California's Energy Efficiency Policies and Programs: A View from its Muddy Trenches

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ABSTRACT

California's recent electric crisis showed electricity's crucial role in economic well-being and confirmed that energy efficiency and conservation programs can deliver timely and significant savings. The crisis also led to impatience and the discarding of Market Transformation (MT) as a goal, relegating it instead to a tool among others for saving energy. New policy directions, particularly by the California Public Utilities Commission (CPUC) sought to move energy efficiency program administration and implementation to non-Investor-Owned-Utility (IOU) entities.

The crisis also highlighted problems in current energy efficiency programs and policies. The main entities involved government, utilities, vendors and NGOs working in a non-synergistic fashion. It can be argued that the latest CPUC decisions since October 2001 have thrown 2002 energy efficiency program implementation into a fog, losing in the process the inertia of the successful 2001 programs and fostering conflict instead of collaboration, as entities vie for the Public Goods Charge (PGC) funds and roles. This lack of continuity in regulatory oversight, program administration, and program goals and strategies hampers the evolution of mature energy efficiency markets. The energy efficiency community must strive to regain such continuity from the regulatory bodies and programs.

This article seeks to point out the need for a better mix of private and public interactions than what is currently occuring in California's energy efficiency efforts. Program portfolio definition, implementation and supervision need to be apportioned more clearly among the multiple entities currently involved. These efforts will benefit from actions that foster collaboration and build upon the extensive experience California already has. The paper draws upon the author's personal observations based on longterm involvement as an efficiency advocate, and most recently, working directly in energy efficiency in California.

Introduction

The California electric crisis of 2000-2001 heightened public entities (particularly the CPUC's) interest in modifying all aspects of the energy system, including the energy efficiency PGC-funded programs. Yet the changes being proposed and implemented by the CPUC are resulting in delays in program implementation and confusion among both potential implementers and consumers, without clear gains in the results of the PGC programs. Currently needed is a thorough undertaking that can carefully examine past program results and the current situation, to define the optimal portfolio of programs, implementation entities, and required levels of supervision and reporting.

California's stellar 2001 energy efficiency and conservation and demand response efforts resulted in a reduction of about 10% peak load demand (~ 5 GW) and about 7% in electricity use with public investments on the order of 1.1 billion dollars (CEC 2002; Kushler, Vine & York, 2002). These efforts showed that public funds could quickly and

cost-effectively garner heightened energy efficiency and/or conservation responses from customers.

The accomplishments of the energy efficiency programs were partly enhanced and partly hindered by the California energy crisis of 2000-2001. The perception of impending higher electricity prices and higher bills due to higher gas prices increased customer interest and activity in energy efficiency and conservation. The sense of crisis also led to a plethora of confusing and at times conflicting actions from a multiplicity of actors.

The crisis led some (particularly the CPUC) to believe that the current system for PGC energy efficiency programs was not working and needed change. In the midst of 2001, the CPUC proposed changes in the programs' focus, administration, implementation, and oversight. Main changes proposed include (CPUC 2001, 2002a, 2002b):

- Moving quickly to an open competition process to determine program administrators and implementers. For example, for 2002 the CPUC has allocated about 1/5 of the PGC energy efficiency funds to third-party implementers for local programs and keeps the rest under IOU administration for statewide programs.
- Market Transformation (MT) efforts are henceforth to be seen as a "tool" and not a goal of programs. IOUs were directed to focus on programs that would result in immediate energy and peak load savings.
- An increased focus on ensuring equity in the disbursement of PGC funds, particularly to Hard-to-Reach (HTR) customers.
- No earnings will be allowed for IOUs in PGC funded energy efficiency programs. The CPUC's proposals for changes to the current situation are untimely and are done with little public input. The main proposed change that seeks to increase the participation of non-IOU providers of energy efficiency has shown significant transaction costs, unforeseen impacts and no empirical evidence to back the CPUC's contention that such a change will enhance energy efficiency uptake by customers.

The crisis of 2000-2001 also highlighted problematic aspects of the California energy efficiency programs. Multiple actors competed for funds and/or public attention and/or sought to blame others for the energy crisis, leading to increasing levels of distrust and acrimony. Utilities, contractors, the CPUC and CEC are increasingly frustrated as each spends more time in activities that distract and detract from the pursuit of energy efficiency. There is a growing realization among many that the situation needs improvement.

What is now needed is a process to engage a larger section of society than just the CPUC into an open discussion that identifies issues and proposes solutions. Some of the major remaining issues are:

- What is the ideal level of funding for energy efficiency and conservation?
- Who should choose, implement and oversee the portfolio of programs?
- What criteria should guide such a portfolio selection? For example, how much weight and consideration should be given to equity, experienced programs and implementers, or to quick savings in designing the portfolio?
- How do we assure continued permanence and attainment of savings in the future?

This paper is a thought piece that focuses on how the proposed changes (mostly by the CPUC) are hampering energy efficiency efforts in 2002. The intent is to identify areas

where the energy efficiency community will need to engage to find a consensus on how to go forth to ensure that Californians maximize the energy savings they get from their PGC funds.

Problematic Aspects of the Energy Efficiency Framework in California

The current implementation of energy efficiency programs and policies is not ideal. Two significant flaws are the lack of a clear paradigm on program definition and implementation, and the lack of clarity in institutional roles. This paper addresses these elements, beginning with the paradigm problem.

The lack of continuity in regulatory oversight, program administration, and program goals and strategies seriously hampers the sustainability and evolution of mature energy efficiency markets.

Several public oversight entities (particularly the CPUC and various public interest groups) believe that society will be better served by taking the administration of the PGC programs away from the IOUs. This is based on a perception that IOUs are administratively cumbersome and costly, focused on profits, and lacking in innovative spirit (CPUC 2001). Although there may be some truth to these assertions, these public oversight entities do not show a willingness to recognize how their own public oversight actions have stymied the IOUs effectiveness. For example, the numerous and frequent data requests, often without clear explanations of what the data will be used for, and continuous expressions of their distrust of the IOUs not only distract the IOUs from the productive work to be done and increase administrative costs, but also instill a sense of being under seige and lead to burnout among IOU personnel. Also, regulatory oversight that shifts the focus of programs without warning and/or explanations, makes it hard to innovate. Finally, there are incentives and institutional misalignments between IOU's capabilities and what they are asked to do.

The above perceptions of IOUs ineffectiveness as administrators and implementers appears to be behind the CPUC's last two years of decisions (CPUC 2001, 2002a, 2002b). The CPUC appears intent on moving to a situation where it will be in charge of program portfolio design and administration, and implementation will be awarded via a competitive bidding process judged by the CPUC.

Yet the CPUC's actions are being done too quickly, without the appropriate infrastructure development (both at the CPUC and in the energy efficiency markets). The result is that 2002 program implementation is in a fog, losing the inertia of the successful 2001 programs and fostering conflict instead of collaboration as entities vie for the PGC funds and roles. Salient issues with recent proposals and decisions by the CPUC are:

- **A move away from an established way of doing things to a new, unknown, and confused administration and implementation of programs.** The CPUC has a vision where the IOUs may be one of many actors administering or implementing programs. Although this is a vision that could eventually build an eclectic mix of program implementers, the time frame proposed to carry it out is too short. It does not allow enough time for current and future implementers to transition into their new roles. Nor does it allow customers to adapt to changing program characteristics. Given these complications, the CPUC has had to postpone the full implementation of this vision, further impacting program implementation as both IOUs and non-IOU entities continue to prepare for the impending CPUC changes and decisions.

- **A move by the CPUC to require the IOUs to engage in business practices that increase the risk of monetary losses, without any incentives.** The CPUC wants to require the IOUs to administer all the 2002 contracts for a maximum 5% administrative fee and proposes that no earnings accrue from these activities. These proposals go directly against the IOUs fiduciary responsibility to their shareholders. This makes energy efficiency a bad business practice for IOUs.

The CPUC needs to refocus on policy that will maximize the net societal benefits from the PGC funds. Current micromanagement of IOU administered PGC programs not only increases administrative costs of these programs, but also wastes time and resources that could result in further savings. Society might be better served by continuing IOU administration in an enhanced mode, rather than trying to find a new entity for this role. The societal value of the IOUs' experience and infrastructure to administer PGC funds should be carefully reviewed before moving to a new administrative structure.

What is lost in the entrenched positions of the various parties is that customers need to be made aware that they have options for reducing their energy use, and enhancing the accessibility and availability of efficient options to customers. Instead of focusing on customers' needs, the discussions among the parties in charge of the PGC programs are lately more about turf, about oversight, about responsibilities and power struggles. Lost in these fights is the end goal—namely, customers taking actions to save energy that are deemed to be cost-effective and beneficial to society.

Roles and Interests of Institutions Involved In Energy Efficiency

One place to begin to resolve the current disharmony is to remind ourselves of the natural roles and interests for the main institutions engaged in energy efficiency and conservation efforts in California. The intent is to identify areas where interests are misaligned with current roles and/or attributions (Fitch 2002; Messenger 2002; Miller 2002).

California Public UtilitiesCommission (CPUC):

The CPUC traditionally was expected to regulate IOUs and guide and approve energy efficiency programs and budget emphasis. These roles still seem clearly the purview of the CPUC. Using CEC, public interest group, and IOU information and input, the CPUC can decide on an optimal portfolio of programs.

The CPUC's interest would seem to be to regulate and be percieved as an independent oversight institution looking out for rate-payers' interests, to ensure that PGC funds are used effectively and in an equitable fashion.

Instead, the CPUC is increasingly being percieved as having politically motivated agendas that go beyond its purview. The appointed leadership does not follow necessarily its staffs' recommendations. How to ensure true independence from politics is a key issue to address. It is not clear if an elected leadership will work, as then electioneering funding needs could easily result in a CPUC leadership that is "captured" by particular interest groups.

Office of Ratepayer Advocates (ORA)

The ORA is a part of the CPUC. It is entrusted to look out for ratepayers interests and make sure that IOUs profit from PGC funded programs is based on realized savings. Given the current CPUC proposal that no earnings be attached to PGC programs, the future role and even existence of the ORA is an issue to examine.

ORA has maintained a skeptical view of utility's reported accomplishments—that protects ORA from being "captured" by the IOUs. Yet, the level of accrimony, the multiple data requests and oversight requirements, lead to excessive costs at the IOUs, diverting resources that could be directed to customers themselves.

Another cost stems from the ORA review of IOU savings and earnings claims. The cost occurs at least in two instances: when the IOUs define their measurement, evaluation and verification (ME&V) plans (and attempt to guess at the level of detail needed to pass ORA review, usually erring on the excessive side), and when the ORA reviews the ME&V study results using its own consultants. It would seem more logical to have the ORA and the IOUs jointly define the scope of the ME&V efforts and manage these jointly with third party independent evaluators. Mediation mechanisms could be put in place to resolve methodological and result interpretation disagreements.

California Energy Commission (CEC)

The CEC was created to provide scenarios and forecasts of future energy demand and supply and prices, that serve as inputs for others in the design of the optimal mix of energy resources to ensure these are adequate for the California economy. The CEC can also gather information on the markets that the programs should be going after; providing key data inputs for the design of an optimal portofolio of PGC programs.

The CEC also got caught up in political issues and fights for turf that ocurred during the latest California energy crisis in 2000-2001. The legislature asked the CEC to disburse about 250 million dollars in 2001 for energy efficiency and conservation programs (Messenger 2002). Many CEC programs mimicked previous IOU efforts, at times confusing customers. Other programs did not get off the ground before the Governor (facing an enormous budget deficit), recalled unspent funds in early 2002; breaking any continuity and experience that was being established.

As the State budget is reduced, the need for the CEC and the CPUC as separate public energy entities may be questioned. Although there is some collaboration with the CPUC, these institutions at times compete for turf or instances arise where there is no clarity as to who has ultimate oversight. As with the CPUC, the appointed leadership also has to respond to political pressures.

Governor's Office

Energy, previously a backwater where only engineers and lawyers dwelled, has since 2000 become an extremely sensitive issue. Given the importance energy has as a crucial input to the health of the State economy, the governor is now also involved in the fray. Yet, the lack of previous expertise and knowledge and shifting political views, make it hard for a governor to provide clear, timely and effective leadership. The governor's office used the media for public sentiment surveys and the CPUC as a good/bad cop; only enhancing

uncertainty as to what the final government actions would be. The experience of 2000-2001 seems to indicate that it is best to provide for energy decisionmaking to have some degree of insulation from political pressures.

California Department of Water Resources (DWR)

The DWR was set up to run the California water system that primarily ensures that southern California and the farming community gets enough water. With the advent of the electricity crisis and insolvency of the main IOUs, the DWR was given the task in January 2001 to purchase electricity for the IOUs until these could return to the electricity wholesale markets. Yet the DWR was given this arduous task without the adequate infrastructure. The DWR ended up with 43 billion dollars in long term contracts for electricity (mostly over the next 10 years). Though the contracts helped bring wholesale electricity prices to normal levels, given the current adequacy of supply, they also compete with any energy efficiency programs.

These now politically unsavory contracts could stymie the interest of the State government to have energy efficiency suceed. Thus political pressure (due to the public outcry over the now percieved as "expensive" long-term DWR contracts), could be put on the CPUC to reduce the effectiveness and/or affect the legislators' willingness to consider enhanced funding proposals of PGC programs.

Investor Owned Utilities (IOUs)

Due to their billing systems, close relationships to customers, and perceived expertise with energy and energy efficiency, the IOUs can provide both direct services to customers and partner with third parties to reduce their implementation and infrastructure costs.

Being IOUs means that shareholder earnings are important to top management. Customers are also important, as they can complain to the CPUC, and while direct access was available, could go to other providers.

Until the mid-1970's the IOUs saw their role as providing increasing amounts of electricity to assure the development of the State. Efficiency, in essence, used to run counter to an institutional culture where enhancing supply was the operating paradigm.

More recently, efficiency is seen as part of a broadened perspective of their role vis-a-vis customers, i.e., not only providing them with electricity, but with enhanced service, where efficiency can lead to enhanced customer retention (particularly under open access).

To further align IOU interests, the Electric Revenue Adjustment Mechanism (ERAM), a mechanism where earnings were delinked from sales, making the IOUs neutral to demand or supply side activities, was instituted in 1982. Indeed, for a few years in the early 1990s, IOUs could make a higher return-on-investment (ROI) from their energy efficiency programs than from selling electricity. Utilities ramped up their energy efficiency and conservation programs, recouping their investments in rates. With the coming of deregulation, IOUs saw efficiency efforts as costs that could make them less competitive, and they reduced their budgets. Under deregulation, ERAM was also done away with. The CPUC now decides what level of profit (if any) the IOUs make on energy efficiency programs. For example, in 2000, the profit was limited to 7% and then only 5% of program costs. The CPUC now proposes to do away with all earnings from DSM/MT activities and to put 15% of the costs incurred at risk for recovery if the programs do not perform as

expected. This latest CPUC proposal makes the IOUs once again more interested in selling kWh rather than saving them. This CPUC action could be interpreted as going against the law that says that the CPUC should make the IOUs at least neutral to efficiency investments—thus the current proposed decision from the CPUC may face valid legal challenges. Under the current CPUC proposal, the main remaining value of energy efficiency programs to IOUs is for public relations.

Third Party Implementers (TPIs) and Energy Service Providers (ESPs)

Experienced TPIs can be well positioned to implement a variety of energy efficiency programs. For example, some TPIs in California can do outreach to targeted customer groups with whom they have good links and credibility. Community-Based-Organizations (CBOs) are a type of TPI that is particularly useful for dealing with Hard-to-Reach (HTR) customers, helping alleviate the equity concerns of the CPUC as to what customers are under-represented in PGC funded programs. City and County governments can provide market pull and push via purchasing procedures and permiting and local code requirements.

ESPs, traditionally envisioned as private, for profit companies trying to get consumers to adopt energy efficiency widgets, get a share of the PGC incentives and program implementation funds. The biggest problem with them is that many customers do not trust them due to a perceived conflict of interest as they are also vendors of equipment and services. Also, the high transaction costs of energy efficiency implementation has led ESPs to mostly cater to the institutional/commercial and large industrial customers.

Future issues for using TPIs and ESPS are how to ensure that new entrants are capable, doing quality work. Will it be possible to have them self-regulate the quality of their services or will they always require oversight from for example, IOUs or CPUC administrators/managers? How can we optimize the partnering of TPIs and ESPs with IOUs and government entities to provide the heterogeneous customers with the combination of entities they will be most willing to engage with?

Improving the Situation in the Future

It is imperative that the energy efficiency community strive to regain more continuity from the regulatory bodies and programs, and put in place mechanisms for the eventual transformation of equipment and services markets to energy efficient ones. Together with this should be a move to a more collaborative engagement between private and public entities, where a broader spectrum of these entities than the CPUC leadership determines how to proceed.

Clarify Evolving Public and Private Entities Roles and Foster Collaboration

An early task is to clarify roles of both public and private entities involved in PGC-funded programs. A task force composed of representatives of such entities or a neutral third party convening such representatives could do this. To the degree possible, such efforts should be done collaboratively to ensure buy-in from all parties. An early attempt at this was a recent teleconference organized by the Association of Energy Service Professionals (Fitch 2002; Messenger 2002; Miller 2002).

The roles of the various parties will evolve as the markets evolve. New programs initially could be mostly administered and/or implemented by IOUs to take advantage of IOUs name recognition and experience. As these programs gain familiarity in markets and their implementers gain public acceptance, the programs can be done directly by the contractors, and eventually, should no longer get PGC (or other) incentives. In other instances, the IOU participation will always be needed, involving changing roles. As emerging technologies become the norm they can be codified via standards and codes.

Choose Energy Efficiency Programs Administrators on a Cost-Effective Basis

The decision to move from IOU to a non-profit administrator must be based on a thorough analysis of what is most cost-effective to society. The cost savings accruing from a reduced need to supervise a non-profit program administrator need to be carefully compared with the increased transaction costs that may ensue. One example of increased transaction costs will be accessing customer billing data. Another increased cost will be the time and effort that will be required to establish a credibility and seamless protocols and procedures for the new administrator; not only with other implementing parties, but more importantly, with customers.

In the non-profit program administrator scenario, implementation of the programs could continue with IOUs, ESPs, and NGOs. The non-profit administrator could also provide oversight of the public entities carrying out energy efficiency and conservation programs. Such an entity could be modeled after the Northwest Energy Efficiency Alliance. A board composed of interested parties could oversee the administrator.

Establish a Mechanism for Defining the Portfolio of Programs

As part of the determination of the future role of energy efficiency and conservation, it will be necessary to choose a short, medium and longer-term portfolio of programs, implementing, and oversight agencies. An eclectic portfolio mix of energy efficiency and conservation programs that encompass both resource acquisition and market transformation actions working synergistically should be defined. The portfolio should include actions that attend the most pressing short and medium term needs of society. Resource acquisition programs are better suited to insufficient capacity situations. Otherwise, the continued push for a broader participation by market actors via both, push and pull actions is warranted. For example, during an "energy crisis" information campaigns can focus on giving customers information on how they can implement obvious cost-effective measures, and less on enhancing awareness about energy efficiency.

If the CPUC retains the role of choosing the portfolio of programs, then it should consider pushing equity considerations only in times of excess capacity of electric supply. During times of supply scarcity, it should pick programs that lead to the largest savings of energy. For example, during the crisis of 2001, programs focused on larger users would have garnered savings more easily. The ensuing savings would have put downward pressure on wholesale prices for electricity, benefiting all customers.

Enhance Public Oversight to Ensure Maximum Net Benefits to Society

Public oversight should not only rest with the CPUC, the ORA, FERC, and the legislature. Some mechanism needs to be implemented to either invigorate current public oversight or give such oversight to some other body. The intent would be to ensure that energy efficiency programs and implementing institutions maximize net social benefits.

The current public oversight is not working ideally. The leadership of government oversight entities is appointed—it often does not have the expertise or experience that might be required in times of crisis. Their responses may reflect political considerations or zealousness in the application of their mandate, and not necessarily result in maximum net benefits to society. Environmental and social justice non-government organizations should continue to be able to represent the public, but acting on behalf of the broader society and not just catering to their selected constituency. For example, The Utility Reform Network's (TURN) focus on protecting ratepayers from rate hikes during 2000-2001 ended exposing these same people to higher taxes. A mediation scheme could be established to resolve disputes between public oversight entities and private administrators and/or implementing entities to maximize social benefits of PGC programs.

Holding public oversight entities actions to a prudence cost-effectiveness review would reduce wasted resources. There is a lack of understanding by NGOs, the CPUC, and the ORA, that their data requests, their ordering paragraphs, their constant shifts in policy, all lead to lost opportunities and wasted resources.

Optimize the Mix of Continuity and Competition for Program Implementation

Defining the appropriate mix of continuity and competition is crucial for optimizing program implementation. Customers need to have some level of predictability as to permanence of programs and implementing agencies. Program continuity is more likely using experienced program implementers who have established customer recognition as energy efficiency providers. Because of their experience and name recognition, such program implementers are also more likely to maximize program results. But having only a few implementers can result in higher costs due to the lack of competition. Yet in a still mostly immature energy efficiency market, to assume that competition will exist by decree, is to commit the same mistake that deregulation made. How much competition or continuity focus a program has will depend on the market it seeks to impact. Studies that characterize markets will result in reduced free-ridership, and more cost-effective savings to society-both in energy and via the hedging value of efficiency in the electricity wholesale pricing markets.

Who Decides the Portfolio, Chooses the Implementers, and Oversees Programs?

A broad group of entities needs to be involved in defining the portfolio, choosing the implementers, and overseeing those chosen to implement it. A task force could be assembled to answer these issues. Part of the outcome of these deliberations should be a continuous evaluation protocol that not only ensures the implementation of the recommendations of the task force, but more importantly, to see if they are working adequately. Some aspects the task force will need to keep in mind are:

- The CEC can provide the base information for defining the portfolio-as it is a modern version of IRP. Yet political considerations need to be kept out of this portfolio definition—and that in reality is very hard to obtain at institutions operated by politically appointed, or politically elected, leadership. There is always a risk of ending up with pork barreling rather than a well-thought out portfolio.
- The CPUC is currently attempting to choose the portfolio and implementers, and oversee program results. Such expansion of traditional attributes has proven to be very difficult as exemplified by the process to select and award the contracts for local programs for 2002-2003. The CPUC has had to pick winners from about 300 proposals, find mechanisms to ensure public oversight and accountability of implementers. Should another entity take upon itself these responsibilities, it will be faced with similar issues to resolve.

Is a Collaborative Possible?

Is it viable to establish a collaborative, similar to the California Collaborative for Energy Efficiency of the early 1990's, where the parties could meet and come to agreements? (A&C Enercom et al. 1990). Or establish a "council of elders" or board of directors who could oversee the entire PGC funds? If so, what should be the attributes of such a body? What powers should it be given? Who should be its members? How would it be overseen? Should the legislature be allowed to disband it? Should its scope be expanded beyond just energy efficiency and PGC funds? What would be gained by the existence of such a body? This last question will provide the answers as to the value of such a body. I believe such a body could help identify the portfolio of programs, select implementing agencies, and oversee program execution. This body could be a non-profit, with no governmental or private sector affiliation. It would contract out studies to examine current and future efficiency options, the evaluation of proposals and selection of year-to-year and multiyear program implementers, and the evaluation of these programs. Programs that are not performing could be cancelled. Such a body will need to have clear protocols and procedures on how it will carry out its business to avoid repeating the California Board for Energy Efficiency experience. Funding would probably come from the PGC.

In the interim, to reduce the animosity and mistrust between the IOUs and regulatory and public intervener entities, I suggest that consideration be given to having rotational work assignments, where for example, ORA and CPUC staff would spend extended periods of time at the IOUs and vice-versa. Or at least, have informal and formal gatherings where staff of these institutions can interact and get to know each other and their issues better.

Align Again IOU Interests With PGC Programs

If the CPUC's plan of no utility earnings from PGC activities is implemented, it will require a re-examination of the oversight done by the CPUC and ORA. The IOUs should no longer be burdened with information requests and ME&V requirements that are tied to earnings, but should instead, be only requested to do ME&V that helps inform how to improve the portfolio of programs and their delivery-to meet customer needs.

The CPUC's belief that it can have private entities such as IOUs, ESPs and ESCOs carry out energy efficiency PGC activities with no earnings is troubling (CPUC 2002a). The concepts behind the ERAM mechanism are still valid—IOUs and other private entities need

a profit incentive. Worse, the CPUC's latest proposal puts 15% of the costs incurred at risk for non-recovery if the CPUC judges performance to have been unsatisfactory.

Enhance Cost-Effectiveness of M&E

M&E efforts need to be cost-effective. If the M&E effort is for determining the earnings of the IOU, then the funds and resources expended in the effort should be lower than the amount of earnings. A negotiated settlement between IOUs and ORA (with CPUC oversight) should occur in all situations where finding out whether the IOU really saved one dollar will cost more than that to determine. Spending money on evaluations in such situations is only warranted if the results are also used to enhance future programs effectiveness. M&E efforts should focus more on identifying where and how programs to promote energy efficiency should focus their efforts.

Conclusions

The recent California experience has shown that energy efficiency and conservation programs can provide very large savings very quickly. In 2001 energy efficiency and conservation played a crucial role in at keeping the lights on in California and reducing the pressure for continued high wholesale electricity prices. Peak demand was about 5 GW lower than in 1999, or ~ 10% below expected, while energy use for the year was 6.7% lower than in 2000. The PGC funded programs saved about 400 MW. Despite such stellar results, the discussion these days centers mostly on whether the IOUs should continue to administer the PGC funds. I believe the discussion should be focused instead on what role energy efficiency and conservation should play in the future of California's energy sector development and subsequently, what the ideal level of PGC funding should be. Future energy policy for the State needs to assign a more predominant role to demand-side options and assign public funding accordingly.

The experiences of the past two years also have shown problematic aspects of the California efficiency programs. Part of this stems from the politically charged ambience that characterized the energy sector. Part came from an interest by the CPUC to move to a more competitive administration and implementation of programs that has hurt the continuity of programs and could impact savings results.

It is time to move beyond the current acrimony between the interested parties so we can maximize benefits to society. Reinvigorating the California Collaborative for Energy Efficiency, as a forum where the community can bring their proposals and have these discussed by a wide range of interested parties may be a possible solution. The current situation where the CPUC proposes and the community can only react fosters animosity by the impacted parties. A process that is more inclusive as to what is up for discussion and where participants feel they have a voice is likely to lead to a more collaborative ambiance and enhanced savings.

To optimize future energy efficiency and conservation, future efforts need to clarify institutional roles, define a portfolio of programs and implementation strategies that are tailored to the various markets, and recognize that markets evolve and thus, the implementation strategies and actors involved must also evolve. M&E must move from being mostly focused on whether IOUs (or implementers) should get the earnings, to work

that helps inform program implementation and direction and better select the portfolio of programs.

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