

Taking the Efficiency Utility Model to the Next Level

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ABSTRACT

The concept of an “efficiency utility” took form in 2000 with the creation of Efficiency Vermont. Variants on this statewide approach to non-utility responsibility for acquiring energy efficiency resources exist in other states. While these entities are accountable to regulators, their structure and supervision have been quite different from typical regulated electric and gas supply utilities. In 2007 Vermont began to consider structural changes that could improve on the success of the current model. The primary impetus for considering these changes was the need for a structure that would allow the efficiency utility to take on longer-term roles, commitments, and partnerships, including long-term resource planning, financing, and bidding resources into the regional forward capacity market. Efficiency Vermont’s current 3-year contract model has imposed significant constraints on the evolution of these roles and responsibilities. The regulator’s contractual relationship with the efficiency utility, as opposed to the judicial relationship it has with other utilities, has also presented some difficulties and constraints. In response, Vermont is considering a new efficiency utility model that is much more like other franchised utilities. The new structure is analogous to a supply utility under performance-based regulation and includes adoption of 20-year budgets and resource acquisition goals. Legislation was passed in February 2008 that explicitly empowers utility regulators to “appoint” an energy efficiency utility for a twelve-year term under this new model. This paper discusses the development of the new model and the details that have been determined for implementation.

The Opportunity

In mid-2007, the Vermont Public Service Board (PSB) convened a process to consider alternatives to the energy efficiency utility (EEU) structure the state had adopted in 1999 for implementing statewide ratepayer-funded energy efficiency resource acquisition. This structure was known as Efficiency Vermont. Since 2000, Efficiency Vermont has grown to be widely acknowledged as one of the most successful energy efficiency efforts in North America (Eldridge, Prindle, York & Nadel, 2007; York, Kushler & Witte, 2007). It established a non-utility administrative model that has been adopted in several other jurisdictions, and is being considered in many others. So why would Vermont want to change something that appears so successful?

Making a Good Thing Better

In establishing the nation’s first EEU, the PSB assigned the responsibility for statewide energy efficiency resource acquisition to a non-utility entity. The EEU performs this function on behalf of the state’s electric distribution utilities, fulfilling the efficiency resource component of their statutory least-cost resource acquisition obligations. The EEU is accountable, however, not to the utilities, but to the PSB through a contract. The two key features of this contract are that it is: (1) competitively bid; and (2) a performance-based contract, with a significant compensation

hold-back that the delivery entity is eligible to earn if it meets the specified performance indicators. As the PSB recently noted, “This structure has served Vermont well over the last seven years. The EEU’s performance has exceeded expectations...” (Vermont PSB, 2007a). Nonetheless, after seven years of operation, a range of stakeholders, including regulators, advocates, utilities and the current EEU contractor, concluded that it was time to consider some structural refinements and alternatives. It had become apparent that there were some limits imposed by the short-term contract model that were serious enough to suggest reassessment of the structural model itself. While there was much to be preserved, the parties recognized there was also an opportunity to make a good thing better.

On July 13, 2007, the PSB issued a notice that it would convene a workshop process to consider changing the structure of Vermont’s EEU. This notice stated:

“In the Board’s role overseeing the electric EEU, it has identified some aspects in the program’s overall structure that may require some modification in light of experience and changing circumstances” (Vermont PSB, 2007a).

The PSB’s notice included an enumeration of the specific reasons to consider modifying the structure. These were organized under two categories: (1) problems associated with a short, fixed-term contract, and (2) difficulties associated with the contractual relationship. At the outset of the workshop process, PSB staff and workshop participants identified the most problematic impacts of a short, fixed-term contract as follows:

- As an efficiency implementer approaches the end of the contract term, it will tend to focus on short-term results that can be accomplished before the end of the contract period. This end-effect discourages starting new projects, developing relationships, or initiating long-term strategies that might be highly valuable, but unlikely to yield results until after the end of the contract period.
- Any short-term contract does not compel an entity to engage in long-term resource planning that extends beyond the current contract period.
- As the efficiency effort becomes larger and more complex, the costs of transition to any other entity become a considerable barrier to changing contractors.
- Whereas a periodic competitive bidding model in theory provides some assurance of performance, quality, and innovation, if the same entity is consecutively awarded the contract several times and appears to be performing well, the pressure of competition can decrease. This can result in an unintentional monopoly without the benefits of regulation.
- Current state procurement regulations severely constrict the term of any contract. Three years is likely the maximum term that can be easily accommodated.
- The rebid process can both consume considerable resources and be quite disruptive for involved parties, particularly when the contract value is very large. The diversion from contract implementation and societal costs associated with conducting a rebid every three years may not be worthwhile if superior levels of performance are being achieved and there is a high probability of deciding to continue with the current contractor.

The key issues regarding the contractual relationship between the regulators and the EEU contractor were identified by the PSB as:

- As the size and complexity of the efficiency efforts have grown, regulators are increasingly challenged by the level of effort to administer a contract.
- Regulators see a potential for conflict in carrying out their judicial role with respect to regulated utilities while at the same time carrying out an administrative role with respect to the EEU contractor.
- In a number of instances, *ex parte* communication considerations regarding concurrent regulatory proceedings have limited communication in EEU administrative deliberations. For example, when discussing EEU operational matters, PSB staff may need to leave if a topic touches on the subject of a docket or rulemaking under current consideration by the PSB.
- The role of the EEU contractor has been limited in PSB proceedings that affect the EEU, such as the setting of goals and budgets. Additionally, there has been concern about the perception of a conflict of interest if the EEU contractor, as a contractor to the PSB, were to advocate before the PSB on efficiency or other utility matters.
- The EEU contractor has felt constrained in engaging in public advocacy regarding efficiency and other energy policy matters out of concern that, as a contractor to the regulators, there could be some perception (however unwarranted) of speaking on behalf of regulators.

As discussions of a new structure developed, there was broad agreement among the parties in the working group that it was becoming increasingly important that an EEU structure be more compatible with long-term planning and resource acquisition strategies. Already, in 2007, a regulatory order regarding long-range transmission planning required the EEU to begin preparing triennial 20-year forecasts of probable demand reductions that will occur from efficiency efforts, both at a statewide level and for each of 14 load zones.

Preserving the Best of the Current Model

As the parties considered options for modifying the EEU structure, there was consensus that the best attributes of the current model should be preserved:

- Performance-based contract. It was broadly perceived that there was great value in the high level of accountability for results that has been achieved through a performance-based EEU contract. Maintaining a mechanism in which there are serious consequences for the EEU, tied to achievement of specified performance indicators, was deemed essential.
- Flexibility. A corollary to assessing performance by results (as opposed to assessing program design or spending) has been the high degree of flexibility granted to the EEU for determining how best to achieve its contractual goals. This has allowed Efficiency Vermont to modify strategies and allocate resources quickly, in response to feedback on performance, changing markets, new technologies, and other unforeseen conditions and opportunities.
- Evaluation and savings verification. All of the workshop participants, and the Legislature, placed great emphasis on the importance of maintaining rigorous, independent evaluation of EEU performance, as well as continuing annual savings verification by the Department of Public Service in its capacity as the ratepayer advocate.
- Public awareness and brand identity. The Efficiency Vermont brand has achieved extremely high recognition in the state as the single, trusted source for energy efficiency knowledge. This brand, which belongs to the state, should continue to be used.

- Technical excellence and capability. The current EEU has built a considerable professional staff, technical capability, systems, and tools at ratepayer expense; the parties agreed that these resources are valuable and should be preserved in any shift to a different structure.

Areas of Opportunity for Structural Improvement

The process also identified areas for potential improvement that any new structure might be able to address, including:

- Repositioning regulators, with respect to the EEU, closer to a regulatory relationship, such as that which exists with energy supply utilities, rather than acting as administrators of a contract.
- Enabling the EEU to enter into long-term financial obligations, including raising capital and partnering with financial institutions to provide new financing products or loan guarantees to customers that require EEU financial backing;
- Enabling the EEU to participate in the ISO-New England Forward Capacity Market, including qualifying as a market participant and being able to stand behind bids to provide capacity into the market three to five years in the future.
- Providing clearer public assessment to assure all parties that the entity is truly providing least-cost services;
- Enabling the EEU to meet needs for statewide long-term electric planning;
- Allowing the EEU to participate in regulatory proceedings and in the Legislature, including participating as an advocate, in a manner similar to distribution utilities; and
- Providing flexibility that allows for possible fundamental changes in efficiency policies and programs in response to market transformation or policy decisions. (Notably, in February 2008 the Vermont Legislature passed landmark legislation (Act 92) that called for expansion of the State's energy efficiency efforts to address non-regulated fuels.)

Consideration of Options

The charge from the PSB to the EEU Structure Working Group was “to examine what type of alternative electric EEU structure would improve the aspects described above while preserving the strengths of the current EEU program. This charge includes consideration of the myriad of design details associated with a particular model, including legal, financial, operational, and transition issues.” (Vermont Public Service Board, 2007a).

In a series of workshops held by the Public Service Board, the parties considered several types of structural change for the EEU. At the outset, the working group considered a fairly broad array of potential models, including:

1. Short-term contract – the current Efficiency Vermont structure
2. Long-term contract – the current structure with a longer term
3. Separate legal entity – similar to the Energy Trust of Oregon
4. Joint action agency – a private authority created by the state
5. Governmental body – similar to NYSERDA
6. Direct administration by the regulators – similar to Efficiency Maine

7. Franchise with indefinite term – a new model analogous to utility regulation with an ongoing appointment
8. Franchise with defined term – a new model analogous to utility regulation with a specified, limited term of appointment

The parties considered all of the options on this list. The working group developed a list of objectives for considering the options and applied the objectives to the eight options and potential variants. By mid-September, the focus had narrowed to two options: a longer-term contract and a franchise-like appointment. Deliberations shifted to thinking through how each component of EEU scope and operation might be implemented for each of these two options, and the group agreed that simply moving to a longer-term contract would not sufficiently address key objectives.

Therefore, the focus narrowed to in-depth consideration of all the issues and details associated with the franchise-like model. A self-selected group of the parties developed a detailed draft description of how this new structure might operate. By the end of the year, a high degree of consensus had been achieved among most of the parties regarding the alternative structure. While not all elements of the model were resolved with all parties, there was broad agreement on the approach and most of the features. A report from the workshop process was presented by regulatory staff to the Public Service Board on January 15, 2008.(Bishop & McNamara, 2008).

One of the greatest uncertainties regarding a franchise-like structure was whether the regulators had clear authority under Vermont statute to implement this model. To address this issue, the Legislature included specific language to this effect in Act 92, an energy bill signed into law on March 19, 2008.

A New, Regulated Energy Efficiency Utility Model

The proposed regulated EEU has two objectives:

1. Acquiring maximum cost-effective demand-side resources through comprehensive approaches to reducing customer electricity requirements.
2. Avoiding or deferring capital investments that would otherwise be required to maintain reliability of the electric system, both statewide and in specified target areas.

Changes in Scope

Many of the activities defined within the scope of the proposed regulated EEU have been conducted by the EEU in the past, while others have been added in recognition of changing needs and opportunities. Although most of these roles are common where utilities administer efficiency portfolios, they encompass a very broad scope for non-utility administration. Elements that this scope would authorize include:

- Increasing the efficiency of buildings, equipment, products, and other electricity end uses, at time of replacement and / or through retrofit;
- Reducing peak load through control;
- Reducing absolute energy use through controls, sizing, operation and maintenance practices,

- and other end-user consumer actions;
- Participating in electric system planning with the state;
- Empowering consumers to manage their electricity use through the provision of public information and education;
- Developing and supporting policy instruments that can serve as useful tools for electricity savings through voluntary action or government adoption, including guidelines, codes, and standards;
- Participating in the ISO-New England Forward Capacity Market to secure capacity payments for demand-side resource measures implemented by the EEU, for the benefit of Vermont ratepayers;
- Assessing and facilitating fuel switching, combined heat and power, and demand response, as eligible demand-resource measures where cost-effective, appropriate, and part of optimal, comprehensive treatment;
- Conducting appropriate levels of applied research, development, and demonstration; and
- Training and supporting workforce development.

In addition to the above areas of responsibility, the new, regulated EEU is expected to fully assume responsibilities assigned to the EEU by regulators regarding demand-side resources in statewide transmission planning and addressing electric system reliability deficiencies. This role requires the EEU to work with the state's distribution companies and transmission company in planning for and analyzing "non-wires alternatives" (e.g., energy efficiency) to capital investments in the transmission and distribution system, including providing substantial input to regularly updated 20-year transmission plans.

Furthermore, it has been proposed that a new, regulated EEU would be designated as the default provider of detailed analyses of energy efficiency alternatives to system upgrades that address local reliability constraints. The EEU would also serve as the default implementer of targeted efficiency measures if efficiency was part of a reliability solution.

Legal Structure and Establishment

The new structure can be implemented by a regulatory "Order of Appointment" that designates an entity to serve as an EEU. While the current EEU contractor is a non-profit corporation, this would not be required, nor was it a requirement in the original model. The Order would contain all the necessary terms and conditions that are currently provided through the contractual mechanism. The EEU would not be designated as a "company," as are the state's regulated electric and gas utilities, and would not be issued a Certificate of Public Good. However, a number of the requirements associated with the "company" designation that are deemed to be relevant and appropriate for regulating an EEU would apply to the appointed entity. A recently adopted Vermont statute identifies the specific utility obligations and requirements that do apply, including provisions regarding powers of the PSB and the ratepayer advocate, recordkeeping, investigations, reports, and procedures.

While the PSB has not yet decided, it is presumed that the Order of Appointment establishing the new EEU structure would be the product of a contested-case proceeding before regulators, allowing for notice and full participation by the affected parties. Initial budgets, goals, and performance indicators would be set through this process. One option could be that the

proceeding be left open, which would facilitate regular future setting of budgets, goals, and performance indicators, as well as regular performance reviews.

As now specified in Vermont statute, an EEU appointment will be for a term of 12 years, with the opportunity for the PSB to re-appoint the entity at that time.

Long-Term Budgets and Goals

One of the compelling changes associated with this new structure is the move to routine regulatory adoption of an EEU Long-Term Demand-Side Resources Plan. This plan will consist of a set of year-by-year budgets and savings goals for the EEU that extend 20 years into the future. It would be updated no less frequently than every three years, in a public proceeding before regulators, with analyses and proposals contributed by both the ratepayer advocate and the EEU. Other parties will have the full opportunity to participate, and regulators will then adopt new budgets and goals for the next 20-year period. This Long-Term Demand Side Resources Plan will provide short-term budgets with a high level of certainty and short-term goals against which performance can be assessed, while at the same time providing a somewhat less-certain assumption of longer-term budgets and expected savings that can be relied upon for long-term planning.

Performance Mechanism

Just as in the current contract model, a significant hold-back in compensation (currently on the order of 2.5% of the total budget) would be paid to the appointed entity only upon attainment of specified resource acquisition goals. This could also include, as under the current contractual model, provisions for weighting and scaling incentives.

Each time budgets and goals are established, the performance goals and incentive mechanism will be reset. This includes choosing quantifiable performance indicators (MWh, MW, etc.), specifying minimum and target values, and choosing the weighting to be applied to each indicator. Assessing performance of the EEU against these quantifiable performance indicators provides a basis for regulators to treat the EEU in a manner similar to a supply utility under performance-based regulation. If EEU performance against minimum requirements or quantifiable performance indicators is below certain thresholds, it would trigger a process that could lead to loss of the appointment.

In addition to performance-based compensation for resource acquisition, the new model anticipates a (relatively small) portion of the budget as “cost-of-service” compensation. This would be cost reimbursement for certain designated activities and responsibilities that are not associated with the achievement of resource acquisition goals, such as public information and education, market assessment, planning and forecasting, support for codes and standards, and applied research and development. Budgets would be established for each of these categories, based on specific scopes of work, and included as part of the regular budget and goal-setting cycle. As it has developed, this concept has increasingly drawn on regulatory models of utility service under performance-based regulation.

Periodic Reconsideration of Appointment

One of the greatest concerns in moving to an appointment model was providing adequate checks, beyond achievement of short-term resource acquisition results, that an EEU not become complacent, operationally inefficient or not keep up with best practices from other jurisdictions. These concerns resulted in several mechanisms for reconsideration of the choice of the appointed entity. First, there was agreement that the term of the appointment would be limited to twelve years. Additionally, current plans call for a performance review of the EEU no less frequently than every six years. This review is different from the savings verification and other routine evaluations of the EEU's processes and impacts. It is a scheduled review of certain indicators that would be compared to appropriate comparative data achieved by other administrators in other jurisdictions. If this review suggests cause for reconsideration of the choice of the appointed entity, a process would be begun to consider alternative entities. Finally, while this process is scheduled every six years, any party may petition regulators to initiate such a review, for cause, at any time.

Evaluation

As has been the case since the initiation of the EEU structure in 2000, required regulatory impact and process evaluations, as well as annual savings verification, would continue to be the responsibility of the Vermont Department of Public Service, the agency that acts as the ratepayer advocate in Vermont's regulatory structure. This agency would also be responsible for recommending to the PSB whether an EEU has achieved established quantifiable performance indicators in each performance period, as well as annually certifying EEU progress and general performance to the PSB.

Uncertain Territory

All parties involved in moving toward this new model acknowledge that it is unprecedented and involves considerable uncertainty. One concern is that new regulatory processes may be more complex, formal and burdensome than anticipated. The past benefits of using a negotiation process to set goals and incentives may be difficult to carry forward into the new structure. Some parties continue to be concerned that planned oversight and checks may be inadequate, while others suggest the level may be excessive and not worthwhile. The extent, frequency and number of regulatory processes may prove burdensome for broad stakeholder participation. While regulatory costs are anticipated to increase for many parties, particularly for an EEU, they could increase more than foreseen. Concern has also been expressed regarding the potential negative impact of a new structure on the historically-high level of trust and collaboration among all parties. Nonetheless, there is a fairly broad consensus to proceed, weighing risks against anticipated benefits and with a level of faith in the ability to modify the new structure as experience is gained.

Status and Conclusions

Vermont's contractual model for an EEU has worked well, but the potential benefits of changing to an improved model have resulted in movement toward a new structure. Of all the

known options, a franchise-like regulated efficiency utility model appears to be the consensus choice for current circumstances.

The Vermont Legislature has supported moving to this new structure, recently passing enabling legislation and adding responsibilities for energy efficiency in the use of non-regulated fuels. The decision whether to move forward, as well as details and timing of implementing this new model now sit with Vermont regulators.

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