Burlington Electric customers will pay for efficiency services as part of their electric rates and will not pay a separate charge. Based on the data in Attachment B of the MOU, the average annual funding for EEU programs over the 5-year period is approximately $13 million/year.

Parties reached agreement in the MOU that a Fiscal Agent, a Contract Administrator, and an Advisory Committee would be selected by the PSB to help oversee the EEU. A Burlington-based consortium won the competitive bid for the role as the EEU, in which the consortium will be responsible for the statewide implementation of Vermont's energy efficiency programs either directly or through subcontracts. The Fiscal Agent will receive the monies collected by the electric distribution companies and disburse the funding to the EEU. The Contract Administrator will assist the PSB in managing the details of the contract between the PSB and EEU. Members of the Advisory Committee, representing the distribution utilities, consumers, DPS, etc., will offer input on program design, re-allocation of funds within programs, and any other issues that will assist the PSB.

The EEU budget includes programs for commercial, industrial, and residential customers. Core programs will target missed opportunities in new construction, promote market opportunities and efficient products, and address the special concerns of dairy farmers and low-income customers. The charge to cover the EEU began February 2000 and will continue through December 31, 2004. The EEU was to begin to offer services in early 2000.

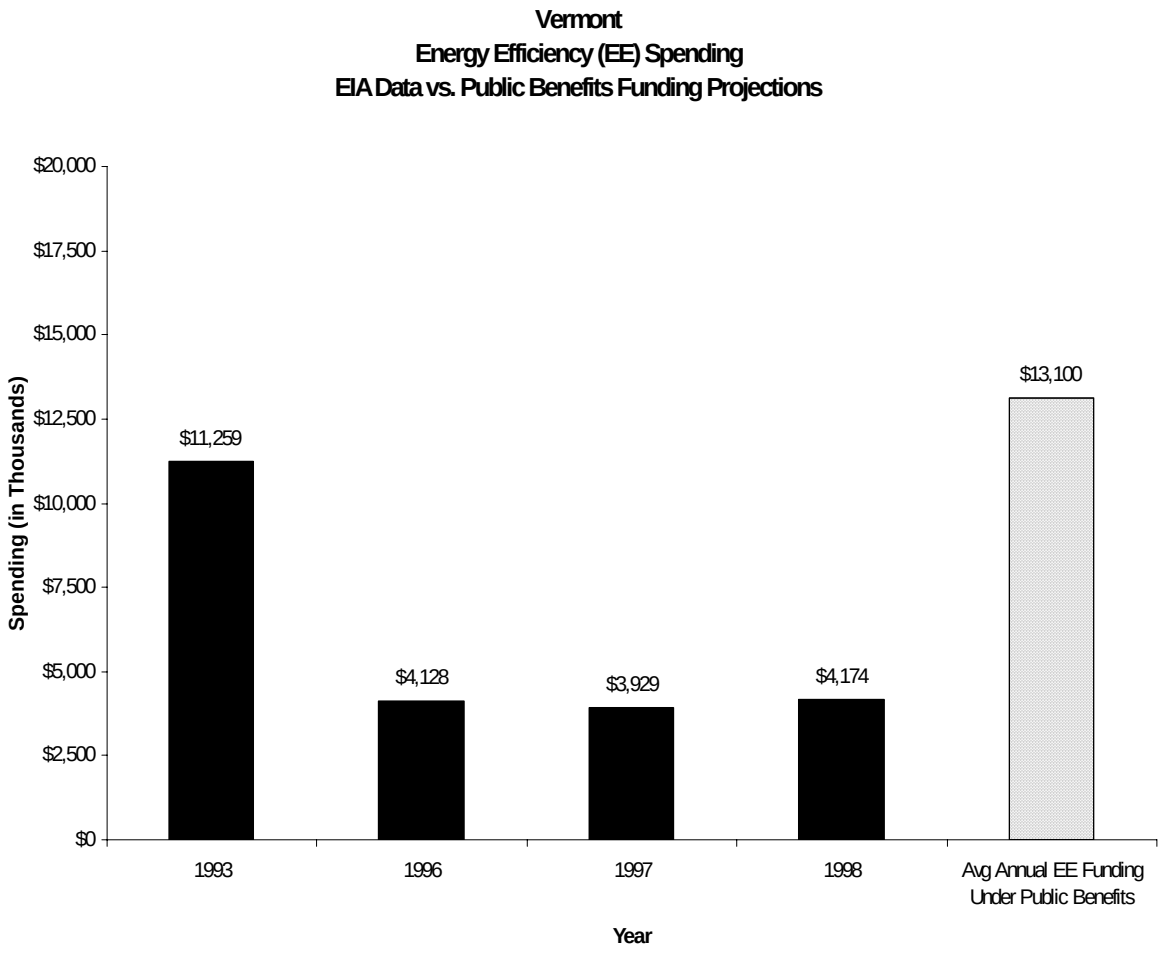
Status

The RFP to select the organization to become the EEU was issued in late 1999, and the winning team (headed by a Vermont-based nonprofit organization—the Vermont Energy Investment Corporation) was selected in January 2000. The initial program service delivery through the new organization (known as "Efficiency Vermont" or "EVT") began in March 2000. Programs initially began primarily as a "hand-off" of the previous utility programs to EVT, but the process for program revisions and new program implementation is well underway.

Qualitative Assessment

The assessment of the energy efficiency public benefits policy approach in Vermont by the parties interviewed (state regulatory agency, utility, and environmental group) was very positive (grades ranging from 'B+' to 'A'). Positive comments focused on the good, solid funding support, the logical advantages of having a single central entity administer the programs (rather than having the 20 or so investor-owned utilities, coops, and municipal utilities in Vermont each try to administer their own programs), and the fact that most utilities had been looking to "off-load" the responsibilities of providing these programs anyway. The approach chosen was characterized as "a win for everyone."

The implementation to date was rated even more positively (the one respondent with a 'B+' raised the grade to 'A+'). Comments noted that there had been very good cooperation between the utilities and the state in facilitating the transition, and that there appears to be widespread acknowledgment that the consortium chosen to make up the EEU was an excellent selection.


Vermont
Energy Efficiency (EE) Spending
EIA Data vs. Public Benefits Funding Projections
$20,000
$17,500
$15,000
$12,500
$10,000
$7,500
$5,000
$2,500
$0
Spending (in Thousands)
$11,259
$4,128
$3,929
$4,174
$13,100
1993
1996
1997
1998
Avg Annual EE Funding Under Public Benefits
Year

WISCONSIN

Policy Mechanism

Although Wisconsin has not restructured its electric industry, it has passed legislation creating an extensive public benefits funding mechanism. In October 1999, the governor signed legislation known as "Reliability 2000" (part of Act 9 of the 1999 Biennial Budget Act), which, among other things, created a public benefits policy and funding mechanism. The legislation specifies four areas of public benefits: energy efficiency; renewable energy; low-income programs; and R&D.

The funding mechanism and allocation requirements are rather complex, but a simplified explanation is as follows. The funding originates from two sources: (1) pre-existing utility expenditure levels on energy efficiency and low-income programs in 1998; and (2) a new charge on all electric customers. There are formulas for determining how much new money should be available for energy efficiency and low-income programs, and renewable energy is specified to receive 4.5 percent and R&D 1.75 percent of the energy program funds. The best current estimate of the total amount of state-required public benefits funds (not counting federal funds) is approximately $111 million/year (equivalent to approximately 2.2 mills/kWh). Of that, energy efficiency would receive $62 million, low-income programs $45 million, renewable energy $2.8 million, and R&D $1.1 million.

All public benefit programs are ultimately to be administered by a state agency (The Department of Administration). However, utilities are allowed to phase out of the administration of their share of the funds ("source [1]" above) and transfer that money to the Department over a period of up to 3 years. Also, the Department intends to competitively select Wisconsin-based nonprofit organizations to directly administer the energy efficiency and renewable energy programs.

Status

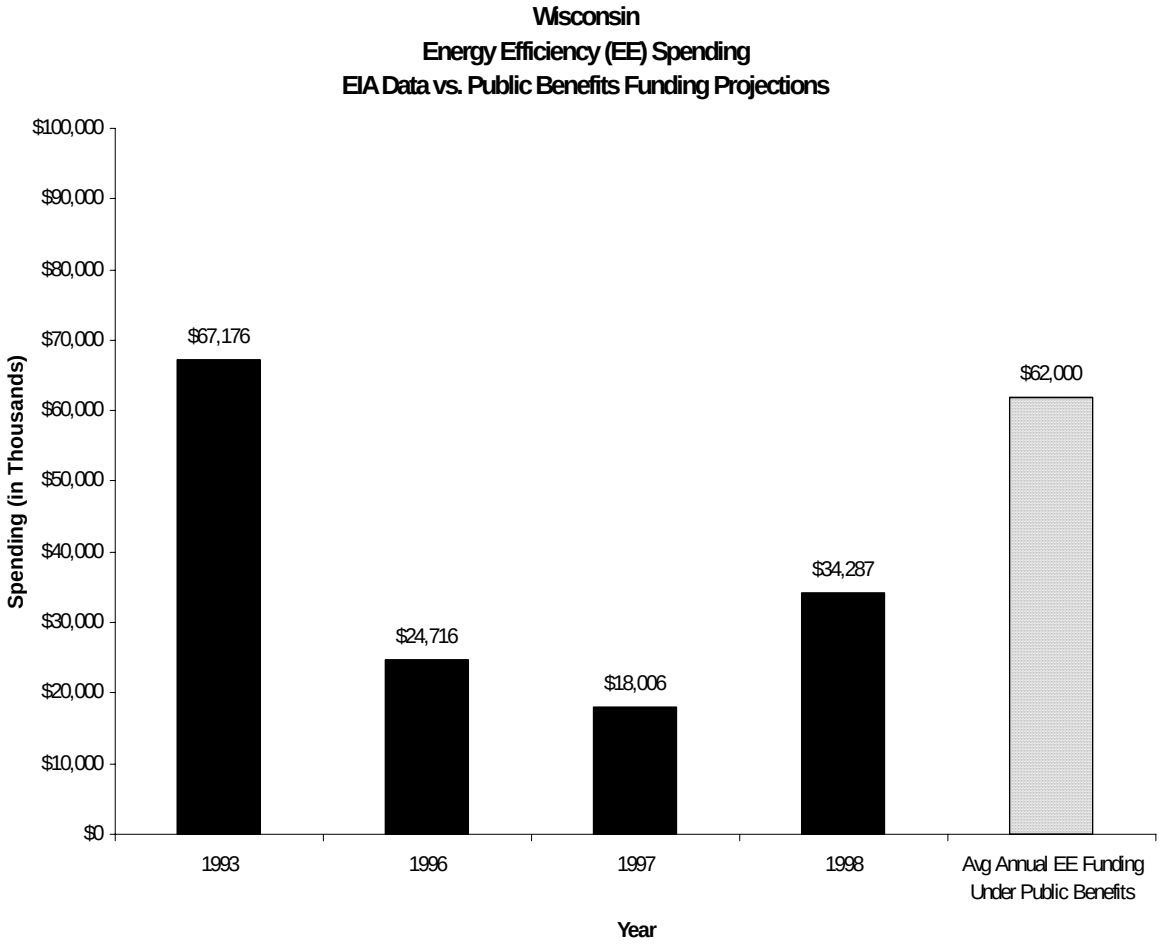
The Department of Administration is in the process of developing the procedures and structure that will be used to administer the programs, and is awaiting final Public Service Commission orders and final administrative rules that will specifically establish the amount of funds available. In the interim, energy efficiency programs continue to be delivered in Wisconsin, administered either by the utilities or, in one area of the state, by the Department of Administration in a pilot project.

Qualitative Assessment

The overall assessment of the Wisconsin public benefits policy approach, from representatives of the state government, and utility and environmental sectors, was quite positive. Assigned grades ranged from 'B+' to 'A'. Among the positive comments were the fact that the approach was comprehensive (covering EE, LI, and RE aspects), and that it was designed to provide for a smooth transition from utility-run to state-administered programs.

Although most respondents felt it was too soon to assign a grade to implementation, there was general concern that the fund collection mechanism had not yet been finalized and put in place. This has resulted in a delay in the Department being able to move forward with programs. On the other hand, there was widespread agreement that the Department was doing a good job of offering parties input into the planning process, and also of soliciting expert assistance in forming their plans. However, one environmental representative remarked very unfavorably on the reported news that the Public Service Commission had decided to go with the lower energy efficiency and low-income 1998 spending level claimed by the utilities rather than the higher figure estimated by PSC staff, referring to this as "a huge black eye" for the program.[30] Other than this setback, overall assessment of the public benefits approach in Wisconsin was very favorable.

[30] The net effect of this difference would be about $32 million/year less funding for public benefits programs. The funding estimates provided earlier in this summary assume that lower level of funding.


Wisconsin
Energy Efficiency (EE) Spending
EIA Data vs. Public Benefits Funding Projections
$100,000
$90,000
$80,000
$70,000
$60,000
$50,000
$40,000
$30,000
$20,000
$10,000
$0
Spending (in Thousands)
$67,176
$24,716
$18,006
$34,287
$62,000
1993
1996
1997
1998
Avg Annual EE Funding Under Public Benefits
Year