



March 3, 2005

Ms. Jaclyn A. Brillling  
Secretary  
New York State Public Service Commission  
3 Empire State Plaza  
Albany, N.Y. 12223

Dear Ms. Brillling,

This letter provides the comments of the American Council for an Energy-Efficient Economy (ACEEE) in CASE 05-M-0090 regarding Systems Benefit Charge III. ACEEE is a non-profit research organization that works on programs and policies to promote energy-efficiency. We have participated in analyses and discussions on energy-efficiency programs in New York State since the 1980s and currently serve on the New York SBC Advisory Group. This letter provides our comments on the 14 issues for which the NYSPSC has asked for feedback.

## **1. Goals and Objectives**

Progress towards the program's goals and objectives are covered in the May 2004 Energy Smart Program Evaluation and Status Report, particularly in the table on pages ES-29 to 31. As a member of the SBC Advisory Group we helped fashion this report and we support its findings. The Advisory Group has been formally tasked by the PSC with directing the evaluation of the SBC program. As noted in previous letters from the full advisory group to the PSC, the evaluations show substantial progress towards the PSC's four goals. The Advisory Group has stated that it "believe[s] that NYSERDA's program is demonstrating real and substantial progress in achieving energy efficiency, providing reductions in demand, encouraging renewables, supporting energy R&D in New York, and improving affordability for many low-income customers." The evaluation report also "estimates clear economic and environmental benefits for the citizens of New York." In addition, in its most recent transmittal, the Advisory Group found the programs as a whole to be cost-effective under a wide range of scenarios.

## **2. Continuation of SBC**

We strongly support continuation of the SBC. The program has promoted substantial and cost-effective energy and peak demand savings as well as reduced emissions of greenhouse gases and key criteria pollutants. Evidence from the evaluation indicates the program is having a positive impact on New York's economy – for example, the evaluation estimates that the programs are providing about 5500 jobs in New York including direct and indirect impacts. Demand for program services exceeds available funds. And there is no evidence that the private market can continue this level of service without a SBC. Under these circumstances we recommend that the SBC be extended for at least five years, and that serious consideration be given to a longer extension, such as eight or even ten years. A technical and economic energy-efficiency potential analysis recently prepared for NYSERDA indicates substantial savings opportunities through at least 2020. A longer-term extension would provide more certainty for planning future electric capacity needs and would allow program implementers to pursue longer-term opportunities. If the PSC wanted to review progress towards goals and make appropriate adjustments, a mid-term

review could be included as part of an 8 or 10 year SBC extension.

As for level of funding, we recommend that the electric program be continued at current levels. Such a budget balances the demand for program services (which exceed available budgets) and the desire to keep electric rates down. However, as noted in our response to question 14, depending on how the RGGI process goes, we may revise this recommendation in the future.

### **3. Have Conditions Changed? Should Goals be Changed?**

In our view, the conditions supporting a SBC are as compelling now as they were when SBC II was established nearly five years ago. The private market is no more ready today to serve the functions served by the SBC than it was five years ago. For example, a 2001 study by ACEEE of energy service companies and retail electricity commodity providers found little activity by these firms to serve residential and small commercial customers and even services for industrial and large commercial customers was limited. That study concluded that public benefit energy-efficiency programs continue to be important and that it is very unlikely the private market can replace public benefit programs.<sup>1</sup>

Furthermore, natural gas markets have become significantly tighter than they were five years ago, with forecasts for supply limitations continuing for at least the next five years. In part these gas supply problems result from an increased dependence on natural gas for power generation, particularly on the margin. As a result, we have seen increased gas prices and price volatility. The true level of tightness has been somewhat masked as a result of unusually mild weather over the past three years. Because gas has become such an important power generation fuel, ACEEE's research has demonstrated electricity savings, such as those provided by the SBC, can play a critical role in rebalancing natural gas markets in the near-term.<sup>2</sup>

On the other hand, the electric reliability situation is not as dire as five years ago in New York State, although the available power supply downstate continues to be tight. In this situation, future programs can more equitably balance goals for demand and energy reductions, and reductions over the short-, medium- and long-terms. Also, we believe that SBC II faced too many goals (from the PSC, the New York Energy Plan and NYSERDA's program objectives) and that goals should be simplified. Recognizing this, the SBC Advisory Group developed the following list of six goals:

1. Improve system reliability, primarily by reducing peak electrical demand.
2. Improve energy efficiency for all customer classes.
3. Provide cost savings to households, businesses, and institutions considering energy bills and the cost of energy management services and investments.

---

<sup>1</sup> Kushler and Witte. Sept. 2001. *Can We Just "Rely on the Market" to Provide Energy Efficiency? An Extermination of the Role of Private Market Actors in an Era of Electric Utility Restructuring.* Report UO11. Washington, DC: American Council for an Energy-Efficient Economy.  
<http://www.aceee.org/store/proddetail.cfm?CFID=569382&CFTOKEN=28344766&ItemID=11&CategoryID=7>.

<sup>2</sup> R.N. Elliott, A.M. Shipley, S. Nadel and L. Brown. 2003. *Natural Gas Price Effects of Energy Efficiency and Renewable Energy Practices and Policies.* Report Number E032. Washington, DC: American Council for an Energy-Efficient Economy. <http://aceee.org/pubs/e032full.pdf>.

4. Reduce the environmental impacts of energy use by promoting renewable energy and new clean generation technologies and by supporting sustainable building practices and projects that reduce and monitor emissions of criteria air pollutants and greenhouse gases.
5. Foster long-term market changes, so the achieved energy, economic, and environmental benefits will be sustained and grow over time.
6. Accelerate the development and market introduction of next generation energy-efficient end-use and strategic electric technologies.

We recommend that SBC III use these goals. The PSC may also want to consider adding an economic development goal to this list. We further recommend that in a few cases, quantified goals be considered. For example, specific targets can be set for peak demand reductions and kWh savings. Other states are increasingly setting goals for these key parameters (e.g. California, Illinois, New Jersey, Texas, and Vermont) in order to make sure at least a specified level of savings are achieved.

#### **4. Program Priorities**

In terms of program priorities, we would suggest an increased emphasis on "lost opportunity" resources and on transforming particular markets so that efficient goods and services become normal practice.

Lost opportunity resources are energy-saving opportunities that happen infrequently, and when energy savings can be purchased at low cost. If these resources are not captured then, achieving savings in the future becomes substantially more expensive. Examples of lost opportunity situations include new construction (new homes, new commercial buildings), building remodeling, and replacement of long-lived equipment (e.g. air conditioners and furnaces). At these times, efficient products can be purchased for the incremental cost between an efficient product and a standard product, which is typically a modest cost increment. If energy-saving measures are not installed at the time of new construction or equipment replacement, upgrading efficiency requires a retrofit, for which the cost is the full cost of the efficient product and not just the incremental cost. Due to these high costs, retrofits are hard to justify except for some low-cost measures.

Market transformation seeks to leverage long-term changes in the market in ways that reduce costs relative to acquiring savings widget by widget and building by building. For example, a Nov. 2003 study of market transformation efforts by the Northwest Energy Efficiency Alliance found that their programs were saving energy at an average cost of about 1 cents/kWh,<sup>3</sup> which is significantly less than the cost of most of the New *York Energy Smart* programs. New York State has had a market transformation objective since SBC I, but in SBC II this objective was somewhat downplayed in order to increase near-term savings. We recommend returning to the balance of SBC I between market transformation, resource acquisition, and peak demand reduction. In this vein, we think the C/I Performance Program can be scaled back some. This program has provided large savings but also uses the largest portion of the SBC budget (e.g., 39% according to the 2004 evaluation report). We believe that incentives in the C/I Performance Program can be reduced and more money devoted to lost opportunity and market transformation

---

<sup>3</sup> Violette, Ozog, and Cooney. Nov. 2003. *Findings and Report: Retrospective Assessment of Northwest Energy Efficiency Alliance*. Boulder, CO: Summit Blue Consulting and **Stratus** Consulting.  
<http://www.nwalliance.org/resources/documentdetail.asp?DID=424> .

programs as discussed above.

We also recommend that priority be given to serving all customer classes and service territories in approximate proportion to their contribution towards the program budget. We don't think funding and spending need to exactly align, but instead this alignment should be approximate. From our review of the NYSERDA evaluation reports for 2003 and 2004, we believe that the industrial sector is somewhat underrepresented (they received 10.6% of incentives as of the 2003 report but we think they account for a greater percentage of funding). Also, the 2004 evaluation (p. ES-37) shows that the Con Edison territory received about 5 percentage points less incentives than their share of contributions while the NMPC area received about 5 percentage points more incentives than their share of contributions.

More generally, we also think the downstate region should receive increased attention since reliability is more tenuous downstate, and local gas infrastructure problems are more significant. This could happen either through the SBC, or directly through the rates of downstate utilities (e.g. as included in the proposed Con Edison settlement agreement).

## **5. Program Adjustments to Reflect RPS**

With the adoption of the RPS, the SBC no longer needs to fund market-ready renewable energy projects. Our understanding is that NYSERDA is already moving in this direction, but this change should be formalized in guidance the PSC provides for SBC III. However, we think it is still useful for the SBC to fund RD&D work on renewable energy technologies that are not yet fully market-ready.

## **6. Improving the Collection and Allocation Process**

We have not looked at the collection process and have no comments on it. Regarding allocations, we comment on these in our response to question 4.

## **7. Program Changes**

In general, we think the current suite of programs is a good one. For example, in a 2003 study we did entitled *America's Best: Profiles of America's Leading Energy Efficiency Programs*, we identified 63 "exemplary" and "honorable mentions" programs from across the country. Of these programs, six were *New York Energy Smart* programs (three exemplary, three honorable mentions).

However, while the programs are generally very solid, we think program marketing and administration can be streamlined by combining some programs. For example, separate programs are not needed for motors and commercial lighting – these should be combined with Smart Equipment Choices. We also believe the commercial new construction and Energy Star Homes programs should be expanded, because new commercial buildings and homes represent a critical lost opportunity resource. We also recommend expansion of efforts to encourage retrocommissioning of large commercial building, and increasing efforts to encourage optimization of motor, pump-and compressed air systems. These represent two areas with large, low-cost savings opportunities for which current efforts barely "scratch the surface". For example, retrocommissioning and motor system optimization could be made specific focus areas in the FlexTech and Technical Assistance programs, and money budgeted to help cost-share implementation of retrocommissioning and motor system optimization recommendations.

## **8. Improving Responsiveness to Consumers**

Our sense is that programs are generally responsive to consumers, particularly within the constraints of the program budget.

## **9. Improving Marketing**

The current programs are budget limited and not market-limited, and therefore current marketing efforts generally are adequate. However, more marketing will be needed for new and expanded program areas. Also, to address some of the allocation issues discussed above under question 4, we recommend that marketing be increased downstate and to industrial customers. In addition, one limitation of the current *Energy Smart* programs is lack of sufficient field staff to help market and administer programs. From our work examining programs around the country, we find that field staff can be important information and marketing conduits as they build relationships with trade allies and major customers in their region. We recommend that a budget be established to expand field staff, including staff in each region of the state. We also recommend that these field staff coordinate their work more closely with customer-service representatives employed by New York's utilities.

## **10. Improving Administration**

Administration is generally done well in our view, although there are a few areas that need improvement. First is contracting. We have heard of multiple instances where projects get delayed for many months in the contracting process. We recommend that a specific goal be set for completing the contracting process (e.g. 30 days from receipt of all contract paperwork to issuance of final contract). Also, sometimes there are substantial delays in which NYSEDA staff take weeks or even months to approve contractor products such as marketing plans and materials, survey forms, etc. We recommend that guidelines be considered for these reviews, such as one week turnaround for short/simple materials, two weeks for longer/more complicated materials, and three weeks for the most complicated materials. Finally, there is the field staff issue which was discussed above under item 9.

## **11. Evaluation Process**

In our view the evaluation process has gone well and significant changes are not needed. The SBC II evaluation process is much more complete and thorough than the SBC I process. The SBC II evaluation process provides estimates of energy savings, peak savings, emissions savings, cost-effectiveness, economic development benefits, and progress towards market transformation indicators. There is also a small budget for special evaluation needs to address issues that in the view of the SBC Advisory Group are important and not within the regular evaluation plan. We recommend that all of these aspects be continued. We also support continued use of multiyear contracts for evaluation contractors. It takes a lot of time to select contractors and bring them up to speed. Multiyear contracts provide several years of work before this laborious process must be repeated. Therefore, as a general guideline, we recommend initial one year contracts, renewable for up to two additional years before having to re-compete.

## 12. Research on Market Competitiveness and T&D

We are supportive of devoting a portion of the R&D budget for work in these two areas. We also recommend a research budget be established as part of the natural gas programs discussed below. Research is very important for developing new technologies and practices that can be widely promoted in future program years.

## 13. Natural Gas Programs

In our opinion, the most pressing need for the SBC program is to expand it to include natural gas. As the PSC knows all too well, wholesale gas prices have risen dramatically and these costs have been passed onto New York consumers. Furthermore, most forecasts estimate that fairly high costs will continue for about eight years -- until substantial additional LNG capacity and/or an Alaska gas pipeline enters service. The one thing that can be done before then to lower prices is to reduce demand. As noted in our response to question 3, the existing electric SBC contributes to this natural gas demand reductions by reducing peak electric demand that is produced in substantial part from gas. However, significant gas end-use efficiency opportunities also exist that would complement the reductions in power-generation gas demand. A Dec. 2003 analysis by ACEEE and Energy and Environmental Analysis (the same consulting firm hired by DOE to work on the National Petroleum Council Study) found that reducing electricity and natural gas use by about 5% over 5-years in the Northeast and Mid-Atlantic states would reduce natural gas prices by 7-11% (varying by year).<sup>4</sup> The best way for New York to achieve these savings and these benefits is to establish a gas SBC and have NYSERDA administer these programs, closely coordinating programs with the electric SBC.

In New York, our understanding is that about 75% of the gas is used in the residential and commercial sectors (and an even higher percentage of the "firm" gas), and therefore these sectors should be the main target for a gas SBC program. Major energy-saving opportunities which programs should address include the following:

### Residential Sector

- High-efficiency furnaces, boilers, water heaters, and clothes washers (a major consumer of hot water)
- Improved controls including modulating aquastats for boilers and easy to use setback thermostats
- Modest-cost measures to reduce water heating energy use such as tank-wrap, pipe-wrap, low-flow showerheads, and faucet aerators.
- Weatherization, such as duct sealing, infiltration reduction, and increased insulation through an expanded version of the Home Performance with Energy Star program
- Efficient new homes, expanding the existing Energy Star New Homes program

### Commercial Sector

- High-efficiency furnaces, boilers, water heaters, clothes washers, dishwashers and pre-rinse spray valves. High-efficiency cooking equipment should also be investigated.
- Improved controls including modulating aquastats for boilers, reset and time controls for commercial buildings, and hot water pump loop controls for multifamily buildings.

---

<sup>4</sup> Elliott, et al. 2003. *Natural Gas Price Effects of Energy Efficiency and Renewable Energy Practices and Policies*. Report E032. Washington, DC: American Council for an Energy-Efficient Economy. <http://aceee.org/energy/efnatgas-study.htm>.

- Proper commissioning (and recommissioning) of controls is very important
- Boiler tune-ups and improved W A C system maintenance
  - Use of high-efficiency windows when existing windows are being replaced
  - Increased roof insulation
  - Efficient buildings, expanding the existing New Construction program
  - Whole building approaches to energy-efficiency, working with EPA's Energy Star Buildings program

In the industrial sector, the major end-uses of gas are space heating and process heating. There are significant opportunities for boiler tune-ups, installing high-efficiency boilers when existing boilers need to be replaced, better maintaining steam systems and steam traps, and process controls and process optimization. Most factories will also have large opportunities for electric savings and therefore we recommend that an expanded industrial electric SBC be the primary vehicle for reaching industrial customers, but that these programs include a substantial gas component funded by the gas SBC. Also, a combined electric/gas effort would complement the existing NYSERDA Combined Heat and Power (CHP) activities, which have potential to save gas by both modernizing steam systems while also efficiently generating electric power that could displace power currently being generated in part from gas.

As for amount of funding, we recommend at least \$25 million per year and perhaps as much as \$50 million per year. The \$25 million figure is based on the savings and costs modeled by ACEEE for New York in our 2003 report on natural gas price effects (cited above). The \$50 million figure is based on roughly and conservatively scaling up to the New York market the annual spending by Vermont Gas Systems on gas efficiency programs. Vermont Gas Systems has operated an exceptionally complete set of programs and spends about \$1 million annually on a cost-effective suite of programs for their 35,000 customers.<sup>5</sup>

We recommend that the gas SBC be established for at least five years, in order to allow time for planning and program start-up. If the electric SBC is extended for more than five years, we recommend the same period be used for the gas SBC.

We recommend that a gas SBC be administered in a very similar fashion as the electric SBC, including a small charge per unit of gas purchased, lean administration by NYSERDA, and oversight of planning and evaluation by the SBC Advisory Group. However, the Advisory Group should be modestly expanded to include gas company representatives and a few experts in gas efficiency. We also recommend that NYSERDA be asked to sit down with the gas utilities to discuss ways the gas programs can best be marketed.

#### **14. Other Suggestions**

We would like to point out that New York is one of nine states engaged in the Regional Greenhouse Gas Initiative (RGGI), which is scheduled to issue a model rule for a carbon cap-and-trade system this year. ACEEE is a stakeholder in the RGGI process, and has participated in the computer modeling process. The modeling process is evaluating the potential contribution energy efficiency can make to reducing carbon emissions, and to reducing the overall cost of the RGGI rule. NYSERDA's previous analysis of energy efficiency potential is the basis for input

---

<sup>5</sup> More information on programs by Vermont Gas Systems and other utilities can be found in Kushler, York and Witte, Dec. 2003, *Responding to the Natural Gas Crisis: American's Best Natural Gas Efficiency Programs*. Report U035. Washington, DC: American Council for an Energy-Efficient Economy. <http://aceee.org/pubs/u035.htm>.

to the modeling process. Indications are that the modeling results will show that increased investment in energy efficiency will be important to reaching RGGI's goal at acceptable cost.

While the RGGI rule is not yet complete, we anticipate that it will result in calls for sustained and increased use of SBC-funded programs to support realization of RGGI's goals. Since one of the New York SBC program's goals is to reduce carbon emissions, and since the RGGI program will likely call on the state to sustain or increase its SBC funding, sustained funding for the SBC program is all the more important.

This concludes our comments. If you have any questions about these comments please do not hesitate to contact me.

Sincerely,

A handwritten signature in black ink that reads "Steven M. Nadel". The signature is written in a cursive, slightly slanted style.

Steven M. Nadel  
Executive Director