Energy Efficiency Administration: Many Religions, One Spiritual Experience

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ABSTRACT

There is a wide array of approaches to energy efficiency administration around the US. Even if the whole were designed as an experiment to test and compare competing models, it would be hard to imagine a more diverse set of structures, entities, goals and implementation strategies. In talking to administrators and energy efficiency experts from each region about the issues they face, their differences are readily apparent. The administrators function under different legislative and regulatory mandates, employ widely differing types of organizations, have different timelines, funding levels, goals, incentives, constituencies and program mixes. They have differing histories, alliances and enmities among parties. What is notable is the convergence of many their responses on issues central to administration.

Out of the cacophony of voices representing different approaches, emerges the beginnings of a shared wisdom that may transcend the differences. This paper describes in qualitative terms the responses of 20 experts to a set of questions concerning the administration of energy efficiency programs including the use of third-party implementers and the role of innovation. While their responses certainly acknowledge those aspects that are unique to each region or state, they also begin to outline what may be a shared sense of the conditions that must exist for successful administration of these programs: clear goals and guidelines, trust and good working relations between administrators and regulators, funding stability over many years, incentives for performance, broad administrative discretion in implementation and mid-course corrections, continuity of programs and customer relationships, and cooperation across regions.

Introduction

Although energy efficiency programs have been in place for almost three decades, the advent of electric restructuring, the rapid increase in use of a public goods charge (PGC), and the development of regional approaches to market transformation have fostered new approaches to these programs and their administration (Blumstein 2002). Because of the legislative origin of much of this funding and the shift away from the traditional utility ratemaking approach (York 2002), many new questions have arisen about the best way to regulate, administer, deliver, and evaluate these programs.

Roughly 40% of the states have some public goods funding, either proposed or in place (Kushler et al 2004), and several more have energy efficiency supported through utility rates. As each of these states has formulated their own answer to this challenge, there currently exists a variety of approaches to the administration of these programs (Harrington 2003). This has resulted in a diverse base of experience that can be profitably shared amongst states and regions as they consider design, revision, or improvement of their approach.

This study, based on interviews with experts, offers an opportunity to explore the richness found in a diversity of opinion and experience on issues of energy efficiency administration. More importantly, it allows us to profit from the commonalities and recurring themes that arise from that diversity. Different states and regions do things differently for

reasons tied to their particular needs and history. But like navigation by triangulation, these differences make possible the confirmation of common points of wisdom concerning the organization and management of these programs.

Background

In California, the investor owned utilities (IOUs) have continued to manage the bulk of energy efficiency programs since the implementation of the public goods charge in 1998. With an ever-evolving regulatory framework, new roles for third parties, and the continued opportunity for innovation, there is an ongoing need to review and improve current practices. The purpose of this study is to gather policy level information on issues of energy efficiency administration from around the United States to better inform such changes.

There has been an open experiment in California searching for the best way to utilize the capabilities and interests of third parties in furthering the goals of public policy for energy efficiency. There has also been much discussion about the role of the public goods funding in promoting innovation in energy efficiency. And while the study discussed here focused on gathering other's experience with these issues around the country, their answers to the questions also reflect on broader issues of regulation and administration.

Methodology

A series of interviews were conducted in person and over the phone between June and October 2003. Energy efficiency administrators and experts were contacted across the United States and invited to participate in one-on-one interviews of 1-3 hours in length. The interviews reported here were for the most part based on a standard set of questions developed around two topic areas: third-party programs and innovation. The questions were designed to elicit both a characterization of the experience in each region or state and the lessons learned and how they might apply to others.

A separate interview was usually conducted for each subject area resulting in 37 interviews involving 20 individuals, i.e. some people were interviewed more than once. Some questions were open-ended and others specific, allowing interviewees the opportunity to both speak freely regarding a broad subject area and also encouraging them to provide the specifics of their experience and lessons learned. The three subject areas had between 15-24 questions each. Those interviewed represented a variety of interests and organizations including non-profits, environmental organizations, consultants, engineering firms, third parties, utilities, national labs, and administrators. Information was gathered for five regions covering 31 states representing 90% of the funding for US energy efficiency based on spending in 2000 (York 2002). This paper covers the responses to questions on third-party programs and innovation.

Results

The results are presented under two main headings corresponding to two topics: Third-party Programs and Program Innovation. The interviews covered the Northwest (Washington, Oregon, Montana and Idaho), Southwest (Nevada, Utah, Arizona, Wyoming, Colorado, New Mexico, and Texas), Midwest (Minnesota, Iowa, Missouri, Wisconsin, Illinois, Michigan, Indiana, Ohio, and Kentucky), Northeast (New York, New Jersey, Delaware, Maryland,

Vermont, New Hampshire, Massachusetts, Connecticut, Rhode Island, and Maine), and California.

Third-Party Programs

Representatives of each region as well as national experts were asked to address a series of questions on third-party programs including their history, results, strengths and weaknesses, and lessons learned. In addition, they were asked to comment on the relevance of those lessons to California. All regions have some experience with stand-alone or turnkey third-party programs, i.e. programs wholly designed and managed by third parties, but the majority of the third-party work outside of California is done as directed arms-and-legs contracts, i.e. contacts specifying work designed and managed by the administrator but carried out in part or in whole by the contractor as an extension of the of the administrator's resources. Arms-and-legs contracting is the traditional approach employed by utilities and has been adopted by more recently established non-utility administrators:

- In the Northwest, utilities have done some pay for performance contracts and BPA has done a general solicitation to "see what's out there". The Northwest Energy Efficiency Alliance (The Alliance) plays a dual role; they administer programs for the four-state region and they also act as a third party receiving funds from the Energy Trust of Oregon (ETO). The Alliance currently commits 20% of their funding to unsolicited proposals and 80% to targeted Requests for Proposals, but 100% is really arms-and-legs contracts since the Alliance negotiates with every unsolicited proposal to make them fit The Alliance's needs.
- The Midwest states have a variety of experiences with third-party programs. Iowa and Minnesota have utility-administered programs with utilities running their own programs or contracting third parties through open turnkey solicitations or arms-and-legs contracts. In Wisconsin, PGC funds are administered by the state energy office through turnkey third-party contracts by market sector (residential, commercial, etc.)
- In the Southwest, there is limited experience with turnkey third-party programs outside of Texas, which began relying completely on third-party programs in 2002, and Nevada, which directs the dollars and specifies the general area and approach. In Texas, standard offers are turnkey contracts but market transformation programs are run as arms-and-legs contracts. Utah and Colorado have employed a more traditional approach of designing their own programs and then contracting them out.
- In the Northeast third parties are primarily working on arms-and-legs contracts although some utilities such as National Grid are farm out specific sectors on a turnkey basis. New Jersey had a large pay-for-performance standard offer in place prior to 2000 but decided to return to utility-run arms-and-legs contracts. In 2003, a new governor and a new public utilities commission announced that they intend to bid the programs out on a turnkey basis. Maine has also decided to hire third parties to run programs. Efficiency Vermont (EV) uses some in-house contract staff but runs all their own programs.

The important distinction between what is going on in California and what is going on in the rest of the nation is the type of turnkey program put out for bid. Other than viewing the administrator as the third party, there are limited applications where administrators have held

open solicitations, such as those held by NYSERDA and BPA and these solicitations have been exploratory in nature and do not call for significant investments. For the most part third-party work in other regions is closely specified and managed to ensure it meets the specific needs of the administrator and fits in with other programs offered. In the case of third-party administrators such as The Alliance or Efficiency Vermont, the administrators either do the work themselves, directly manage contract staff or they negotiate with contractors for the product they want.

In most regions, there is a wide variety of third-party organizations participating in energy efficiency programs including energy service companies (ESCOs), non-profits, engineering firms, customers and government agencies. The level of ESCO participation however is closely tied to the availability of "supplemental support" (Kushler 2001). In the Northwest and Southwest, where there are no pay for-performance-contracts, there is little ESCO activity beyond the institutional markets.

Although most interviewees cited variation in the results from individual contractors, overall there is a general satisfaction in most regions with the work done by third-party contractors. Third parties' success is linked to several factors:

- The scope of work is so wide that it is helpful to hire experts for specific issues
- Their depth of experience in program delivery, technical expertise and ability to handle large quantities of work
- Their ability to get buy-in from a wider audience, which builds credibility at the legislature.

Third-party programs are also sometimes seen as less successful and administrators have chosen to terminate contracts and employ in-house resources or arms-and-legs contracts instead. Some of the factors that have led interviewees to take these actions include:

- Some contractors use funding as venture capital: they take the money and are not interested in further contact with the administrator.
- Third parties are not doing a good job of program marketing or managing customer relationships.
- Pay-for-performance standard offers that were ESCO delivered but were expensive and not offering anything new.
- Contractors also had other things to sell customers and didn't represent EV as well.
- Contractors are harder to manage and require a lot of planning.

Overall, the option of using third-party contracts is considered an advantage particularly where contracts are closely specified and controlled. One interviewee summed it up as follows "Third-party programs can work where there are clear goals." When interviewees where asked about lessons learned their responses followed closely with their assessment above.

- ESCOs should be used as arms-and-legs contractors instead of providing turnkey services.
- The administrator needs to have a clear idea about how they are going to use the third parties' proposals. Then negotiate with them until they become effectively arms-and-legs contracts.

- Layout what is expected of contractors in excruciating detail.

In a follow up question, interviewees were asked what lessons regarding third-party programs might be transferable to California, given the unique combination of local conditions and approach surrounding the lessons learned in each region. Despite the full spectrum of types of organizations running programs from state agencies to third parties, several unifying themes emerged. These included the need for clear direction, multi-year commitment, good working relationships, consistency of programs, and coordination among parties:

- An annual program process or an annual review process won't work; you need a three to seven year implementation plan.
- California needs consistent regulatory direction and a multi-year perspective.
- Regulators regulate, but they don't do administration or implementation. There is an informal collegial relationship between regulators and the administrator. There is a climate of trust.
- The important factors for success are good working relationship with the public utilities commission and parties while moving forward with the programs.
- One needs consistency of programs, commitment over time, and coordination (rather than competition) among parties.

Innovation

Although often phrased differently, there was general agreement concerning the definition of innovation, which was broadly described as something new, better, improved, or different. These words were applied to technologies, program designs, and market approaches. In addition, the discussion of innovation went beyond the programs themselves and covered aspects of administration and program management including measurement and evaluation, customer relations, the setting of targets and regulatory framework.

Innovation in energy efficiency can be found in every region. Improvements to program design and administrative practices are widespread and well documented with examples in each of the five regions covered here (York and Kushler 2003). When interviewees in this study were asked which programs stand out as shining examples of innovation, they often mentioned administrators, the programs they design, goals they set and missions they serve:

- Two market transformation organizations, Northeast Energy Efficiency Partnerships and The Alliance are noteworthy for innovation in market transformation.
- Utility-driven market transformation programs coordinated through Super Efficient Refrigerator Program (SERP), Consortium for Energy Efficiency (CEE), and National Buildings Institute (NBI) have a good track record for setting the bar high enough to require innovation.
- The U.S. Environmental Protection Agency's National Double Your Savings Program for clothes washers is an example of innovation.
- The New York State Energy Research and Development Administration's (NYSERDA's) programs can make the long-term investment required for innovation because they are a state agency and have political support.

- The administrative model itself can be seen as innovative: "Creating Efficiency Vermont was the biggest innovation in the region"

In looking for common themes that might tie these success stories together or offer examples for others to follow, this study queried the interviewees as to which aspects of these programs contribute most significantly to their success and how did the administrative structure and processes support the development of this approach. Responses varied from region to region; however, they echo broader themes that show up again and again – clarity, incentives, multiple year perspective, good relations, etc.:

- Have people with experience and credibility as well as solid motivation. Both altruism and financial incentives are required. You need people who care and a well-designed contract, e.g. Efficiency Vermont.
- Implement uniform regional programs across service territories.
- Have regulators provide clear guidance and goals, multiple-year commitments, flexibility for the administrator to decide how to accomplish the goals and share the risks with others.
- The administrator needs a stable regulatory structure so that commitments can be made and they must maintain the tension between the commitment and the ability to change.
- Structure is not as important as the people and their attitude and relations. They must want it to work and need it to work from the top down – public utilities commission, administrators and implementers.
- A performance contract and stretch goals, manage by cross-functional teams and the ability to offer customers a full range of comprehensive energy services matched to their needs, fosters creativity.
- Program design is key: thinking through the problem in the market place and how to fix it, e.g. SERP.
- Build measurement and evaluation into program design and provide for a periodic feedback loop.
- Involve a brilliant person.

In a follow-on question, interviewees were asked how innovation can be encouraged and where to look for it. Again, responses tended to echo the common themes of incentives, multiyear perspective, clarity of goals, and good communication:

- Offer incentives to account managers to market innovative ideas (e.g. National Grid).
- Encouraging innovation by looking two or three years down the road in the ongoing planning process (e.g. Oncor)
- Third parties are a good source of innovation.
- Let people know you're looking for innovation and make them tell you why their proposal is innovative.
- Maintain a good dialog between non-governmental organizations the state, and administrators.

When asked where do you find innovation, most often interviewees came up with a variety of responses indicating that innovation may be found almost anywhere. Some of the best

places to look include your peers and their most recent developments, component manufacturers, product manufacturers, national laboratories, E Source, Northeast Energy Efficiency Partnership (NEEP), and The Alliance. The approach most cited by interviewees was to stay abreast of developments through conferences, contact with other administrators, benchmarking studies, the market, and the literature.

Innovation, or its lack, may be used as a reason to adopt new regulatory policies, a different administrative approach, or encourage new entrants. In the quest for better programs, the role of innovation in a portfolio of programs is sometimes overlooked. When Interviewees were asked what percentage of their portfolio is normally invested in innovative approaches their answers ranged from three percent to 100 percent, but most responses were in the 10-20% range. Even the outlier made sense in a regional context. The Alliance considers 100% of their programs as innovative since their mandate is to provide market transformation programs for the region. Looking at their budget as a percentage of spending in the region reduces the percentage to the range reported elsewhere:

- Efficiency Vermont is about 25-33%.
- For the Northeast very little of the portfolio (less than 10%) is invested in innovative approaches because they are risky. Mostly innovative approaches are tried as pilots.
- MEEA is about 10%.
- National Grid is 3-5%.
- In Connecticut 5-10% is set-aside for R&D.
- In California 20% is bid out to third parties but only a portion of that is innovative.

Innovation is also related to the issues of funding and planning horizons. Because of the time required to implement and assess innovative programs, annual budget cycles and commitments are not adequate:

- A lighting pilot took nine months to be a success and then one and a half years to be picked up by others as a mainstream program.
- It takes a long time to take over a market. It takes one to two years to bring something to the market. The more innovative the idea the more disruptive it will be to the market and the longer it will take
- Programs are sporadic and there are no long-term commitments: so far, it has taken five to ten years.
- It takes two years to validate a winner, and one to two years to incorporate it into mainstream programs
- MEEA is in the third year of their oldest program, Residential Lighting, and they are just going mainstream now

And again, when it comes to lessons learned regarding the development and implementation of innovative programs the interviewees repeated the themes outlined above:

- It is important to be clear regarding roles and responsibilities. You need a clear purpose and an explanation of doing these programs.
- The important thing is to have people conscious of the goals

    - A performance contract promotes innovation by providing an incentive to improve results by finding new markets and new technologies.
    - Stretch goals encourage innovation: ratcheting up goals means you have to do it a new way.
    - Need to allow a lot of flexibility in program design, implementation and mid-course correction.
- The most important thing to do is to set up goals, so people are clear on what you want to do.
- The administrator can never talk to sponsors and stakeholders enough.

Conclusion

In talking with others around the country about specific issues of energy efficiency administration, certain answers showed up repeatedly. The themes of stability, clarity, proper incentives, flexibility, and good relations seemed to provide a common answer to a diverse set of questions. It is enticing to consider that among the different states there may be certain common experiences with the administration of energy efficiency programs that have lead administrators and experts to draw similar conclusions about what conditions promote success.

There has been a lengthy debate in California over the best model for administration of the PGC energy efficiency programs. In reviewing the interviews mentioned above, two observations arise. First, that the approaches to administration that have been discussed in California are already being tried somewhere else and in many cases with great success. Second, that despite the many different models, players, and practices, the success of the programs seems to rely on common factors: clear goals and guidelines, trust and good working relations between administrators and regulators, funding stability over many years, incentives for performance, broad administrative discretion in implementation and mid-course corrections, continuity of programs and customer relationships, and cooperation across regions.

Joseph Campbell once told a story about a great convocation of the worlds religions he had attended. Every faith was represented. The priests and officials of the various faiths argued endlessly and never understood one another. The monks on the other hand got along famously and instantly connected based on their common experience. So it may be with energy efficiency where policymakers find a multitude of reasons to separately craft each state or regional framework for the administration of programs according to local politics, history and regulatory contexts while those managing and delivering the programs find certain truths transcend these seemingly mutually exclusive constructs.

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