Administration and Implementation of Public Benefits Programs: Experiences from Four States

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ABSTRACT

In this roundtable we present the lessons learned from the experiences of four states—California, New York, Vermont, and Wisconsin—that have established and are operating public benefits programs. Each of these states has established different roles for the public agencies, utilities, non-governmental organizations, and private sector companies involved in administering and implementing programs. We examine how each of these states has structured and addressed two key functions of public benefits programs—administration and implementation. The presenters offer their perspectives on how well their programs are working based on the choices that have been made for administration and implementation.

Introduction

Creation of public benefits programs has emerged as a policy response to preserve energy efficiency, renewable and low-income energy programs as energy markets are restructured. While the objectives of these types of programs are similar, the structures and means to deliver these services show much wider variation. Of the four states profiled in this paper, two of them—California and New York—have restructured their electric utility industries to introduce competition at the retail service level. The other two states profiled—Vermont and Wisconsin—have not restructured their industries, although both of them have investigated such action. Both Vermont and Wisconsin concluded that statewide programs to deliver public benefits services made sense under either a traditional regulatory structure or a restructured market-based model, and so moved ahead and established such programs.

This paper presents lessons learned from these states' experiences with public benefits programs and how they see the programs evolving. It also demonstrates new roles and structures for energy efficiency programs. The information provides valuable insights into the effectiveness of different choices that can be made as to how public benefits programs are structured and delivered. Such information is especially valuable to other states that are initiating public benefits programs and facing key decisions on how to structure and deliver these programs.

California

Background

California has been a leader in energy efficiency and conservation for the last quarter century. The California Energy Commission (CEC), funded by a ratepayer surcharge, has been adopting and updating the state's residential and non-residential new building and appliance efficiency standards since the 1970s. California's investor-owned utilities (IOUs) began offering energy efficiency programs in the late 1970s.

The IOU programs have a long history of expansion and contraction. As energy efficiency programs grew in popularity, statewide utility spending grew from $100 million a year in 1980 to $230 million in 1984. However, the fall of oil and gas prices in 1985 triggered a downturn in program funding. In 1989, total demand-side management (DSM) funding dipped below $100 million a year.

In the early 1990s, the California Public Utilities Commission (CPUC) authorized the utilities to earn ratepayer funds for measured energy savings. As a result, the utilities once again found energy efficiency programs profitable. The funding for those programs rose to $500 million a year in 1994. But this changed once again in the mid-1990s when program funding declined with the uncertainty that developed around restructuring. In 1996, California's restructuring bill required that the utilities collect funds for "public purpose programs" including energy efficiency, low income, renewable energy, and research and development (R&D). About $275 million a year was designated for energy efficiency programs administered by the IOUs and overseen by the CPUC (CEC 1999). In 1997, the CPUC failed in its attempt to create a new structure that would allow independent administrators to implement its public purpose energy efficiency programs. The CPUC is now once again looking at alternative administrative structures.

Finally a new entity, the California Power Authority (CPA), was created as a part of the solution to the energy crisis of 2001. The CPA has no independent funding but will combine its financing authority with the CPUC and CEC entities.

Structure

The CPUC oversees about $275 million in public goods charge (PGC)-funded energy efficiency programs annually. These programs are administered by the IOUs, subject to CPUC oversight. With the 2001 energy crisis, the CPUC received an additional $97 million—about three-quarters of the new funding was added to the existing IOU programs and one-quarter was directly administered by the CPUC.

Traditionally the CPUC provided only policy oversight for the IOU-administered programs. The IOUs would select which programs to run and either implement them directly or hire contractors. Since 1998, the IOUs have administered "third-party initiative" (TPI) programs, which now constitute about 7 percent of overall PGC budgets. Non-utilities may bid for program funds in a competitive request for proposal (RFP) process. Recently the CPUC expanded the TPI programs and began taking a much more active role including selecting programs, managing contracts, and evaluating the results.

Before the 2001 energy crisis, the CEC administered about $30 million collected from all ratepayers and other sources. In 2000–2001, the CEC was appropriated an additional $380 million in special taxpayer funds for a variety of programs. The CEC uses a combination of directly administering the programs and hiring third-party administrators. The CPA will administer its own programs, often through third-party administrators. The CPA plans to have its loans repaid through collections on ratepayers' utility bills.

Experience: Lessons Learned from California's Energy Crisis

In the summer of 2001, California experienced unprecedented challenges in maintaining the supply of electricity and mitigating the economic impacts of soaring market prices for electricity. Examination of this recent experience provides key insights into the effectiveness of California's approach to administration and implementation of PGC-funded programs in responding to such extraordinary circumstances. California's experience with energy efficiency and conservation as a long-term, slow-to-develop strategic tool was radically changed by the need to solve its energy crisis. As a first step, the CPUC re-targeted some of the PGC efficiency programs. In the CPUC's 2001 "Summer Initiative," it reallocated $72 million remaining from previous years' energy efficiency funds to efforts to reduce peak electricity demand.

Governor Davis set goals for adding an additional 5,000 MW of new supply and also reducing California's peak demand by 5,000 MW by the summer of 2001. To put the 5,000 MW goal into perspective, the combination of all of California's conservation and energy efficiency efforts over the previous 25 years had saved about 9,000 MW of peak demand (Governor's Conservation Team 2002).

To reach the Governor's goal of 5,000 MW by the beginning of the summer of 2001 required significant amounts of voluntary conservation. Using a combination of ratepayer and taxpayer funding, the state initiated the "Flex Your Power" campaign to spearhead this call to action, which included paid media and an organizational effort that reached state employees, local governments, businesses, and nonprofit organizations throughout the state. Coordination of this statewide information campaign was very important for increasing customer awareness and participation in available programs.

Actions California Used to Reduce Peak Demand

Below is a brief description of the major initiatives. The PGC-funded programs played a primary role in addressing the challenges faced by California. The ability of California to respond to this situation may have been severely hampered had there not been PGC-funded programs and infrastructure in place.

- **Energy Conservation Media and Education Campaign:** The Department of Consumer Affairs conducted a statewide media awareness campaign that informed the public of the problem the state faced and encouraged businesses and citizens to reduce peak demand and energy usage.
- **20/20 Program:** The 20/20 program provided a ratepayer-funded 20 percent rebate on energy costs during summer months to customers of IOUs who reduced their

usage 20 percent or more compared to the same month in 2000. Several of the municipal utilities ran similar programs.

- **Building Efficiency Improvements:** The campaign included weatherization of low-income housing to reduce electricity demand and assist low-income Californians. The effort also included the adoption of a 20 percent increase in the CECs building standards.
- **Incentive Programs:** Expanding on existing PGC and other programs, the CEC, CPUC, and other agencies pursued incentive programs. Virtually every program proposed that had reasonable promise to substantially reduce peak by the summer of 2001 was attempted**.**

Table 1. New Incentive Programs for the Summer of 2001

Measure	Cost ($Million)	Summer '01 MW Goal
CPUC Programs		
Summer Peak Initiative	$67.0	67
Appliance Rebates	$50.0	61
Oil and Gas Pumping	$12.0	16
Commercial Lighting Retrofits	$35.0	44
Low-Income Weatherization and Appliance Rebates	$45.0	8
CEC Programs		
LED Traffic Signals	$10.0	6
Innovative Programs	$48.0	122
Demand Responsive Buildings	$48.0	185
Cool Roofs	$23.9	40
State Buildings and Public Universities	$5.5	50
Water/Wastewater	$16.3	45
Municipal Utilities	$40.0	35
Agriculture	$87.1	22
Local Government Loans	$49.5	20
Real Time Meters	$34.0	500
Other Agency Programs		
Public Awareness/ Media Campaign	$50.0	2,000
20/20 Program	$227.0	Included in Public Awareness
Classroom Outreach	$7.0	NA
Other Low Income	$220.0	NA
Renewable Projects	$99.5	10
State Energy Projects	$35.0	30
Mobile Efficiency Brigade	$40.0	10
State, Fed., & Local Gov't Response	?	658
AC Cycling	?	300
ISO/CPUC Demand/Curtailment	?	735
CPUC Interruptible Tariff Program	?	1,280
Totals	$1,248.8	6,244

- **Voluntary Efforts:** The governor called on media, businesses, and government agencies to assist in educating the public about the need and means of saving energy. Business organizations and companies across the state developed a "Declaration of Action" to voluntarily cut energy use for the summer months by 20 percent. Local governments and special districts made similar pledges. State agencies placed messages regarding saving energy on state websites, lottery tickets, mailings, etc. and ultimately reached millions of residents.
- **State Facility Efficiency Improvements:** The Department of General Services, the University of California and the State University systems conducted audits of their buildings, identifying steps that could be taken to reduce each building's peak demand. By June, the state's largest office buildings had achieved an overall average of reducing energy by 26 percent.

Impact of the Efforts

The CEC tracked the peak and energy savings every month, comparing 2001 demand and consumption to 2000. The metered data was adjusted for weather and growth. By June 2001, the state achieved 5,570 MW of demand reduction with an additional 3,200 MW of reduction available by voluntary curtailments had they been necessary. There was 6.7 percent reduction in overall electricity consumption in the state, and a 10 percent reduction during summer peak hours, reaching a record reduction of 14 percent in June 2001. The CEC and others are conducting studies to determine what motivated Californians to conserve at such unprecedented levels.

Future

The majority of the savings for the summer of 2001 came from voluntary changes in consumers' behavior. The CEC demand forecast for the summer of 2002 calls for half of the voluntary conservation to reoccur. The Department of Consumer Affairs has an additional $35 million to run its media campaign through the summer of 2002. The CPUC is continuing its exploration of having non-IOU administrators for PGC-funded energy efficiency programs. For 2002, 20 percent ($100 million over two years) of the total annual PGC funding is proposed to be allocated to non-IOU administrators. The PGC will remain in effect until 2012, which will fund utilities and other parties in order to continue to implement energy efficiency and other programs.

The CPA is authorized $1 billion in revenue bond financing for energy efficiency financing projects. The CPA is currently working with the CPUC, CEC, and other entities to determine the most effective programs to receive its funding.

New York

Background

New York's System Benefits Charge (SBC) was established in May 1996 by the New York Public Service Commission in Opinion No. 96-12 (NYPSC 1996) to fund public

benefit programs during the State's transition to a competitive retail electricity market. The SBC was designed to fund public policy initiatives that were not expected to be adequately addressed by competitive markets in the areas of energy efficiency, low-income energy affordability, R&D, and environmental protection. SBC funding levels were established within individual electric utility rate cases (NYPSC 1998) and funds were collected through a non-bypassable charge on electric utility transmission and distribution (T&D) systems.

Improving energy efficiency remains a central focus of New York's energy policy. Through its public benefits program, the state has begun assisting development of an energy services industry that will help shift the impetus for providing energy efficiency to the private sector. These programs deliver: (1) energy efficiency and related services to small customers and low-income households, (2) support for development of markets for manufacturing, stocking, and sales of energy efficient products; and (3) support for R&D activities in renewable energy development, new product development and applications, and environmental protection. Through a NYPSC directive, the state's public benefits program was recently expanded to include load management and emergency generation resources procurement to help meet the state's peak electricity needs until new generation resources become available.

Public Benefits Program Structure

The New York State Energy Research and Development Authority (NYSERDA) was designated the administrator of New York's statewide public benefits program, pursuant to a January 30, 1998 Order of the NYPSC. NYSERDA developed and implemented a broad portfolio of programs (the New York Energy $mart^{SM} program) designed to continue energy efficiency, low-income services, R&D and environmental protection programs during the state's transition to electric retail competition. A March 1998 Memorandum of Understanding (MOU) finalized SBC operating arrangements among the NYPSC, the New York State Department of Public Service (DPS), and NYSERDA. The MOU also directed the formation of an outside advisory group to serve as independent program evaluator. The 24-member Advisory Group has met periodically to review NYSERDA's implementation plans and progress, as well as to help guide program evaluation.

The New York Energy $mart^{SM} Program was initially funded at approximately $175 million (about seventy five percent) of the approximately $234 million of public benefits funding allocated for the period July 1, 1998 to June 30, 2001 (the initial three-year program), or $78 million per year for all public benefits funding and $58 million per year for the New York Energy $mart^{SM} Program. The remainder of the funding was allocated to the six IOUs to support ongoing public benefits activities. On January 26, 2001, the NYPSC extended the SBC Program for an additional five years, from July 1, 2001 to June 30, 2006. The funding for the expanded program was increased to $150 million per year with NYSERDA administering $139 million per year.

Experience: Initial Three-Year Public Policy Goals and Progress to Date

The NYPSC's initial three-year goals for New York's public benefits program were to:

- Promote competitive markets for energy efficiency services; and
- Provide direct benefits to electricity ratepayers or be of clear economic or environmental benefit to the people of New York.

In 26 months of program implementation, the New York Energy $mart^{SM}$ Program has demonstrated progress toward these NYPSC goals. The Program has adopted a balanced and strategically prioritized portfolio of energy efficiency, renewable energy resource, and R&D initiatives. These initiatives have improved the efficiency of electricity use through cost-effective energy efficiency measures and services; promoted the energy efficiency services industry; addressed the energy affordability issues of low-income households; invested in public benefit energy R&D, including promoting new energy technologies and maintaining environmental monitoring and protection; and begun to transform the market for energy-efficient products and services.

Further, evaluation indicators of New York Energy $mart^{SM}$ Program are demonstrating (NYSERDA et al. 2002):

- An increased population of energy smart consumers and availability and demand for energy-efficient products and services in New York, as the market share for ENERGY STAR® products sold in New York increased 119 percent for appliances and 144 percent for lighting;
- Public and societal benefits to New York's energy customers with 671,915 tons of CO_2 eliminated;
- Reductions in the economic and energy burden carried by electric ratepayers in New York with savings to program participants of $119 million a year in energy costs;
- Increased quality and quantity of information available to policymakers, ratepayers, and other stakeholders for energy-related decision-making;
- Greater choice for New York consumers in selection of energy-using equipment and appliances;
- Reduced costs associated with energy efficiency improvements allowing greater consumer choice and affordability;
- Expansion of the market for renewable energy technologies in New York; and,
- Development of market niches for the development and demonstration of new energy efficiency and other strategic R&D technologies to benefit all New Yorkers.

Program Modifications and Enhancements

As a result of NYSERDA's administrative experiences to date, several modifications and enhancements have been made to the New York Energy $mart^{SM}$ program. A brief summary of these modifications is described below.

- The existing New York Energy $mart^{SM}$ targeted outreach effort has been expanded to market and promote all New York Energy $mart^{SM}$ programs with a single and consistent statewide message about program opportunities for all customers.
- NYSERDA's New York Energy $mart^{SM}$ program continues to be coordinated with

Long Island Power Authority (LIPA) and New York Power Authority (NYPA) energy efficiency programs to take advantage of opportunities to improve the efficiency and effectiveness of New York's public benefits programs.

- Several of the New York Energy $mart^{SM}$ programs are bundled into a single program opportunity notice (PON) or RFP in order to better tailor programs to customers and provide a single point of entry for program services.
- Several of the programs are being expanded to provide greater depth in services. While the New York Energy $mart^{SM}$ program has been credited with good breadth of market coverage across market actors and sectors, it has been recognized that funding was insufficient to provide the depth necessary to transform markets effectively over a relatively short period.
- New programs have been added to the New York Energy $mart^{SM}$ program portfolio, including peak reduction and price sensitive load program opportunities. In addition, the program is being modified to include non-electric measures to provide customers more comprehensive and attractive financing in packages to promote fuel-switching and combined heat and power measures, where doing so will help to reduce overall electricity usage and especially lower peak demand.
- NYSERDA's program application and contracting processes have been streamlined to provide faster service to customers without compromising the integrity or rigor of the competitive contractor selection and contracting process.
- NYSERDA is establishing a more formal and systematic program orientation for market allies participating in New York Energy $mart^{SM}$ programs. Allies are introduced to all the New York Energy $mart^{SM}$ programs and encouraged to introduce their customers to the programs as a value-added service.

Due to the increased emphasis on resource acquisition, especially in the near term, greater emphasis will be placed on using evaluation funds to obtain electricity savings data by specific measures and by utility territories, with particular attention on the program's peak electricity demand reductions. Included in this effort will be a comprehensive benefit-cost analysis of measures and programs.

NYSERDA continues to make mid-course program changes, as necessary, to address the ever-changing conditions of New York's energy market.

New York Energy $mart Program Progress to Date

During its first three years, the New York Energy $mart^{SM}$ program has achieved broad public benefits including improved environmental quality, increased energy affordability, and enhanced electric system reliability.

The table below provides an overview of the progress of the New York Energy $mart^{SM}$ program. The table contains summary results of programs, either anticipated or from installed measures, for funds committed as of June 30, 2001. These include an anticipated electricity savings of over 927 gigawatt-hours (GWh) per year and an anticipated energy bill savings for program participants of $119.1 million per year—$102 million from electricity savings, $13.8 million from natural gas savings, and $3.3 million from oil savings.

Table 2. New York Energy $mart[SM] Initial Results

Evaluation Criteria		Results
Anticipated Electricity Savings per Year from Funds Committed		927.7 GWh
Anticipated Demand Savings from Funds Committed		521.3 MW
Anticipated Energy Bill Reductions per Year from Funds Committed		$119.1 million
Anticipated Clean Generation per Year from Funds Committed		126.1 GWh
Electricity Savings per year from Installed Measures		312.5 GWh
Demand Savings from Installed Measures		216.9 MW
Average Program Cost of kilowatt-hour		$0.016
Average Program Cost per kilowatt		$902
Anticipated Annual Emission Reductions from Funds Committed (all Sources)	Nitrogen oxides	960 tons
	Sulfur dioxide	1,680 tons
	Carbon dioxide	671,915 tons
Anticipated Co-Funding and Leveraged Investment		$626.1 million
Jobs Sustained and/or Created		2,311

Future

Through June 30, 2006, New York's public benefits program will have been funded for a total of eight years at over $1 billion. The continuation of the New York Energy $mart[SM] program, pursuant to the NYPSC January 2001 Order, established new policy goals by which to measure the program's success. These goals encompass and expand the original SBC policy goals.

NYSERDA will continue to regularly assess the changing needs of the marketplace as compared to general market indicators, including market activity, market barriers, marketplace inequities, transaction costs and risks, lost opportunities, specific customer needs, and financial constraints in order to ensure that programs are meeting their objectives. In addition, NYSERDA will continue to oversee and evaluate the New York Energy $mart[SM] program on behalf of the SBC Advisory Group. This group will continue to serve as the independent program evaluator and NYSERDA will continue to provide detailed status and evaluation reports to the Advisory Group, PSC, and the Department of Public Service.

At the end of the current SBC Funding period in 2006 when funds are fully expended and implementation is complete, the New York Energy $mart[SM] program is projected to have reduced peak demand by nearly 1,300 MW and saved more then 3,500 GWh of electricity annually for New York. This savings is equivalent to the annual electricity needs of approximately 500,000 households.

Vermont

Background

Vermont has been administering all ratepayer-funded public-benefits energy efficiency since March 2000 using an "energy efficiency utility" model. Funded by an energy efficiency charge on all ratepayer bills, this model uses a single, statewide non-utility entity operating under the name "Efficiency Vermont" to administer all energy efficiency efforts. Efficiency Vermont operates under a multi-year, performance-based contract with the Public Service Board (PSB).

While the decision to consider the energy efficiency utility model initially arose in Vermont as part of consideration of retail electric restructuring in 1998, the Vermont legislature determined in early 1999 not to proceed with restructuring. However, at the same time, a Department of Public Service (DPS) review of utility energy efficiency efforts over the prior decade under regulated least-cost planning suggested that a statewide, non-utility alternative ought to be considered regardless of restructuring. The primary benefits put forward in the report included: (1) statewide coverage and uniformity, instead of varied program offerings from 22 separate utilities, (2) reduced regulatory contentiousness and cost, (3) reversal of current trend (1996–1999) of utilities to cut back on DSM program spending, and (4) greater administrative and service delivery efficiency.

In 1999, the PSB issued orders (in Docket 5980) that: (1) relieved Vermont electric distribution utilities of their obligation to deliver system-wide energy efficiency, (2) established the alternative administrative structure, (3) set up the energy efficiency charge and fund-handling details, (4) defined a set of initial "core" programs that would be implemented statewide, and (5) set initial five-year budgets. The Vermont legislature passed a bill establishing the authority of the PSB to take this action, setting a funding cap of $17.5 million per year, but consciously not putting any sunset on the authorization. The PSB order incorporated a regulatory settlement that spelled out many of the details of how the efficiency utility would operate, as well as the continuing role and responsibilities of electric distribution utilities. This settlement was negotiated among all the parties to the Docket, including all of the state's regulated utilities; the DPS; and various business, consumer, and environmental groups.

An RFP for contractors to act as the energy efficiency utility was issued on October 19, 1999, with proposals due November 30 and a contract award made by the PSB in February 2000.

Public Benefits Program Structure

The responsibility for design, marketing, delivery, and implementation of public-benefits energy efficiency in Vermont sits entirely with Efficiency Vermont. This entity acts as an independent contractor to the state under an extensive and detailed contract negotiated between the contractor and PSB. In addition to a scope of work, this contract contains policy guidance, legal and accounting rules, and a lengthy set of negotiated measures of performance for the contractor. These performance indicators include quantified goals for MWh energy savings and total resource benefits for the end of the initial three-year contract

period, as well as some thirty additional activity milestones and result indicators. A financial performance incentive equal to approximately 2.9 percent of the contract value was agreed upon for 100 percent attainment of these performance results (far less than the typical rate allowed under most utility-administered arrangements).

The Vermont structure also involves a contract administrator, who is also hired as an independent contractor by the PSB, and handles any day-to-day contract administration responsibilities on behalf of the PSB. It further includes a fiscal agent, also an independent contractor, who receives energy efficiency charge collections from the utilities and disburses funds against bills submitted by Efficiency Vermont upon approval by the contract administrator. It is notable that because the funds collected never become funds of the state, they are less exposed to redirection and many procurement limitations associated with use of state funds are avoided.

The DPS has responsibility in this structure for review of the savings claims made by Efficiency Vermont each year. The DPS engages in an ongoing process of review and update with Efficiency Vermont of prescriptive savings algorithms. Once a year, DPS also conducts a verification process of the all savings claims. The DPS is also responsible for assessing and reporting on market potential, efficiency baselines, and making recommendations to the PSB on directions and priorities for the future of Efficiency Vermont.

Decision-Making Processes

Due the performance-based nature of the contract, the PSB has given wide latitude to Efficiency Vermont regarding program design and implementation. The contractor is required to seek approval of the PSB for "major" program changes and major shifting of funds. The contractor is required to submit an annual plan each fall for the coming year, which is presented in a workshop setting before the PSB with opportunity for interested parties to offer comments to the PSB regarding its approval of that plan.

Funding and Budgets

Funding is provided by an energy efficiency charge that currently is phasing in over multiple years. In 2000, the charge averaged $.0015/kWh, rising to an average of $.0021/kWh in 2001 and $.0026/kWh in 2002. The resultant budgets for Efficiency Vermont were $5.6 million in 2001, and $10.2 million in 2001, and $11.3 million in 2002-a total of $27 million for the initial contract period. While presently a set contribution that varies by utility, the energy efficiency charge is expected to become a uniform volumetric charge in the coming years.

Program Models and Objectives

There are multiple objectives for Efficiency Vermont set forth in legislation, regulatory orders, and the contract with the PSB. Many of these objectives are potentially conflicting, so Efficiency Vermont pursues a reasonable balance among them, guided by dialogue with interested parties, pubic input, and feedback from customers. Following are the key objectives that determine Efficiency Vermont's service offerings and strategies.

- With limited resources, lost opportunities are prioritized over discretionary retrofit, but a reasonable balance is sought. At the end of the first two years of implementation, approximately 70 percent of spending was on lost opportunity markets and 30 percent on retrofit, with 82 percent of MWh savings in the former. Of the retrofit spending and savings, the majority (approximately 60 percent) was for services targeted to low-income households, with the balance being for limited services targeted to large commercial/industrial, school, and general residential retrofit opportunities.
- Efficiency Vermont seeks to balance the attainment of immediate electrical energy and demand reductions with maximizing long-term electrical and total resource benefits. In the first two years of implementation, the average measure life of savings has been 15 years, which has been a satisfactory balance with lifetime savings. To maximize acquisition of total resource benefits, all Efficiency Vermont services are designed to secure not just electrical savings and demand, but also to leverage electric ratepayer investment in securing savings of all fuels and water.
- Efficiency Vermont is expected to allocate resources in part to maximize benefits to all ratepayers, but also to balance this with efforts to return benefits equitably among ratepayers across the state. Specifically, there are objectives to return benefits equitably by geographic location (e.g., by county, proportional to population), by distribution utility (proportional to the total energy efficiency charge paid by customers in each of the state's 22 electric utilities), and by rate class (approximately 50 percent residential and 50 percent commercial/industrial). At the end of the initial two years of operation, these distributional equity objectives had been met very well.

Experience

The overall experience has gone far better than anticipated. With only a two-month period from notice of contractor selection, Efficiency Vermont took full responsibility for administration and operation on March 1, 2000. Starting that day, all requests for efficiency services were re-directed from utilities to Efficiency Vermont and all ongoing projects became the responsibility of Efficiency Vermont. All of the activity milestones for rapid ramp-up in the first year were met (including, for example, development and full functionality demonstration of a comprehensive data tracking system in 120 days).

Virtually all parties appear to be very pleased with this new approach to delivering statewide public-benefits energy efficiency. The utilities are supportive and refer customers routinely to Efficiency Vermont. The utilities also routinely provide full electronic customer identification and consumption records so that Efficiency Vermont can maintain a single, statewide database on customer energy use and assign savings to individual customers. In the workshops before the PSB to evaluate both of the first two annual plans submitted by Efficiency Vermont, there were no serious concerns raised by any party, including the DPS or PSB. Each plan has been approved as submitted, as has every request for budget modification. Reports delivered to the state legislature on the performance of Efficiency Vermont have also been very well received.

Efficiency Vermont has put unprecedented effort into developing supportive partnerships with statewide dealer and vendor networks, as well as design and engineering

professionals, economic development agencies, and business and trade associations. This has been very fruitful and resulted in positive support for this model.

Most importantly, the public appears to find this new structure very sensible, simple, and worthwhile. With over one in seven electric customers in the state having installed energy-saving measures though Efficiency Vermont (mostly residential lighting), visibility is reasonably high. There is a single statewide source for all efficiency services, with a single toll-free number and website. The services available are the same statewide for all customers and the public seems to find the notion that separating the roles of selling electricity from saving it makes sense in terms of the motivation of the entity they are dealing with.

At the end of 2001, the preliminary estimate for Efficiency Vermont cumulative annualized savings was approximately 60 GWh, 70 percent of the goal set for superlative performance in the initial contract period. This had been achieved with expenditure of only 55 percent of the available funds for the contract period.

Lessons Learned

When the model was developed and the RFP for contractors issued, there were a set of "core" program designs that were specified as a starting place for what should be offered. Efficiency Vermont began with those program definitions, but has increasingly moved away from identifying, marketing, or offering separate "programs." As a single statewide source for whatever assistance consumers need with energy efficiency, it is simpler for both customers and Efficiency Vermont to direct customer needs in various markets to appropriate Efficiency Vermont services. It had also been assumed, at the time of the RFP, that the design and relative funding of different programs would be an issue that might be contentious and require extensive processes of deliberation and approval, resembling those in place under regulated utility delivery of programs. This has turned out not to be the case, particularly in the context of a performance-based contract. With the contractor accountable for bottom-line results, the contractor has been given wide latitude to modify and adjust service offerings as its sees best to respond to changing markets, new opportunities, customer feedback, and the experience of implementation.

Planning, capability development, and the ability to implement longer-term efficiency strategies requires a relatively stable period of performance and funding. Experience suggests that a four- to five-year period minimum would be advisable from this perspective.

The performance contract model has been a very strong and positive driver with many attributes. Experience suggests that a better job could be done in specifying and balancing performance indicators, but on the whole it appears to be well worth consideration elsewhere.

Efficiency Vermont is currently contracted by a multi-organizational team, with the lead contractor being a nonprofit, mission-oriented energy services organization. Some level of Efficiency Vermont's success date has been attributed to the consistency of the lead contractor's organizational mission and the mission of Efficiency Vermont.

Future

There is every indication that Vermont will continue using this model to deliver system-wide, public-benefits energy efficiency for the foreseeable future. Indeed, in establishing this model, the PSB noted that the market barriers to energy efficiency were significant, pervasive, and long term. There is no sunset on the authorizing legislation.

Wisconsin

Background

Wisconsin's statewide public benefits program, Focus on Energy, traces its roots to the Focus on Energy pilot program, created in 1998 by the Wisconsin Department of Administration in cooperation with the Wisconsin Public Service Corporation (WPSC—an IOU serving northeastern Wisconsin) in order to test the feasibility of assigning a state agency to manage energy efficiency and renewable energy programs.

In 1999, based on the early success of this pilot and the desire to maintain the availability of public benefit programs statewide, the Wisconsin legislature passed what were known as the "Reliability 2000" provisions of the 1999–2001 State Biennial Budget. The Wisconsin Department of Administration (DOA) implements the resulting public benefits program under the name Focus on Energy. Oversight of existing utility-operated energy efficiency and renewable energy programs will transfer over to the DOA over a three-year period, ending December 31, 2002.

As DOA began to develop the specifics of the Focus program, Governor Scott McCallum further refined the expectations for the program in his *Energy Policy 2001: Strategic Directions for Wisconsin's Energy and Economic Future* (McCallum 2001). Issued in July 2001, this was the first comprehensive review of energy policy issued by a Wisconsin governor in more than 20 years. Among the policies was the commitment to achieve over 1,450 MW of energy savings through the state's energy efficiency and renewable programs over the next 15 years.

Vision

In response to these legislative and gubernatorial directives, the DOA spent much of 2000 and 2001 crafting a complete energy efficiency and renewable energy plan, including vision and goals for the program. The DOA plan was published in December 2000 and is available on the Internet at www.wifocusonenergy.com (DOA 2000).

When fully implemented, the plan provided for the "full range" of public benefits available through energy efficiency and renewable energy. These benefits were seen as going beyond the kilowatt-hour, kilowatt, and therm savings of traditional programs to include pollution reduction, economic benefits, indoor air quality benefits, and other benefits that can be attributed to the more efficient use of energy. The program was to be based on cooperative partnerships among consumers, utilities, and government at all levels. The plan contained a clear market transformation orientation with the stated intention of ultimately reducing the

level of government involvement in the markets for energy-efficient goods and services. Less clear, but still present, was the intent to achieve some level of short-term energy savings.

Roles of the Department of Administration

The DOA indicated in the plan that it would specify outcomes for the various components of the Focus on Energy program but leave detailed program design and implementation proposals to the contracted nonprofit program administrators that were mandated by the enabling legislation. It was the department's intent to strike a balance that allowed contractors to propose the design and implementation methodology for programs in their area of expertise while the DOA maintained overall policy direction of the statewide programs. In general, DOA staff were to be utilized for their policy expertise, with day-to-day program implementation left to market-oriented, private sector contractors. This design strategy has proven difficult to implement. Willingness to defer to contracted implementers is more easily gained at the theoretical level than at the implementation level, where state officials must regularly face public scrutiny of even the minutest details of the daily activities of their staff and contractors. It turns out that "how they get there" is in fact still important, even as the Focus program talked about the greater importance of determining "where they go."

A further critical DOA responsibility was to work closely with its program administrators and evaluation contractor to develop evaluation metrics and designs that accurately assess the achievement of the specified outcomes, especially those related to market transformation. The creation of recognized and acceptable metrics appears to be of increasing importance in establishing consistent program theory as well as communicating value to the public.

Funding

The Focus on Energy program was funded by transferring to DOA the portion of utility rates that gas and electric utilities devoted to energy efficiency and renewable programs in 1998. Ultimately, in October 2000, the PSC determined that amount to be $45.8 million. Recognizing that utility expenditures for these purposes had steadily declined since 1993, the legislature also created a public benefits fee in an effort to maintain and guarantee a reasonable and equitable distribution of these benefits. In all, Act 9 created a utility public benefits fund that, upon completion of the transition period, will total $62.3 million annually for energy efficiency and renewable energy purposes.

Market Transformation

The emphasis of the Focus on Energy program on market transformation is a key to achieving long-term energy efficiency and expanding the use of renewable energy. A fundamental hypothesis was that individuals and businesses, when given a supportive environment and a better understanding of the benefits, will opt to produce and demand a greater amount of energy efficiency and renewable energy goods and services.

The Focus program attempts to identify and communicate the full, long-term value of energy efficiency and renewable energy to manufacturers, retailers, and consumers. The program then attempts to encourage appropriate responses and eventually expects that market actors will decide on their own to participate in a developing market for energy efficiency products and services.

The transition from a utility-delivered resource acquisition program to a government-overseen market transformation program is a task not to be underestimated. The beneficiaries of the previous structure (contractors as well as participants) tend to perceive the changes negatively, particularly the reduced rebates. Other stakeholders and decision makers are ambivalent about the change and do not appreciate the distinction between the market transformation and "full range of benefits" objectives and the more traditional resource acquisition objectives. Budget pressure and political philosophy have combined to oppose what is seen as a "new tax" added to the systems benefit fee. Nevertheless, the program has gone forward and started to show identifiable and positive results. As one example, the program received three ENERGY STAR® partner awards from the U.S. Environmental Protection Agency in 2002.

As another indicator of positive results, the Focus on Energy program has successfully partnered with a major Wisconsin paper manufacturer and a small Madison biotech startup to win a $500,000 National Industrial Competitiveness through Energy, Environment, and Economics (NICE³) grant. This grant will enable the partnership to develop a new process to convert timber to wood pulp with sharply reduced energy inputs. The Focus on Energy program has also worked with the Forest Products Industry to identify the need for a Forest Product Technology Transfer Center in Wisconsin that would hasten the movement of new technologies from the laboratory into the field. This would create a meaningful competitive advantage for Wisconsin forest products firms.

Stakeholder Satisfaction

To date, Wisconsin has conducted no survey or other measure of stakeholder satisfaction. Anecdotal evidence suggests that opponents of the program are very vocal and include former contractors to the IOUs who have not received continuing contracts. Other opponents, including some state legislators, question the need for and value of the program. Several utilities appear to have belatedly realized the value of energy efficiency and renewable programs, if for no other reason than to maintain customer contact and good will. On the other hand, program participants appear well pleased with the level of technical services and support provided. They are, however, not particularly vocal in their support.

Lessons Learned

The program is still in the process of ramping up to full funding as of May 2002. Some early indications are that, in spite of its efforts to establish a clearly defined plan, the DOA has not succeeded in uniting all the relevant stakeholders behind a single vision for the program. Given the nature of a system benefits charge, many stakeholders are new to the energy efficiency or renewable business, and perhaps less than committed to the program. To these people, the alternatives do not consist of choosing between residential program and

commercial programs, but rather between energy efficiency programs and any number of high-priority government programs.

Even among the "energy experts" and DOA's own contractors, the distinction between market transformation and traditional resource acquisition creates an ongoing tension. While the Focus on Energy program was always conceived of as a comprehensive energy efficiency and renewable energy effort, the early program rhetoric tended to portray it as completely devoted to market transformation. As the public agenda turned to reliability concerns, the long-term nature of market transformation was criticized. Stakeholders from several sectors, including elected officials, made clear their expectation of immediate and verifiable energy savings. The Focus program responded with an attempt to clarify the balance between resource acquisition and market transformation. Essentially the balance required that all Focus programs achieve a benefit/cost ratio of at least 1:1, using only traditional measures of energy efficiency. Savings beyond the 1:1 benefit/cost ratio could include less objective measures of economic development, environmental improvement, and other yet-to-be-identified benefits. While the DOA saw the clarification as the final word, it is not clear that other stakeholders have fully accepted or grasped the distinction. A successful resolution of this tension will be critical to developing a consistent and effective statewide program.

There has been concern that assigning public benefit programs to a state agency would subject the program to the burden of bureaucracy imposed by state personnel and procurement systems. The Focus program design has apparently successfully minimized these concerns. Of course, the legislative decision to contract out all program delivery functions left only minimal involvement for the state personnel system. Wisconsin effectively only recruited two new staff people to administer the additional $62.3 million annual program. Likewise, the decision to enter into a minimal number of administrator contracts, with the administrator in turn responsible for numerous subcontractors, minimized the procurement issue also.

A greater concern has proven to be the program sustainability question raised by assigning the program to a state agency. The legislative ability and willingness to continually review budgets creates an essentially permanent struggle for budgetary authority in the face of opposition to the system benefit charge as a "new tax." No amount of assurance that it's an "ongoing program" can relieve participant concerns about a potential repeal of the entire program in the next session of the legislature. As of this writing, Wisconsin, like many other states, is grappling with a serious budget shortfall. It appears likely that the utility public benefit fund will be called on to make at least some "contribution" to its resolution. It is apparent that this budgetary battle will be a continuing fact of life for the program.

Future

The public benefits program in Wisconsin has no statutory sunset or termination date. That is not to say that it is "permanent." In addition to the continuing budget discussions, continuation is likely to hinge on the successful resolution of the tension between market transformation and resource acquisition objectives. In fact, this latter resolution may well determine the course of the budget debate. If the program can successfully define and demonstrate achievement of a reasonable balance between resource acquisition and market

transformation, the economic and environmental value should be, in theory, compelling. The missing component at this stage is a set of valid and accepted metrics that will move all the stakeholders and decision makers to agree on the value of market transformation. Once that value is factored in with the traditional resource acquisition metrics, we can anticipate greater acceptance of the program as a whole and consequently an easier argument in legislative budget debates.

Conclusions

Each of these four states has taken a different approach to administering and implementing its public benefits programs. Table 3 presents a summary of key characteristics of these different state public benefits programs.

While each of these states has taken a different approach to providing statewide public benefits programs, examination of each state's experience reveals several common attributes. Generally, the programs in these states

- Have a clear vision and well-defined objectives to guide program strategies, planning and key decisions;
- Build on existing infrastructure and experience;
- Provide reasonable autonomy to program administrators and implementers;
- Are flexible and use ongoing feedback to make mid-stream adjustments to program designs, services, and operations;

Table 3. Statewide[1] Public Benefit Programs Summary Characteristics

State and Program Name	Administrative Entity	Implementing Entity	Annual budget (2001 $ million)	Initial Program Year	Sunset (S) or Renewal (S) Date
California: CPUC Programs	Investor-owned utilities	Investor-owned utilities and contractors	$275	1996	2012 (S)
New York Energy $mart℠	State authority	State authority and contractors	$139	1996	2006 (R)
Efficiency Vermont	State public service board and contractor	Statewide energy efficiency utility and sub-contractors	$10.2	2000	None
Wisconsin: Focus on Energy	State energy office and contractors	Contractors	$62.3	2000	End of 2002 (R)

[1] By "statewide" we mean the primary public benefits program in each state. California also has programs under CEC and CPA. New York also has programs under LIPA, NYPA and six IOUs.

- Use effective, consistent marketing to establish a program identity and reach customers.
- Encourage innovation;
- Have adopted streamlined contracting processes to ensure administrative efficiency and avoid being too "bureaucratic";
- Have budget stability for reasonably long periods (3 or more years);
- Leverage partnerships and alliances with utilities, business, and industry to achieve greater impact; and
- Seek to complement and catalyze market forces to achieve long-term market changes.

Several of these points merit emphasis. Budget stability appears very important to creating an effective infrastructure for delivering public benefits programs. California, New York, and Vermont all have reasonably long time horizons over which to develop and deliver public benefits programs and services. New York and California both have entered their second major funding cycles after initial periods of 3 to 5 years. Wisconsin's initial funding period is 3 years, and larger statewide budget problems have created a certain atmosphere of uncertainty with respect to the duration and funding levels of the programs. This in turn raises another feature of these programs that seems important to their success: The more that funding for the programs is separate from other possible statewide income streams, the more secure it is for maintaining funding at established levels.

Autonomy of administrators and contractors seems to be another feature linked to program success. Efficiency Vermont and NYSERDA both have a great deal of autonomy with respect to program decisions and implementation issues. California is still working on its ultimate public benefits program structure and is exploring various adaptations to the structure currently in place. The entities in Wisconsin responsible for administering and implementing programs are generally more constrained by being tied closer to government agencies and associated administrative procedures. Wisconsin is early in its experience and already has made some adjustments to its structure and administrative procedures to assure program effectiveness. The lesson seems to be that these programs need to emulate the operation of the markets they seek to develop, support, and sustain. They need to have efficient and timely decision-making and operational practices; they can't be "bureaucratic" with burdensome contracting requirements and slow, laborious decision-making processes. They also must be flexible to be able adapt to changing conditions and feedback.

A final lesson learned from examining these initial experiences with public benefits programs is that they already have achieved or have targeted significant levels of energy (kilowatt-hour) and demand (kilowatt) savings. While certain programs experienced some transition and start-up problems from previous program delivery infrastructure, each of these states appears to have managed this transition relatively effectively. The public benefits programs are successfully delivering products and services to the full spectrum of energy customers—from households to major industries and institutions. In doing so, these programs are delivering the *public benefits* of improved energy efficiency—a cleaner environment, lower energy costs for consumers (households, businesses, industries, and institutions), and a more robust, reliable electricity supply system.

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