

COMMONWEALTH OF MASSACHUSETTS  
DEPARTMENT OF TELECOMMUNICATIONS AND ENERGY

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PETITION OF THE MASSACHUSETTS	)	
DIVISION OF ENERGY RESOURCES	)	DEPARTMENT 06-_____
FOR AN INVESTIGATION INTO	)	
ESTABLISHING AN ELECTRIC	)	
EFFICIENCY PERFORMANCE	)	
STANDARD AS A COMPONENT OF	)	
THE SUPPLY OF	)	
BASIC SERVICE ELECTRICITY	)	
	)	

Massachusetts Division of Energy Resources  
100 Cambridge Street, Suite 1020  
Boston, MA 02114  
617-727-4732

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## EXECUTIVE SUMMARY

The Division of Energy Resources (DOER) hereby petitions the Department of Telecommunications and Energy (the Department), pursuant to its authority under G.L. c.164, to open an investigation into the creation of an Efficiency Performance Standard (EPS) to serve customers who receive Basic Service electricity supply in Massachusetts. We argue that Basic Service customers would be better served if electric distribution companies were required to procure a minimum percentage of their projected needs for electricity supply for Basic Service customers in the form of cost-effective energy efficiency resources. Such procurements would provide more opportunities for Basic Service customers to decrease their electricity use than is available to them now and can be accomplished in a way that causes the overall cost of Basic Service to be lower than it would be if supplied exclusively by generation resources.

This regulatory action could be implemented by the Department under its authority to set the terms and conditions applicable to distribution companies when they purchase resources to meet their Basic Service supply obligations.<sup>1</sup> The Department is not required by law to restrict the provision of Basic Service only to power generators. Efficiency providers are eligible, too. Therefore, the Department could also authorize the purchase of energy efficiency as a component of the resources used to provide Basic Service. The law requires that the charge for Basic Service not exceed “the average monthly market price of electricity.”<sup>2</sup> This petition argues that an EPS for Basic Service customers can be implemented in a manner that insures the charge for Basic Service “will not exceed” the average monthly electricity price that would have been charged without those purchases.

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<sup>1</sup> G.L. c. 164, § 1B(d).

<sup>2</sup> Id.

The design for an EPS proposed here has been arrived at after careful consideration of the efficiency performance standards established by several other states and after extensive consultation with efficiency experts from around the country and preliminary discussion with representatives of Massachusetts' electricity system stakeholders. It includes an attainable electricity savings goal, a practical strategy for achieving that goal, a mechanism for insuring the efficiency investments are cost effective and a means to measure progress toward the goal. The goal would be to achieve a reduction of 1.5% in sales of Basic Service by the sixth year of operation. Distribution companies would meet this target through annual procurements of efficiency resources provided by efficiency vendors through investments in the homes and businesses of Basic Service customers. Recovery of the EPS cost would be accomplished through the charge for Basic Service, collected in monthly increments over periods of five years for each efficiency resource procured.

Current electric efficiency programs and the collection of funds needed to pay for them through distribution rates from all customers, as required under current law, would continue. Taken together, these two types of efficiency programs could eliminate the annual growth in the electricity use by Basic Service customers while meeting all of their electricity requirements.

DOER encourages the Department, upon agreeing to open an investigation into an EPS for Basic Service customers, to consider as a first step the establishment of a formal stakeholder collaborative process to assess the potential for additional efficiency, review design options for an EPS and address various implementation issues. In any event, DOER urges the Department to open an investigation into requiring that a minimum portion of the requirements of Basic Service be procured as energy efficiency and believes the implementation of such a program would provide significant economic and electricity reliability benefits to Massachusetts.

## I. THE CURRENT STATE OF EFFICIENCY IN MASSACHUSETTS

Electric efficiency programs in Massachusetts are delivered to end-use customers through a framework formalized in the Electricity Industry Restructuring Act of 1997, G.L. c. 25, § 19, (the “Act”). This law directs investor-owned electric distribution companies to collect a System Benefit Charge (SBC) on the consumption of all their customers and to use these funds to provide financial incentives, education and other forms of assistance to consumers to encourage and enable them to make use of energy efficient products and practices.<sup>3</sup>

As a result, these distribution companies currently collect approximately \$125 million annually from customers and expend it on energy efficiency programs. These nationally-recognized programs have been highly successful. They have been shown to reduce the rate of annual growth in electricity consumption by more than one-third over what it would be without these programs.<sup>4</sup> They directly help Massachusetts residents reduce their electricity use, reduce the cost of electricity they consume and help businesses of all sorts become more competitive.<sup>5</sup>

The SBC programs are highly efficient and very cost-effective. Program costs (per unit of electricity saved) have declined over the past several years through increased administrative efficiencies and the adoption of new cost-effectiveness technologies and practices. The current

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<sup>3</sup> Current Massachusetts law authorizes the SBC charge at 2.5 mils per kWh sold through the year 2012, and further states there can be “no other energy efficiency charge.” G.L. c. 25, §19.

<sup>4</sup> From the advent in MA of electric industry restructuring in 1997, through 2005, these programs cumulatively achieved 40,000 GWh in lifetime energy savings and produced lifetime reductions in peak demand of 747 GW. They have reduced the rate of growth in annual electricity consumption by 37%. DTE Cumulative Spreadsheet 1989-2004; and DOER key indicator file extract for 2005.

<sup>5</sup> In 2005, the Regulatory Assistance Project (RAP) prepared an analysis for the United States Environmental Protection Agency and the New England Governors’ Conference, *Electric Energy Efficiency and Renewable Energy in New England*, showing that \$240,000,000 in energy efficiency investments made in New England in 2002 yielded lifetime energy savings of over 10 million GWh at an average cost of 2.4 cents per kWh; that existing energy efficiency programs in New England are expected to produce over \$2 billion in economic output for the period 2000 to 2010, over 1,000 jobs each year on average and nearly \$700 million in wages. Those figures represent only the existing SBC policies, arguing for far greater economic growth through efficiency with greater investments.

SBC program portfolio produces electricity savings over the life of an installed efficiency measure at a cost of approximately 4.1 cents per kWh.<sup>6</sup> This is well below the cost of electric generation for Basic Service which has recently ranged from a low of about 8 cents to a high of about 12 cents per kWh.

Investments in efficiency have been shown to produce significant benefits. Participating customers realize substantial energy savings and corresponding bill reductions. Peak demand for energy is reduced which in turn reduces the wholesale price of electricity for all customers. Increased electric efficiency improves operating margins for businesses, making them more competitive and making the region more attractive to new business development. Moreover, efficiency is an “indigenous” energy resource: it puts energy expenditures to productive use within the state whereas a major portion of the spending on fuel for generation flows out of the region and often the country.

## **II. THE NEED FOR MORE ENERGY EFFICIENCY**

Simply put, Massachusetts consumers would benefit greatly from the use of additional energy efficiency resources to meet annual electricity load growth expectations over the next several years. At current rates of growth in annual electricity demand of almost 2% each year by 2016, Massachusetts would require approximately 2,500 MW of additional electric generating capacity.<sup>7</sup> To maintain current reserve margins, this is the equivalent of approximately five combined cycle, gas-fired power plants. A viable alternative to this daunting scenario would be

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<sup>6</sup> 2002 *Energy Efficiency Activities: A Report by the Division of Energy Resource*. Energy and Demand impacts are validated by a long –standing system of monitoring and verification performed by the Program Administrators and independent third-party impact evaluations, which are reviewed by DOER and DTE.

<sup>7</sup> ISO-NE 2006 CELT Underlying Data.

to expand investments in energy efficiency, distributed generation, and combined heat and power systems.<sup>8</sup>

Not surprisingly, customer demand for SBC efficiency programs often exceeds what can be met within current constraints.<sup>9</sup> Even with some moderation in the rate of increase in electricity prices, customer demand for energy efficiency services in all sectors is not likely to slacken in the foreseeable future. Nevertheless, the savings realized by the current SBC programs are limited to those that are achievable within the funding and programmatic constraints imposed by the Act. Funding for these programs is capped at a level that continues to leave significant amounts of energy savings unrealized, capturing only about 20 percent of the cost-effective, economically achievable energy efficiency potential available across the state.<sup>10</sup>

Other things being equal, it does not make sense for consumers to be paying for more expensive supply resources if there are less expensive efficiency resources available to meet their needs. While many would agree it would be beneficial to expand efficiency activities, the distribution charge used to fund SBC programs cannot be increased to do so.<sup>11</sup> Therefore, DOER proposes the creation of an additional, supplementary mechanism that would leave the SBC programs in place but would achieve much more of the cost-effective electricity savings available in Massachusetts. The long-term, overall goal of energy policy for Massachusetts should be to achieve all cost-effective efficiency opportunities for the benefit of all consumers.

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<sup>8</sup> Governor Mitt Romney, *Next-Gen Energy Plan: A Balanced Plan for Massachusetts' Energy Future*, August 11, 2006 (unpublished PowerPoint presentation).

<sup>9</sup> In 2005, some Commercial Retrofit and Residential programs had to stop taking new applications for several months because there no more incentive funds available.

<sup>10</sup> DOER noted in its 2001 study, *The Remaining Electric Energy Efficiency Opportunities in Massachusetts*, "In spite of this national leading effort, there continues to be a substantial amount of cost-effective energy-efficiency opportunity beyond the cost-effective measures that have been targeted."

<sup>11</sup> G.L. c. 25A, § 19.

However, until such time as new legislation enables a more comprehensive program, DOER proposes that a constructive step in this direction would be to establish an EPS for customers receiving Basic Service. The experience of other states can provide guidance on how such a mechanism should be designed to work most successfully in Massachusetts.

### **III. EFFICIENCY PERFORMANCE STANDARDS IN OTHER STATES**

Efficiency performance standards in one form or another have been adopted by a number of states in recent years. One of the first was in Texas, where that state's restructuring law created a requirement for electric utilities to offset 10 percent of their demand growth through energy efficiency – a goal the utilities in Texas have had no difficulty meeting. Other states, such as Hawaii and Nevada, have expanded their renewable portfolio standards to include energy efficiency.

In 2004, California established by regulation a three-year energy savings target for ratepayer-funded energy efficiency programs as administered by the investor-owned utilities. Funding for achieving these energy goals is recovered by the utilities. CPUC Decision 04-09-060. In 2006 a California proceeding decoupled recovery for the energy efficiency programs from rates, providing stable resources to accomplish the utility-specific energy efficiency goals. Like the proposed Massachusetts EPS, almost all the energy efficiency activities will be performed through the gas and electric utilities; up to 15% of the savings may be acquired through competitive solicitations to third party energy services providers.

Connecticut in 2005 legislatively approved its "Class III Resource Standard," requiring electric suppliers and distribution companies to obtain 1 percent of their generation supply from



clean energy resources, including energy efficiency, beginning January 1, 2007, and increasing to 4 percent by 2010. CT Public Act 05-01.

In June 2006, Rhode Island adopted legislation requiring utilities to develop a least-cost plan that includes procuring all cost-effective energy efficiency – among other clean energy resources – when it costs less than traditional fossil-fuel power.

Vermont includes specific energy savings goals in its contract with Efficiency Vermont, their efficiency program administrator. There are rewards for meeting these goals. The current goal is for savings of a little more than 1% of kWh sales each year, but in 2006 the Vermont Public Service Board approved a major increase in efficiency funding and as a result, the Vermont savings goal will increase to more than 2% per year (exact details are now being worked out).

Finally, the Maine Public Utilities Commission recently opened a docket concerning incorporating demand-side resources into the supply of standard offer service for residential and small commercial customers. MPUC Docket No. 2006-591. The PUC is seeking bundled demand and supply proposals for standard offer service for residential and small commercial customers of state's two utility companies, making Maine the first state in the country to issue a solicitation that combines electricity and conservation for residential standard offer customers. Maine has chosen to require suppliers to offer a blend of energy efficiency and supply in their offerings. Maine does not have a long history of substantial energy efficiency offerings and has recently established a state-sanctioned energy efficiency utility that will have only modest impacts in the next several years.

Each state that has implemented an efficiency performance standard has done so by developing a design suited to its particular needs. The essential elements are an ambitious but

attainable energy savings performance goal, a practical strategy for achieving that goal, a mechanism for insuring the efficiency investments are cost effective and a means to measure progress toward the goal. The design for an EPS for Massachusetts must include mechanisms for each of these elements, carefully integrated with each other and with the existing structure of Basic Service.

#### **IV. CONSTRAINTS ON THE DESIGN OF A PERFORMANCE STANDARD**

In Massachusetts, current law and regulation present a unique set of circumstances into which to introduce an EPS. The Restructuring Act gave Massachusetts customers the right to choose among competitive supply options, so not all customers purchase their power supply from a distribution company. Thus, an efficiency performance standard that relies on collective procurements of power resources can only be implemented on behalf of customers on Basic Service, who purchase their energy from a distribution company. While these customers comprise more than half of the total demand for electricity in Massachusetts, many large commercial and industrial customers and fewer but still significant numbers of medium and small commercial customers have moved to competitive supply.<sup>12</sup> An EPS that installs efficiency measures in the homes and businesses of Basic Service customers will be defined by programs uniquely suited to the character of these customers' electricity use.

In addition, an EPS must take into account that Basic Service procurement rules and cost recovery restrictions have evolved over the years, guided by various Department rulings. Even with an EPS, at least 98.5% of Basic Service requirements will still be met through conventional generation supply procurements. Procurement of efficiency resources for Basic Service must complement and integrate with these rules and restrictions.

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<sup>12</sup> DOER Migration Data, October 2006.

The Act stipulates that there can be only a single energy efficiency charge on the distribution portion of the customer bill. That is already accomplished by the SBC program charge. Consequently, a separate charge on the customer's bill to recover the costs of an EPS is not allowed. Therefore, the cost of efficiency resources purchased to meet the needs of Basic Service customers should be recovered only from those customers, included in the rate they pay for Basic Service. Recovered in this way, there would be no separate charge on the customer's bill for efficiency. Moreover, if the amounts spent to procure electric efficiency are never more than the cost of generation, then the overall cost of Basic Service will remain constant or, more likely, decrease.<sup>13</sup>

## **V. DESIGN CHARACTERISTICS OF A PERFORMANCE STANDARD**

DOER proposes that the Department create an EPS that would, in concert with the savings already achieved by the SBC programs, aim to eliminate the annual growth in electric consumption by Basic Service customers. The primary entity responsible for implementing the EPS would be the electric distribution companies. Since these companies already operate the SBC programs, they have well tested administrative, contracting and monitoring and verification capabilities. To accomplish this level of efficiency, distribution companies would use the services of third party electricity efficiency providers retained through competitive procurements, as they now do for most of the electric efficiency services delivered under the

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<sup>13</sup> The impact of this program on individual customer bills is discussed later in Costs and Benefits section of this petition.

current SBC programs.<sup>14</sup> Below we present proposals for the most important features of an EPS for Basic Service customers.

**Performance Goals:** One of the critical distinguishing features of an EPS compared to the current SBC programs is that the EPS would have specific performance targets. Distribution companies would be required to meet a set percentage of projected sales through purchase of energy efficiency resources. DOER proposes that the minimum requirement increases slowly but steadily over six years from 0.25% to 1.5% of annual Basic Service sales. Measuring performance based on a percentage of annual sales avoids the difficulties in more subjective standards (such as “all cost-effective efficiency”) and allows the annual targets to remain constant while the more precise measure of those targets in MWh saved would automatically adjust according to changes in distribution company supply requirements due to migration of customers to or from Basic Service.

The plan to ramp up efficiency savings targets over six years is recommended for several reasons. First, current electric efficiency programs reduce the supply requirement for Basic Service customers by approximately 0.5% of sales.<sup>15</sup> In order to enable the market infrastructure needed to deliver additional efficiency resources to expand at a manageable rate, the annual expansion must be phased in. An annual increase in the program targets of approximately 0.25% of sales would be ambitious but manageable, given the volume of work (about 0.5% of sales)

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<sup>14</sup> DOER believes that distribution companies should be rewarded or penalized for attainment or non-attainment of annual EPS performance targets. However, since distribution companies are not allowed to earn incentives or otherwise “mark up” the cost of Basic Service generation, but must pass it through to customers “at cost,” it is not clear if the Department could allow such an incentive structure for the EPS or how such incentives would be recovered from customers.

<sup>15</sup> The 2005 SBC programs, targeted to all customers, saved a total of 454,726 annual MWh, (5,123,738 Lifetime MWh) and 58 annual MW (755 Lifetime MW) – Source: DOER PARIS database. The 2005 SBC savings correspond to 0.5% of electricity sales. The goal of saving an *additional 1.5% of sales through the EEPS once it is fully ramped up would produce* 1,364,178 Annual MWh (against 2005 sales )annually for the life of the EEPS, with the general expectation that each year’s additional savings will persist for an average of 11 years.

now performed by efficiency providers in response to the SBC programs. Since the current SBC Program Administrators would be responsible for administering and contracting for most of the proposed additional energy efficiency, the ramp-up period has been proposed to allow sufficient time for staged and sustained expansion. Table 1 (below) illustrates how annual targets could increase over time to eventually reach 1.5% of basic Service sales.

**Table 1**  
**Savings Targets and Estimated Savings for the First Six Years of an EPS for Basic Service Customers**

<b>Annual EPS Savings Target (% of sales)*</b>	<b>Annual EPS Savings (GWh/yr.)**</b>
0.25	78
0.50	158
0.75	241
1.00	326
1.25	414
1.50	504

**\* Percent of annual electricity sales to Basic Service customers in all classes.**

**\*\* Assumes the EPS begins in 2008 with sales of Basic Service estimated at 31,211 GWh.**

An EPS would also make measurable contributions to addressing the pressing concerns for reliable electric service during peak electricity demand hours because efficiency programs

have been shown to provide not just energy savings but “capacity” savings as well.<sup>16</sup> These reductions come about because much of the energy savings produced by these programs, particularly lighting and HVAC programs, reduce the need for additional capacity during the hours of peak electricity demand in both the summer and winter. Since many of these measures, once installed, last ten to fourteen years or more, they produce long-term demand reduction benefits.<sup>17</sup>

To provide a basis for ensuring that clear goals and targets are set, each distribution utility should develop a plan to reach the target of 1.5% of Basic Service sales annually by the sixth year. Within the plan, the distribution company will set an annual energy efficiency procurement goal, expressed in MWh. The company should also estimate the capacity savings that can also be achieved measured in MW and discuss any characteristics of its procurement plan that have been constructed to emphasize capacity savings. Compliance by the distribution companies with the annual and five-year targets would be subject to review by DOER and the Department, much as the current SBC programs are reviewed for efficacy and cost-effectiveness.

**Procurement:** Each efficiency project or program should be evaluated and selected on the basis of the cost it bids to deliver savings over a five year period. If selected for contracting, the electricity savings would be credited to the distribution company’s target over that five year period. The distribution company would be allowed by the Department to enter into contracts for efficiency resources with savings contributions credited toward their targets over the same five

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<sup>16</sup> For example, the 2005 SBC programs alone produced annual demand savings of 58 MW and 755 MW of savings over the lifetime. For example, the 2005 SBC programs alone produced annual demand savings of 58 MW and 755 MW of savings over the lifetime. Source: DOER Key Indicator files, December 2006.

<sup>17</sup> Efficiency programs also serve to lower wholesale electricity prices in an enduring fashion. The largest wholesale price increases are found to occur in the last few percentage increases in demand. At the top of the demand curve, the most expensive resources are dispatched, affecting the entire wholesale market.

year period. Distribution companies would pay their vendors and contractors on verification of measure installation.

Distribution utilities would procure the targeted electric efficiency in annual procurements, each procurement providing 20% of the annual target. After five years, the five overlapping procurements would provide for meeting 100% of the company's target. Annual procurements will serve to minimize changes in overall EPS cost, and provide a better overall mix of energy efficiency projects, since the energy efficiency projects and projected kWh procurement costs will vary to some degree each year. Contracts for procurements of efficiency would be consummated whenever the cost to purchase efficiency resources (per kWh saved) is at or below the then-prevailing cost of supply resources (per kWh delivered) for that distribution company. The latter would be determined for each distribution company by the Basic Service rate determined in the most recent Basic Service supply procurement approved by the Department. In any given year, the distribution company would only have to achieve a savings level as great as could be attained within this cost-per-kWh limit. That is, if the amount of efficiency savings bid at or below the cost-per-kWh of generation is less than the portion of the target savings for that year, the distribution company would not be required to exceed that portion of the target and would be deemed to have met its target.

Annual energy efficiency procurements would be conducted independent of supply procurements and should be scheduled to occur well in advance of the next up-coming Basic Service procurement. This will allow the contribution (in MWh saved) to be factored into the amount of supply needed to meet the remaining requirements of Basic Service customers.

**Cost Recovery for EPS.** The distribution company would pay the efficiency provider for the cost of the project at the time installation is verified. However, the distribution company

would recover its cost for an efficiency project or program from Basic Services customers in sixty equal monthly increments over the five year period the project or program was scheduled to deliver savings. The distribution company would recover its carrying costs on these advance payments. Ideally, these would be included in the monthly cost for efficiency added to the Basic Service rate and should be added to the cost of efficiency when determining if it is less than the then-prevailing cost of generation.

This financing structure is admittedly a compromise. It balances the long-term life of efficiency projects with the need for vendors to receive payment at the time of installation. It avoids the problem that would be created by requiring recovery of the entire cost of the efficiency resource in the first year it starts to deliver savings (as SBC programs do) which would make virtually all of efficiency projects more expensive, on a per kWh basis, than generation supplies. It reflects the fact that virtually every efficiency project or program delivers savings for many more than five years but it does not require distribution companies to extend the time of cost recovery beyond five years. It facilitates the evaluation of the cost of proposed efficiency projects by requiring each to recover its costs over an identical time period, even if its benefits would extend beyond five years, as many do. It would also facilitate the calculation of the monthly Basic Service rate by identifying for the distribution company a simple monthly rate (per kWh) for these efficiency expenses, one that would be roughly comparable to the monthly rate for generation bid by suppliers. This in turn would facilitate the reconciliation of charges owed to or from the distribution company when customers leave or return to Basic Service.<sup>18</sup>

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<sup>18</sup> If an EPS results in lower overall kWh sales to Basic Service customers, distribution companies may experience lower overall distribution revenues. It is likely these reductions will be well within the fluctuations experienced annually from changes in consumption due to changes in the cost of electricity and changes in the level of economic activity in general. Some states where an EPS has been adopted have addressed this issue by decoupling utility profits from kWh sales (e.g. the California PUC has recently approved a decoupling petition and the NY PSC is



Some more expensive efficiency projects with a long lifetime might not be able to compete in this context. But the very nature of an EPS causes competition among efficiency projects, programs and providers. It is inevitable that the most expensive of these may have to look to the SBC funds, or to stalwart individual customers, to find financing that matches their lifetime value.

**Contracting Options:** Distribution companies would be able to contract with energy efficiency service companies or deliver programs themselves, subject to oversight and self-dealing prohibitions. Contracting arrangements could vary. Distribution companies could allocate substantial portions of EPS funding to contracts that expand current SBC programs. However, a minimum portion of the annual efficiency target should be achieved through solicitations for proposals to operate additional programs that are different from but complementary to those programs offered using SBC funds. Additionally, providers of energy efficiency services could identify interested customers and approach the distribution company with offers to deliver savings in return for EPS funding, guided by winning prices in successful bids in the solicitation process discussed above. These additional programs could provide contracting opportunities to a variety of energy efficiency providers, including traditional performance contracting energy services companies (ESCOs), specialized third party providers, technical consultants, and so on. The portion of the annual savings target to be achieved through these innovative programs could be increased over time.

**Program Requirements:** In deciding which efficiency proposals to place under contract, the distribution company would be free to make use of any eligible projects regardless of which customer class received the services or which type of efficiency resource was relied upon (so

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expected to be adopting a decoupling scheme momentarily); or by providing utility shareholder/contractor incentives (which is also done in California, as well as in Connecticut and Vermont).

long as participating customers are receiving Basic Service supply). DOER expects efficiency service providers to first seek out projects with medium and large commercial and industrial (C&I) customers who are still on Basic Service, since these large projects have significant scale economies. Nevertheless, since a majority of large C&I customers have left Basic Service, it is expected that a substantial portion of EPS funds would likely be used to deliver programs to small commercial and residential customers still on Basic Service.

**Eligible Participants:** Only customers receiving Basic Service for at least one year at the time of project implementation should be eligible to have that project qualify for EPS funding. Only projects that are installed by such customers would count toward a distribution company's EPS performance target. However, a customer should not have to remain on Basic Service once a project had been implemented for the savings to be counted toward the distribution company's performance target.<sup>19</sup>

**Eligible Resources:** To be eligible for qualification toward a distribution company's EPS performance target, eligible projects include energy efficiency measures at customer facilities and would have to be located within the state of Massachusetts. Projects would have to conduct appropriate monitoring and evaluation of savings, based on an monitoring, reporting and verification protocol and plan approved by the distribution company program administrator. Combined heat and power and distributed generation projects would also qualify on a partial basis.<sup>20</sup> Demand response projects (e.g. short-term load shifting and/or load curtailment) should

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<sup>19</sup> Supply-side resource procurements by the distribution company would have to take into account possible changes in Basic Service loads due to the impact of migration, just as they do at present.

<sup>20</sup> Partial credit should be determined using the net contribution to electric efficiency provided by each type of project. Thus the fuel consumed by a combined heat and power project, along with a determination of the heat rate (measure of efficiency) would be required in each type of project.

not eligible to participate in an EPS. Their contributions to overall energy savings would be negligible and could not be fairly compared with the cost per kWh of efficiency resources.

**Regulatory Oversight:** As with supply purchases for Basic Service, distribution company contracts for efficiency resources would be reviewed and approved by the Department in advance of contract execution and implementation. The Department should retain ultimate authority over determining cost-effectiveness of the programs and cost-recovery methods. DOER should have responsibility for oversight and coordination of EPS program delivery, monitoring and reporting, verification of savings and program evaluation. All EPS programs should be accompanied by appropriate monitoring and verification procedures, approved by DOER in advance of program implementation. Since DOER already performs much of the oversight in the planning, implementation and evaluation of electric utility programs authorized under the SBC programs, taking on this additional task would alleviate the need to build any additional regulatory infrastructure needed to oversee the implementation of an effective EPS. It would also facilitate coordination of EPS program activity with SBC programs.

## **VI. COSTS TO IMPLEMENT A PERFORMANCE STANDARD**

Based on SBC program cost data recently provided by SBC program administrators, DOER is able to estimate, in a preliminary way, the overall costs and individual bill impacts of an EPS. To do so, we assume EPS costs are similar to SBC program costs (per kWh saved) but amortize those costs over a five year cost-recovery period. Using recent cost data for SBC efficiency programs amortized over a five-year cost recovery period, we estimate resources bid into an EPS would cost approximately 6 cents/kWh. Since this cost is well below the prevailing cost of Basic Service generation supply (for example, recent Basic Service generation prices have hovered around 10

cents/kWh), it will have the effect of lowering the total cost paid for Basic Service by the customers who receive it

There will necessarily be differences in bill impacts among customers who install energy efficiency measures compared to those who do not. For example, those residential customers who install efficiency measures are expected to save approximately \$5.00 per month or about 6 percent off their total electric bill. Residential customers who pay for EPS but do not install measures would see very a small increase in the Basic Service rate of less than 1%, or about \$0.60/month for the average residential customer.<sup>21</sup> Recent history suggests that such a bill impact is indeed minor when compared to fluctuations in basic-service rates. Since 2001, basic service rates have ranged from 5 cents/kWh to almost 12 cents/kWh.

## **VII. LEGAL BASIS FOR OPENING THIS INVESTIGATION**

In its plan to restructure the electric industry in Massachusetts, the Legislature specifically stated: “The commonwealth should ensure that . . . energy conservation policies, activities, and services are appropriately funded and available throughout the commonwealth...”<sup>22</sup> To meet this purpose the Act created and delineated the Systems Benefit Charge.<sup>23</sup> As noted above, SBC funding and programs do not deliver all cost-effective efficiency resources to customers and leave substantial remaining efficiency potential unrealized at considerable expense to customers who must make up for this unrealized potential by purchasing

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<sup>21</sup> Bills increase because the cost of energy efficiency measures, though less than generation, will still need to be collected through a per kWh charge on customers’ bills. Thus, the price per kWh will be higher for all customers and monthly bills will be higher for those customers who maintain the same load levels as before the implementation of the EPS.

<sup>22</sup> Chapter 164, § 1(j) of the Acts and Resolves of 1997.

<sup>23</sup> G.L. c. 25, §19.

extra generation. Thus, the Department should look within its delegated authority to find other means to meet the Act's goal of ensuring that energy conservation policies, activities and services are appropriately funded and available for Massachusetts consumers.

The legislature has authorized the Department to promulgate rules and regulations for the procurement of Basic Service.<sup>24</sup> While the Department has investigated the structure of Basic Service on numerous occasions, it has never fully analyzed the benefits and costs of including energy efficiency in the portfolio of energy resources that make up Basic Service. To the extent that energy efficiency can decrease the cost of this procurement, it should be required as a component of Basic Service procurements.

Although G.L. c. 25, § 19 prohibits any additional charges by the distribution company for energy efficiency programs, it does not prohibit the inclusion of energy efficiency as a cost-effective supply resource for Basic Service. Basic Service is provided to customers pursuant to G.L. c. 164, § 1B. This section requires that Distribution Companies procure such service through competitive bidding and provide it to consumers at a rate that “shall not exceed the average monthly market price of electricity.” The statute allows Basic Service to be provided by any entity approved by the Department. The law does not restrict participation in the delivery of Basic Service to electricity generators. Thus the Department may allow providers of energy efficiency services to contribute to the portfolio of contracts used to provide Basic Service.

To the extent that a combination of generation and energy efficiency can provide a portfolio of resources for Basic Service that meets the statutory requirement that such service

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<sup>24</sup> G.L. c. 164, § 1B(f).

“not exceed the average monthly market price of electricity,” the Department should allow Basic Service procurements to include the purchase of both resources.<sup>25</sup>

DOER will argue that efficiency resources meet the statutory requirements for Basic Service, while also providing a hedge against volatile energy prices and, in turn, reducing costs for consumers. DOER will provide evidence that efficiency resources create a more reliable electricity system for the region and the state. DOER will provide evidence that Basic Service supply consisting of a blend of electric energy and efficiency can decrease the overall cost of Basic Service compared to the “supply-only” status quo. DOER will show that customers who take advantage of efficiency programs will realize substantial savings, while other Basic Service customers will see only a very slight increase in their Basic Service rate compared to what it would be without an EPS. Such slight increase may not materialize at all if an EPS results in reductions to peak electricity demands and thereby lowers wholesale clearing prices for electricity supply.

## **VIII. BENEFITS OF A COLLABORATIVE PROCESS**

DOER developed the concepts and details of the proposed EPS through a consultative process that involved nationally recognized experts.<sup>26</sup> In addition, a preliminary design of an EPS was reviewed and discussed with a group of stakeholders that included representatives of residential consumers, businesses, distribution companies and environmental organizations. The

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<sup>25</sup> For example, an efficiency supplier could propose an energy efficiency project that would save a given quantity of kWh over 5 years at a cost at or below the cost for the same quantity of kWh provided by a generation supplier. The Efficiency Supplier would submit bids providing for monthly kWhs saved at a set price that would not exceed the “average monthly market price of electricity.” Under this approach, the Basic Service portfolio (consisting of the kWh saved by the energy efficiency project and the balance of kWh produced by generated electricity) would then not exceed the average monthly price for Basic Service that otherwise would have been purchased relying on generation alone.

<sup>26</sup> DOER is particularly grateful for the contributions of the American Council for an Energy Efficient Economy, the US Department of Energy’s Lawrence Berkeley Laboratory, the Northeast Energy Efficiency Partnerships and Environment Northeast.

critiques and comments offered by the various parties assisted DOER in focusing the EPS proposal and ensuring that the petition would be responsive to a variety of interests.

Because the EPS concept is still relatively new and because each state that has thus far initiated some form of EPS has made choices that address specific existing legal requirements or other circumstances that are unique to their particular states, there is as yet no single design that has been tested and proven to work best in all situations. Assuming the Department agrees to open an investigation of an EPS, DOER proposes that it initiate a collaborative process to further the development of the design of an EPS. Such a collaborative would ensure that the full range of stakeholder views are readily expressed and enable stakeholders to examine the expected effects of various design options. A collaborative approach would allow stakeholders the opportunity to develop a workable EPS and perhaps would ease the process this petition would set in motion.

## **IX. CONCLUSION**

For the reasons state above, DOER respectfully requests the Department to open an investigation into the creation of an energy efficiency portfolio standard as part of Basic Service in Massachusetts and, as a first step in that proceeding, direct the formation of a stakeholder collaborative to explore various design options and their potential impacts and to report back to the Department expeditiously on the findings that emerge from that process.

DIVISION OF ENERGY RESOURCES



Rachel Graham Evans  
Legal Counsel