

**State of New York Public Service Commission
Proceeding on Motion of the Commission Regarding
an Energy Efficiency Portfolio Standard (EPS)**

Case 07-M-0548

Comments By:

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Energy and Environmental Services Program

**2277 Research Boulevard
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On

***Staff Preliminary Proposal
for
Energy Efficiency Program
Design and Delivery***

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Submitted:

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Who We Are

Lockheed Martin is a major presence in New York. We have approximately 9,547 employees at 34 facilities, the largest three being manufacturing facilities in Owego and Syracuse, and the Knolls Atomic Power Laboratory outside of Schenectady. Over the past five years Lockheed Martin has invested more than \$6 million to make energy efficiency upgrades at these facilities. These efficiency upgrades are saving annually more than 13 million kWh and more than 275 billion Btus of fuel. Lockheed Martin plans to increase its investment in efficiency upgrades during 2008 and following years.

As the result of its acquisition of Aspen Systems Corporation in early 2006 and subsequent growth, Lockheed Martin currently manages more than \$30 million per year of energy efficiency program implementation activities for utilities and state and federal agencies, including program offices in New York City and Albany area. On October 1, 2007, the American Council for an Energy-Efficient Economy (ACEEE) announced the results of its "2nd National Review of Exemplary Energy Efficiency program." We are proud of the fact that seven of the 90 programs recognized are either currently managed by Lockheed Martin or were designed and managed by a member of our current staff when he was employed at another organization. Four of the programs are administered by NYSERDA, one by utilities in the New England states, and the other two are administered by the Energy Trust of Oregon and Pacific Gas & Electric.

On the following pages we present our comments on the *Preliminary Staff proposal for Energy Efficiency Program Design and Delivery.*

Report Section	Comments
I. Executive Summary	<p>We agree that a 15% reduction in energy usage by 2015 “is the most ambitious energy reduction goal ... in the nation.” We also agree that “the EPS Proceeding will be a complex undertaking and will require thoughtful planning, communication, and extensive coordination among the many entities that are or will be delivering energy efficiency programs,” and that “the Commission is especially well-suited to play the role of coordinator.”</p>
II. General Principles	<p>We have no specific comments and generally agree with the statements made in the Staff Report (although we may not agree with all the specifics).</p>
III. Current Practices and Recommendations for Change	<p>A. Program Delivery. The Staff Report first summarizes the historic and current situation, and then presents a “Proposed Delivery Configuration.” The concept of building upon existing statewide programs is undoubtedly a wise course of action, but this need not and should not preclude the introduction during 2008 of additional, more localized programs or variations upon the themes of the statewide programs. These new programs or modifications can then provide hard evidence that other approaches do—or do not—achieve better results. Interim process evaluations should be conducted toward the end of the first year of program operation to identify ways that program designs can be improved.</p> <p>Inclusion of programs to promote natural gas savings will also be a vital step to help meet the “15 by 15” goal.</p> <p>A close working relationship among NYSERDA, utilities, municipalities, and independent service providers will be necessary. Because utilities have a recognized brand and established relationships with end-use customers in their respective service territories, and also have a unique way to disseminate information (i.e., enclosures with the electric or gas bills; personal contacts with customers by staff members), they should be major players in the expanded portfolios of energy efficiency programs. The Staff Report’s suggestions with regard to having utilities play an expanded role are excellent. We endorse the specific suggestion on p. 28 that utilities offer a “Project Expediter” program that packages a group of NYSERDA’s existing programs. <u>Because geothermal heat pumps offer significant savings during both summer and winter seasons, we believe a program to promote their use should also be included.</u> We also endorse the suggestion of encouraging the NYISO to establish a forward market into which peak demand reductions achieved by energy efficiency upgrades can be bid.</p> <p>B. Multi-Year EPS Planning Process. We generally endorse the plan outlined in the Staff Report. However, we believe (1) entities</p>

	<p>that can offer a portfolio of multi-year programs that begin in 2008 should be permitted to proceed, and (2) with the NYDPS as coordinator and an Executive Steering Working Group, NYSERDA, the utilities, and other parties should administer the various energy efficiency programs (including statewide programs). In large and highly diverse states like New York, California, and Texas, we believe this model is superior to the one adopted in Vermont and Maine where there is a single administrator of all efficiency programs.</p>
<p>IV. Energy Efficiency Programs that Can Be Implemented Quickly</p>	<p>We generally support the concept that the initial portfolio of “Fast Track” programs include those in the Staff Report, many of which were developed and are now being offered by NYSERDA. But, as noted immediately above, we believe the portfolio should also include variations on these programs as well as additional programs offered by utilities and third parties (e.g., municipalities). In addition, we feel the respective roles of NYSERDA, the utilities, and other entities need to be further refined. Now is not the time to adopt policies that may restrict the role of any party in offering programs that can be expected to be successful. Let the market (i.e., the end-use customers) chose which programs they want. Variations that include rebates provided by other parties where none now exist should be encouraged, at least during the early years to “kick-start” increased participation levels. Also, a “Project Expediter” program should be added.</p>
<p>V. Evaluation and Monitoring</p>	<p>A. Evaluation. We applaud the statement in the opening paragraph that reliable and rigorous evaluation and monitoring are a necessary part of the EPS program for a variety of important reasons. However, it is not clear that the authors really understand that many of the evaluations conducted in recent years have, by and large, been neither reliable nor rigorous. This conclusion is based on the statement on p.71, “... we expect that the budget would fall within the range of 2-6 percent of the overall program budget.” This range is appropriate only if an unreliable and non-rigorous evaluation effort is contemplated, one with little use of actual metered data. It also seems to exclude funding for process evaluations during the early years to gauge how programs are actually working, whether participation barriers are being overcome, and to identify ways that the programs can be improved.</p> <p>The basic truth that is often overlooked is that measured data is the only reliable data. The practice of actually measuring savings in an impact evaluation has been bypassed in favor of using <i>deemed savings</i> values. We endorse this approach, but only when there are measured data that back-up the claimed deemed savings. In general, there is little problem in using deemed savings for connected load reductions in the case of <u>individual</u> lighting measures (not classes of</p>

measures, such as all CFLs), but rigor is needed when assessing the representative daily operating schedule and calculating annual hours of use. In the case of measures other than lighting, many programs are relying on deemed savings values that are “borrowed” from other sources, which in turn often relied on a survey to determine what others have claimed (without investigating to see whether the claims have a sound basis). Many of the original sources of actual metered values were done more than 15 years ago, and vital details such as sample sizes—which were often too small to yield reliable results—the distribution of capacity ratings, and operating conditions are lost or not investigated. Often, there are a variety of deemed savings numbers available from different sources. There is no way to know which is the most accurate, nor how inaccurate even the best value is.

We recognize that it is expensive to obtain actual metered savings data for appliances, chillers, boilers, furnaces, etc. Everything does not need to be measured, but some representative measurements to “calibrate” deemed savings values urgently needs to be done. The program evaluation community has “kicked the can (getting reliable data) down the road (into the future)” for too many years already. Now, with program funding increasing, it is time to get some actual contemporaneous measurements to ground savings estimates on a firmer foundation.

The distinction between using “the best number you can get quickly” when designing a program, and the number that is used when evaluating actual program accomplishments.

Because it would be wasteful for multiple programs to measure the same measures as part of their M&V activities, consideration should be given to assigning the responsibility for designing and administering a coherent impact evaluation activity applicable to all programs to NYSERDA. Perhaps New York could join with California, New Jersey, and the New England States to develop a coherent impact evaluation activity.

B. Reporting. We endorse the principle of requiring quarterly progress reports, but caution that savings numbers are all suspect and “preliminary” until a rigorous impact evaluation is performed. Therefore, the reports should include an appendix in which detailed data at the measure level are provided.

C. Benefit: Cost Tests. We advocate using a Societal Test in which externalities are valued somewhere in the \$0.01/kWh to \$0.03/kWh range.

We recommend that the formulation of avoided costs should value both summer and winter peak demand reductions, and peak, shoulder, and off-peak energy savings in all seasons. Three of four

	<p>sets of avoided costs for different portions of the state should be established, so utilities, municipalities, and independent service providers who offer programs will have a valid basis for calculating their cost-effectiveness. This will necessitate that measure savings load shapes be considered, and savings during each of the priced avoided-cost time segments be estimated.</p> <p>We urge that a more rigorous approach be taken to forecasting avoided cost values over the period of the planning horizon. No one except EIA believes the real cost of electricity will decrease over time, and that the real cost of natural gas will remain constant. Steel, concrete, aluminum, copper, and uranium have all experienced sharp price escalation (as has oil, of course), and a natural gas shortage is forecast during coming years by a number of experts (assuming the economy does not collapse).</p> <p>Finally, we want to call attention to the fact that the value of incremental cost assumed for each efficient version of a technology relative to the baseline version has a very strong influence on the B/C ratio. Market research needs to be performed to ensure that accurate values are used for this parameter.</p> <p>D. Bill Impacts. We concur that this is an important analysis that should be performed and reported by each of the entities that offer programs in New York state.</p>
<p>VI. Quantification of an Energy Efficiency Goal for Natural Gas</p>	<p>We generally agree with the material in the Staff Report, and in particular appreciate the thorough explanation of the reasons (1) why overall natural gas consumption may increase, and (2) why such an increase may be beneficial and consistent with overall energy efficiency goals. We also believe there should be a more explicit endorsement given to the promotion of energy-efficient gas-fired CHP and chiller systems.</p>