

**Comments of the
National Association of Energy Service Companies (NAESCO)
on the NYSERDA Clean Energy Fund Proposal
(Case 13-M-0094)**

Introduction

The National Association of Energy Service Companies (NAESCO) appreciates the opportunity to submit these comments on the NYSERDA Clean Energy Fund (CEF) Proposals dated September 23, 2014.

NAESCO is the leading national trade association of the energy services industry. NAESCO numbers among its members some of the world's leading energy services companies, including: ABM Energy, AECOM Energy, Ameresco, CM3 Building Solutions, Clark Energy Group, ClearEnergy Contracting, Climatec, ConEdisonSolutions, Constellation New Energy, Control Technologies and Solutions, CTI Energy Services, Energy Control Inc, Energy Solutions Professionals, Energy Systems Group, Entegry, Excel Energy, The Fulcrum Group, Indoor Environmental Services, NextEra Energy Solutions, Honeywell, Johnson Controls, Lockheed Martin, McClure Energy, Navitas, NORESKO, Onsite Energy, Opterra Energy Services, Pepco Energy Services, Performance Services, Schneider Electric, Siemens Industry, Southland Energy, Synergy Companies, Trane, UCONS, and Wendel Energy Services. Utility members include the New York Power Authority, Pacific Gas & Electric, and Southern California Edison.

During the last twenty years, NAESCO member companies have delivered hundreds of energy efficiency, renewable energy, demand response, distributed generation and combined heat and power projects, totaling more than \$2 billion, to institutional, commercial, residential, and industrial customers in New York. Nationally, NAESCO member company projects have produced:

- \$50 billion in projects paid from savings
- \$55 billion in savings – guaranteed and verified
- 450,000 person-years of direct and indirect employment
- \$33 billion of infrastructure improvements in public facilities
- 450 million tons of CO₂ savings at no additional cost

Summary of Comments

NAESCO offers several comments on several of the aspects of the NYSERDA Clean Energy Fund (CEF) proposal in which NAESCO and its member companies have significant experience.

1) NAESCO supports the goal of the Commission to lower the energy costs of New York ratepayers, and suggests that both NYSERDA and the Commission re-affirm the fact that for most consumers, and on a system-wide basis, energy efficiency (EE) is the pre-requisite for the scale implementation of distributed resources, and so the CEF should seek to optimize the implementation of EE.

2) NAESCO supports the proposal of NYSERDA to reform the New York EM&V system, and suggests that the Commission re-establish the successful New York model, which was based on the multi-stakeholder SBC Advisory Group.

3) NAESCO suggests that further research is needed to enable NYSERDA and the Commission to better target their market transformation efforts. Specifically, NAESCO suggests that research is required to identify whether the ratepayer-funded EE programs are transforming markets or transforming consumers.

4) NAESCO believes that the NYSERDA analysis of the barriers facing the scale implementation of EE in the commercial building sector is accurate, but that its program strategies omit the simplest and most effective (and most politically difficult) strategy: mandated EE retrofits.

5) NAESCO suggests that while the NYSERDA plan may be responsive to the policy goals of the Commission, there is to date little empirical evidence available to support the Commission's goal of shifting EE programs from ratepayer-funded incentives to privately-funded EE investment in order to optimize the electric system for all consumers.

Discussion

NAESCO offers the following arguments in support of its comments.

1) NAESCO supports the goal of the Commission to lower the energy costs of New York ratepayers, and suggests that both NYSERDA and the Commission re-affirm the fact that for most consumers, and on a system-wide basis, energy efficiency (EE) is the pre-requisite for the scale implementation of distributed resources, and so the CEF should seek to optimize the implementation of EE resources.

NAESCO appreciates the goal of the Commission to simultaneously reform the utility business model in the REV proceeding (Case 14-M-0101) and to lower the costs

of the implementation of distributed energy resources on New York ratepayers. NAESCO suggests that these ambitious twin goals require that the Commission define the characteristics of the various distributed energy resources – Energy Efficiency (EE), Renewable Energy (RE), Distributed Generation (DG), Combined Heat and Power (CHP) and Demand Response (DR) – and re-affirm that EE is the lowest cost, most reliable for most consumers and least risky for the energy system. EE, in most cases, should be the pre-requisite for the implementation of RE, DG and CHP, because none of these distributed generation sources are cheap and reliable enough to use as the first resource in the loading order. Simply put, EE makes the incremental use of RE, DG and CHP more economically feasible on a large scale. EE should also be implemented in conjunction with DR, because the consumer and system benefit/cost ratio from the combination of EE and DR is better than the benefit/cost ratio from either separately.

NAESCO therefore suggests that both the Commission and NYSERDA re-affirm the fact that EE is a necessary pre-requisite to the Commission's goals of reforming the energy vision and shifting the financial burden of the transition of the electrical system to distributed resources to private financing.

2) NAESCO supports the proposal of NYSERDA to reform the New York EM&V system, and suggests that the Commission re-establish the successful New York model, which was based on the multi-stakeholder SBC Advisory Group.

During the past decade, NAESCO has served on the advisory boards that have assisted in the evaluation of the energy efficiency programs in both California and New York. Our experience is that the old New York EM&V model produced reports representing the consensus of stakeholders (the SBC AG) that were accessible to policy makers and stakeholders, delivered on a timely basis that facilitated the continuous improvement of NYSERDA programs and thus enhanced the ability of the Commission to hold NYSERDA accountable for the expenditure of ratepayer funds. Our experience of the California EM&V model is that it has spent hundreds of millions of dollars to produce disputed results that are delivered years later than required to facilitate program improvement. The California system fosters endless disputes among EM&V “experts” rather than stakeholder consensus and serves to obfuscate, rather than enhance, the accountability of program administrators.

In the last few years, however, the Commission has appeared to move the New York EM&V system away from the successful SBC AG model. The Commission

replaced the SBC AG with the Evaluation Advisory Group (EAG), committee of EM&V experts, which frustrated the ability of stakeholders like NAESCO to provide input (even though NAESCO was a member of the EAG), and essentially eliminated the stakeholder accountability that was a key feature of the SBC AG.

NAESCO therefore supports NYSERDA's proposal to reform the EM&V system, and urges the Commission to revert to the successful New York model in which the SBC AG was responsible for providing oversight to NYSERDA and its corps of expert EM&V consultants and delivering the EM&V reports to the Commission in a timely manner.

3) NAESCO suggests that further research is needed to enable NYSERDA and the Commission to better target their market transformation efforts. Specifically, NAESCO suggests that research is required to identify whether the ratepayer-funded EE programs are transforming markets or transforming consumers.

In its work across the country with ratepayer-funded EE programs, NAESCO has often asked program administrators and EM&V experts whether they have any data that could answer the question of whether EE programs are transforming markets or transforming customers. The data required to answer this question is a longitudinal record of the participation of customers in various incentive programs. The dominant wisdom in the field is that EE programs transform the markets for various technologies (e.g., dishwashers or CFL bulbs). The question we would like to see answered is to what extent the serial transformation of these markets is due to the adoption of each new technology by previously transformed customers. This question could be answered, we believe, by mining the historical utility program data to determine how many customers are users of multiple incentive programs.

The answer to this question is relevant, we believe, because EE programs typically use a marketing strategy that phases out rebates or incentives when the market for a particular technology reaches a threshold level of penetration that the program administrators feel is indicative of a transformed market. But systematically applying this threshold of market transformation apparently leaves behind a large number of "untransformed" customers. An example of this is the continuing success of the ConEd Targeted DSM program, which has demonstrated the ability to harvest hundreds of megawatts of cost-effective EE from numerous distribution regions. Most of this EE has been in the form of commercial lighting retrofits, a market that was arguably

“transformed” before the ConEd program began. Does the experience of the customers who participate in the ConEd program demonstrate that the program “transformed” them, so that they see the value of the new lighting technologies and integrate long-term cost effectiveness into their future electrical equipment buying decisions?

If the answer to this question is yes, and if the historical evidence from the EE programs of the last decade indicates that a generous rebate for one technology “transforms” customers, then we perhaps need to re-adjust our metrics for measuring market transformation to also include the value of consumer transformation. This, in turn, would lead to reforming that EE incentives are structured. In addition to putting a high value (through high incentives) on the early adopters of each new technology (who might in fact be the same customers each time), we might put also put high value (by paying a high incentive) on first-time program participation.

4) NAESCO believes that the NYSERDA analysis of the barriers facing the scale implementation of EE in the commercial building sector is accurate, but that its program strategies omit the simplest and most effective (and most politically difficult) strategy: mandated EE retrofits.

NAESCO members have been trying, without much success, to implement comprehensive EE projects for commercial building owners for the past three decades. During this time, utilities, NYSERDA and state policy makers have also been pounding away at the commercial building market. The author of this paper has been trying to get New York commercial building owners to implement comprehensive retrofits for about four decades, since he organized energy conservation workshops for major commercial building owners as a Program Associate in the Executive Chamber at the beginning of the Carey administration. The litany of unsuccessful approaches is impressive: generous rebates, financing programs, technology research, education and training programs, benchmarking, exhortations by public officials, etc. Even the efforts of former President Bill Clinton, who organized a very high-profile initiative that garnered the support of forty major cities and assembled a multi-billion-dollar project investment war chest from major US investment banks, yielded meager results.

NAESCO suggests that the reason for this is simple, and has been clearly enunciated by the commercial real estate owners since the mid-1970s: improving the long-term energy efficiency of buildings is not their business. Buying and flipping buildings is their business. NAESCO respectfully suggests that NYSERDA’s list of barriers to commercial EE (NYSERDA at 69-70) are rationalizations of this basic fact.

So NAESCO suggests that NYSERDA and the Commission follow the lead of former New York Mayor Bloomberg, recognizing that he knows personally the owners of the dominant New York real estate companies and presumably understands what it takes to move them. Mayor Bloomberg's program had three components: mandatory benchmarking with public disclosure, mandatory energy audits and mandatory implementation of retrofits that meet a medium-term payback threshold. He was able to get the first two components of his program enacted by the City Council, but not the mandatory retrofits.

NAESCO believes that the Commission has the power to compel mandatory retrofits as a condition of electric service, and that there is significant precedent for compelling them. Twenty years ago, public officials determined that commercial buildings without fire-suppressing sprinkler systems constituted a significant public hazard and ordered building owners to retrofit their buildings. There was a predictable outcry from the commercial real estate industry, but within a decade the job was done. NAESCO believes that energy-inefficient commercial buildings constitute a larger public hazard than buildings without sprinklers. The US EPA has documented the fact that the environmental emissions from electricity generation annually kill many more New Yorkers than commercial building fires. The Commission has recognized that high New York energy prices, driven in large measure by commercial building demand, make the state less economically competitive and impose unnecessary costs on all New Yorkers.

Furthermore, unlike the mandated sprinkler retrofits, mandated energy efficiency retrofits will repay their investment cost many times over with reduced energy and maintenance costs and improved tenant health and productivity. The services and financing required for the scale implementation of commercial building EE are all readily available and waiting for demand from the market. The coordination of EE service delivery and the provision of services through implementation and finance subcontractors could provide a new source of revenue that would facilitate the utilities' adoption of distributed resources business models.

All that is needed to catalyze this market is the political will, which NAESCO does not minimize, to cut the Gordian knot of the multiple barriers. NAESCO therefore urges the Commission to make the mandated implementation of EE in commercial buildings a major element of its CEF plan.

5) NAESCO suggests that while the NYSERDA plan may be responsive to the policy goals of the Commission, there is to date little empirical evidence available to support the Commission's goal of shifting EE programs from ratepayer-funded incentives to privately-funded EE investment in order to optimize the electric system for all consumers.

NAESCO, in its reply comments in Phase 1 of the REV proceeding, urged the Commission to be very conservative in its assessment of the ability of the competitive market to provide major elements of the new distributed energy utility business model. Our caution is based on our experience with the transition to the competitive electricity supply market, when a number of experts over-hyped the capabilities of the competitive market in key areas (e.g., customer metering services) to drive down costs and the market failed to deliver its touted benefits to the full range of consumers. If, as we believe and experience validates, EE is a pre-requisite to the optimal implementation of the full range of distributed resources, then the Commission has to be careful to guide the development of the competitive markets in ways that benefit all consumers.

An example that we think is worth studying is the rapid growth of the market for leased or output-based power purchase agreements for residential PV systems. *[Disclosure: NAESCO member companies are not active in the residential PV or private residential EE retrofit markets.]* Many observers applaud these innovation financing vehicles that are delivering a rapid expansion of RE. But the current growth of this market is exacerbating problems for which the REV proceeding will take years to develop solutions, including the re-distribution of electric system infrastructure costs through standby rates and the benefits and costs of using federal tax policy to subsidize certain companies and investors. Whatever the position of various parties is on these questions, NAESCO believes that all would agree that the scope of the problems would be limited by the implementation of EE and DR to limit and shape the customer's load before the PV system is sized and installed. Reducing the energy use of the customer's home reduces the necessary size of the PV system, which reduces the customer's costs; reduces the load on the distribution system, which will often defer utility investments in upgrading circuits; and, reduces the need for standby charges on the customer's bill.

Following this example a bit further, NAESCO suggests that the pre-mature switch of residential EE rebate programs to residential financing programs might very well hamstring the implementation of the optimal policy. New York has operated "whole house" residential retrofit programs for almost a decade with very modest results. The programs combine subsidized energy audits with modest rebates and subsidized

financing, yet attract less than 10,000 customers each year. We have to conclude that a program that emphasizes information (audits) and financing is apparently not a model that can get to scale and which can serve as the basis for a scale move of residential customer to distributed resources. NAESCO suggests that the reasons for the program's shortcomings are not mysterious. The program doesn't adequately recognize (and pay for with rebates) the value of the EE improvements to the system. There is also scant evidence that the homeowners can recover the cost of the retrofits either in energy savings during their ownership of their homes (because the whole house retrofit paybacks are longer than the average term of home ownership) or the increased re-sale value of their homes.

So NAESCO urges the Commission to phase in new programs based on new market theories slowly and carefully, and to replace successful program models only with models that have proven themselves in the field to be more successful. NAESCO accepts the fact that many of the current program models are not getting to scale, but replacing limited-scale programs with programs that have not demonstrated the capability to surpass the existing programs is not a solution.

Conclusion

NAESCO appreciates the opportunity to submit these comments, and urges NYSERDA and the Commission to make the following modifications to the NYSERDA proposal.

1) Both NYSERDA and the Commission should re-affirm the fact that for most consumers, and on a system-wide basis, energy efficiency (EE) is the pre-requisite for the scale implementation of distributed resources, and so the CEF should seek to optimize the implementation of EE

2) The Commission should re-establish the successful New York EM&V model, which was based on the multi-stakeholder SBC Advisory Group.

3) The Commission should direct NYSERDA to conduct research to identify to what extent the ratepayer-funded EE programs are transforming markets or transforming consumers.

4) The Commission and NYSERDA should base its program strategy in the commercial building market on the simplest and most effective (and most politically difficult) strategy: mandated EE retrofits.

5) NAESCO suggests that the Commission should shift EE programs from ratepayer-funded incentives to privately-funded EE investment slowly and carefully, to optimize the electric system for all consumers.

Respectfully submitted by:

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