STATE OF NEW YORK
PUBLIC SERVICE COMMISSION

At a session of the Public Service Commission held in the City of Albany on June 18, 2009

COMMISSIONERS PRESENT:

Garry A. Brown, Chairman
Patricia L. Acampora
Maureen F. Harris
Robert E. Curry, Jr.
James L. Larocca

CASE 08-E-1132 - Petition of New York State Energy Research and Development Authority (NYSERDA) for Approval of an Energy Efficiency Portfolio Standard (EEPS) Energy Efficiency Program.

CASE 07-M-0548 – Proceeding on Motion of the Commission Regarding an Energy Efficiency Portfolio Standard.

ORDER APPROVING ELECTRIC ENERGY EFFICIENCY PROGRAMS WITH MODIFICATIONS

(Issued and Effective June 24, 2009)

BY THE COMMISSION:

INTRODUCTION

In this order, the Commission approves, with modifications, two electric energy efficiency programs designed to serve the multifamily building customer market segment. The programs are to be administered by the New York State Research and Development Authority (NYSERDA). They consist of a Geothermal Heat Pump Systems program and an Electric Reduction in Master-Metered Multifamily Buildings program. The purpose of the heat pump program is to encourage the installation of heating, cooling, and summer hot water heating systems using an exterior ground loop in which is circulated a liquid medium that takes advantage of the geothermal properties of the earth. The

purpose of the master-metered buildings program is to encourage submetering (which produces significant energy savings as a result of the information customers gain, and their payment obligation for, their individual energy usage) and the installation of energy efficient appliances. The Commission will consider other energy efficiency programs designed to serve the multifamily building customer market segment in the near future. The Commission will also consider energy efficiency programs designed to serve the large industrial customer market segment in the near future.

BACKGROUND AND SUMMARY

On June 23, 2008,[1] the Commission created an Energy Efficiency Portfolio Standard (EEPS) program for New York State to develop and encourage cost-effective energy efficiency programs. The Commission initially invited NYSERDA and the six large investor-owned electric utilities to submit electric energy efficiency program proposals. Subsequently, the Commission invited NYSERDA and natural gas utilities with 14,000 or more customers to submit natural gas energy efficiency program proposals. Numerous program proposals were submitted in response to the Commission's invitation. Many of the proposals are in the form of combined electric and gas proposals. To provide for an orderly review of the proposals, they are being considered in phases divided by customer market sectors.

The review in this initial phase is focused on program proposals designed for the multifamily building customer market segment. Due to timing requirements imposed by the State Administrative Procedure Act (SAPA), the Commission cannot at this time consider gas proposals or the gas component of

[1] Case 07-M-0548, Energy Efficiency Portfolio Standard (EEPS), Order Establishing Energy Efficiency Portfolio Standard and Approving Programs (issued June 23, 2008).

combined electric and gas proposals. NYSERDA and New York State Electric & Gas Corporation/Rochester Gas and Electric Corporation (NYSEG/RG&E) submitted proposals that meet the SAPA process requirements for consideration of the full programs by the Commission at this time because their multifamily proposals do not have gas components.

On May 15, 2009, NYSEG/RG&E filed an update to their combined electric and gas multifamily program proposal to make it an electric-only proposal. There has been insufficient time to review that update. Additionally, NYSEG/RG&E have indicated to Staff that they do intend to include some gas measures in their multifamily program proposal, so consideration of that proposal is being deferred for now.

NYSERDA has proposed three electric-only initiatives for the multifamily building customer market segment and requested about $23.5 million in annualized funding for those initiatives. The three programs NYSERDA has proposed are a Geothermal Heat Pump Systems program, an Electric Reduction in Master-Metered Multifamily Buildings program, and a Solar Thermal program.

NOTICE OF PROPOSED RULEMAKING

A Notice of Proposed Rulemaking concerning the energy efficiency program proposals under consideration here was published in the State Register on April 8, 2009 [SAPA 08-E-1127SP1]. The minimum period for the receipt of public comments pursuant to the State Administrative Procedure Act (SAPA) regarding that notice expired on May 26, 2009. The comments received are summarized below.

NOTICE SOLICITING COMMENTS

On April 21, 2009, the Secretary issued a Notice Soliciting Comments and Supplementing Notice of Technical Conferences that invited interested parties to comment on the energy efficiency program proposals under consideration here. The April 21, 2009 notice established a deadline of May 26, 2009 for initial comments and June 5, 2009 for reply comments. The comments received are summarized below.

SUMMARY OF THE POSITIONS OF THE PARTIES

Comments were received from NYSERDA, Multiple Intervenors (MI) and the Community Environmental Center (CEC). Some of the comments discussed programs for large industrial customers, which are not being addressed here. The summary below addresses only general observations and comments relevant to the electric-only multifamily building customer market segment program proposals being addressed in this order.

NYSERDA

NYSERDA did not comment on any specific energy efficiency program proposal. NYSERDA notes that several utilities, including Consolidated Edison Company of New York, Inc. (Con Edison), Niagara Mohawk Power Corporation d/b/a National Grid (Niagara Mohawk) and NYSEG/RG&E, have submitted updated multifamily building program proposals to target buildings containing between 5 and 50 dwelling units. NYSERDA's proposed multifamily programs would serve eligible buildings of any size with 5 or more dwelling units. NYSERDA claims several reasons for caution in creating limits for program opportunity by a utility or a NYSERDA program as a result of the building size to be served. NYSERDA comments that the guiding principal for participation in a program should be the building owner's

preference for the scope and type of services to be implemented. According to NYSERDA, a building owner should have the choice of whether to participate in a more focused utility program or NYSERDA's Multifamily Performance Program, which offers a more comprehensive scope of work, and should not be precluded from participating in a program that offers deeper savings. NYSERDA also states that many multifamily residential buildings are in complexes of buildings, each of which may have fewer than 50 dwelling units. NYSERDA is concerned that segmenting the utility and NYSERDA programs based on the number of units in individual buildings for program eligibility purposes may have unintended consequences that jeopardize energy and cost savings opportunities.

Multiple Intervenors

The majority of MI's comments do not address specific energy efficiency program proposals. MI comments generally that due to current economic conditions in the State, including a severe economic recession, high electricity prices that put businesses at a competitive disadvantage compared to other states, and high costs for existing programs, including costs for the System Benefits Charge (SBC), Renewable Energy Portfolio Standard (RPS), Regional Greenhouse Gas Initiative (RGGI), and the Energy Efficiency Portfolio Standard (EEPS), the Commission should take all reasonable actions to moderate EEPS-related costs to customers. MI estimates that the projected $330 million per year of EEPS program costs alone will increase average electric rates nearly 4.5%, with the highest impacts on the State's most energy-intensive businesses and employers, not counting the effects of the other programs. MI estimates that the combined costs of the current EEPS, RGGI, SBC, and RPS programs comprise 10% of an average customer's electricity bill,

and that other factors such as the recent increase in Section 18-a assessment and increases in utility delivery rates have further increased electricity costs. According to MI, consideration of further spending on EEPS should take into account these other cost increases.

MI notes that the Commission recently instituted Case 09-M-0435 to moderate utility rates in response to the current economic situation and that the Commission should apply the same logic in the EEPS proceeding and should seek to reduce costs. MI further recommends that the Commission consider other available funding sources, such as RGGI and federal stimulus funding, for energy efficiency programs to reduce the costs to customers. MI comments that the Commission should adapt its approach to EEPS spending to changing circumstances, including reduced electricity demand and the availability of other funding sources in lieu of collecting EEPS funding from customers.

Further, MI claims that the benefit/cost ratios underlying proposed EEPS programs in the June 2008 EEPS Order are stale and must be updated. MI recommends that, to provide a cushion of greater certainty that the programs implemented are cost-effective despite changes in circumstances, like falling energy prices which reduce projected program benefits, the Commission should approve only programs that have a total resource cost score of 2.0 or greater. According to MI, this should be done to provide greater assurance that all programs funded by customers provide positive net benefits.

MI states that in the June 2008 EEPS Order, the Commission applied the cost allocation methodology used in the SBC for approving Fast Track programs and indicated that it would revisit EEPS cost allocations among customers at a later date. Noting that no further consideration of cost recovery issues has occurred, MI restates the position it has urged

previously in the proceeding that EEPS-related costs should be allocated by customer class or type in accordance with cost-causation principles. MI recommends that customers should be responsible for the costs of only the electric energy efficiency programs that target their particular customer class or type.

MI further recommends that EEPS-related costs should be allocated to the regions for whose direct benefits the costs were incurred to promote interregional equity. It proposes that collections and benefits should be evaluated by region on an annual basis and inequities should be addressed in future collections. MI also recommends that the cost of energy efficiency programs that reduce both energy consumption and peak demand should ideally be recovered partly on the basis of consumption and partly on the basis of demand, particularly for commercial and industrial customers.

MI comments that if the Commission is not going to apply cost-based allocation of EEPS costs, it should note that energy efficiency programs for large commercial and industrial customers are among the most cost-effective and ensure that adequate resources are targeted at programs for large commercial and industrial customers. MI claims that other characteristics that distinguish large commercial and industrial customers from other customers should also be taken into account, including greater energy intensity, greater price sensitivity, greater knowledge of energy efficiency approaches, more experience in implementing energy efficiency in their facilities, a greater need for custom approaches for energy efficiency, and greater concerns about potential EEPS costs and about subsidizing efficiency programs for other customers that may include competitors.

MI claims that the Commission should address cost recovery issues now because the one-size-fits-all volumetric

surcharge has outlived whatever usefulness it once may have had. Absent that, MI recommends that the Commission adopt an annual cap for EEPS charges imposed on large commercial and industrial customers. MI claims that such action is needed to limit rate impacts to a predetermined level and to eliminate existing uncertainty about maximum future rate impacts. MI also notes that this type of approach has been adopted in some other states. MI recommends a cap on additional EEPS surcharges of no more than $25,000 per year on any customer.

Regarding the design of energy efficiency programs for large commercial and industrial customers, MI recommends that such programs should be flexible to allow customers to tailor projects to their individual needs and avoid burdensome program requirements. MI supports the approach of the proposed NYSEG/RG&E programs that would offer custom rebate components for commercial and industrial customers, and also notes that NYSERDA's programs for industrial customers have become more responsive to customer needs over the years.

MI states that its strongest recommendation is to allow large commercial and industrial customers to "bank" the EEPS surcharges they pay and then be allowed the first opportunity to recoup that money to fund their own efficiency projects. MI says that such an approach would address many of its concerns regarding cost recovery and program design. MI notes that the Commission stated in the June 2008 EEPS Order that it would revisit this type of banking approach later in the proceeding. MI believes that the current phase of the proceeding is an appropriate time to do so.

Community Environmental Center

CEC describes itself as the largest implementer of weatherization services in New York and a provider of NYSERDA

Multifamily Performance Program services. It supports approval of NYSERDA's proposal to promote solar domestic hot water in the Multifamily Performance Program based on its experience with the technology. CEC claims that widespread adoption across the world has demonstrated the technology's potential for energy conservation success and a program of incentives for the technology would place New York as a leader for the production, installation, and maintenance of solar domestic hot water systems. CEC predicts that the costs of solar domestic hot water will fall once plumbers and electricians become familiar with the systems and that market efficiencies will then foster widespread implementation, even after incentives are removed. CEC notes that solar domestic hot water has the potential to reduce energy costs due to efficiency savings and to reduce carbon emissions and the threat posed by global warming. CEC claims that NYSERDA's proposed approach to targeting solar installations in multifamily buildings that currently use electricity to heat water should provide the highest return on investment on solar domestic hot water installations. CEC also notes its support for NYSERDA's proposal to promote geothermal systems in buildings as an additional means of meeting the targets of the EEPS proceeding. CEC included a report on its experiences with two pilot solar domestic hot water installations in Brooklyn.

NYSEG/RG&E

Reply comments were received from NYSEG/RG&E. Responding to NYSERDA's comment that the multifamily building market should not be segmented, NYSEG/RG&E comment that their program design applied to any building with 5 or more dwelling units, but that they later updated their program proposals to target buildings with 5-50 units based on a recommendation from

Staff and their belief that NYSERDA would target all multifamily buildings with 51 or more units. NYSEG/RG&E had originally anticipated that NYSERDA and the utility programs would serve the same market, allowing customers to choose between programs based on their needs and energy efficiency plans. NYSEG/RG&E claim that it is not reasonable to require that certain administrators segment their programs to a portion of the market while allowing other program administrators to serve all customers with no size constraint. NYSEG/RG&E recommend that the multifamily programs offered by NYSERDA and the utilities should either be targeted at assigned customer size segments, or unassigned with all multifamily customers having the opportunity to select among available programs.

NYSEG/RG&E claim that additional information is needed to evaluate NYSERDA's proposed Electric Reduction in Master-Metered Multifamily Buildings program. According to NYSEG/RG&E, details are needed regarding which meter service provider(s) will be responsible for providing submetering services for individual dwelling units, whether the individual units will receive lower bulk rate charges while receiving individual services, and how NYSERDA's proposal complies with the current and prospective changes to the Commission's submetering regulations.

Regarding MI's claim that EEPS-related costs must be moderated, NYSEG/RG&E note that in their updates they now propose smaller programs that will have smaller impacts on SBC collections than the programs originally proposed. Regarding MI's claim that the benefit-cost ratios underlying proposed EEPS programs are stale, NYSEG/RG&E state that all of their program benefit/cost analyses were already updated in May 2009. NYSEG/RG&E oppose MI's request that a per-customer annual cap on EEPS Surcharges be set and to recover costs partly on the basis

of energy consumption and partly on the basis of demand. NYSEG/RG&E note, and provide several examples to illustrate, that implementing those proposals would be complex, require significant analyses, and could add significant resource requirements and costs for SBC billing and EEPS programs. A number of specific issues that would have to be resolved in order to implement MI's requests are identified. NYSEG/RG&E also argue that further information is needed to evaluate MI's proposals to permit large commercial and industrial customers to "bank" EEPS-related charges for their own use, and that implementation of such an approach would impose additional costs that would need to be recovered. NYSEG/RG&E state that it is not clear which customers specifically would be eligible for banking under MI's proposal, and that eligibility criteria would need to be developed for customers and the types of projects for which banking could be applied.

Joint Supporters

Reply comments were submitted by Joint Supporters in response to MI's claims that the TRC calculations are stale and that programs with marginal benefit-cost ratios should not be approved. Joint Supporters argue that changes in economic conditions, including recent lower energy prices, are transitory in nature, and that it would be short-sighted to redo the TRC tests based on information that will change again in the coming weeks or months. Joint Supporters quote from a recent U.S. Department of Energy-sponsored report (though no full citation is provided) that states that combined heat and power solutions are a "proven and effective near-term energy option to help the United States enhance energy efficiency, ensure environmental quality, promote economic growth and foster a robust energy infrastructure." Joint Supporters claim that programs that

promote solar, wind and other alternative fuels are equally as valuable and necessary because without such programs we are doomed to repeat mistakes of continual boom and bust cycles in the alternative energy field over the past thirty years with the result that we are still not only dependant on foreign sources of oil, but on a fuel that is harming the planet and its citizens. Joint Supporters further argue that eliminating such programs will make it harder to reach a goal of 15% reduction in energy use by 2015, and all but impossible to reach emission reduction goals.

REVIEW OF PROGRAM PROPOSALS

Geothermal Heat Pump Systems Program

NYSERDA proposed to offer a new component within its Multifamily Performance Program that would provide incentives for the installation of geothermal heat pump systems. Heat pump systems can be used for heating and cooling buildings and can use excess heat from the system for hot water heating. A typical system consists of an exterior ground loop in which is circulated a liquid medium with a heat pump and system controls in the building. By taking advantage of relatively constant ground temperatures of approximately 50 degrees Fahrenheit, heat pumps function as heat exchangers, discharging building heat into the loop in the summer to cool the building and withdrawing heat from the ground in winter to warm the building. NYSERDA estimated that a proto-typical heat pump system installed in a 100-unit electrically-heated multifamily building could save about 1,020 MWh in heating and cooling load and an additional 166 MWh for domestic hot water heating over the (estimated 20-year) life of the system and would cost approximately $875,000. Heat pump installations have a high initial cost. NYSERDA

believes a reasonable payback period could be achieved, expected by NYSERDA to be four to five years.

Within the multifamily building customer market sector, NYSERDA would target a sufficient number of buildings such that it would impact about 1,200 dwelling units per year.[2] Larger buildings with a greater number of dwelling units would also be candidates for the program. Only participants in the Multifamily Performance Program would be eligible for the heat pump installation, which would provide participants an additional incentive for such installations.

NYSERDA proposed an overall budget of $7.59 million dollars through 2012 ($6.58 million through 2011). Limited funding in 2012 represents funds for projects encumbered by the end of 2011 but not yet completed. This budget allocation includes $6.6 million in total EEPS funding without administrative costs and measurement, verification and evaluation (MV&E). Of the $6.6 million program spending proposed by NYSERDA, 50% percent ($3.3 million) would be targeted toward low-income recipients, with 50% proposed for geothermal heat pump installations in market-rate rental buildings. These program spending amounts include marketing and outreach levels of $37,500 in 2009 and $75,000 in 2010 and 2011.

Cumulative projected savings, as projected by NYSERDA, are 6,104 MWh in 2009, 18,311 MWh in 2010, 26,489 MWh in 2011, and 30,518 MWh cumulatively for the period from 2012 through 2015 (after program funding is exhausted in 2012).

[2] NYSERDA's filing states "[i]ncentives will be provided for approximately [twelve] 100 unit buildings per year" and "[t]his program will build upon the success of the [Multifamily Performance Program] and targets all types of multifamily buildings." We understand the "twelve 100 unit buildings" reference to be illustrative of the size of the proposed program rather than of the intended buildings to be targeted. Staff advises us that the same understanding was discussed with NYSERDA in information gathering sessions.

NYSERDA's incentive measures would provide an estimated $1,200 per ton of cooling capacity to customers installing heat pump systems (approximately 16% of the installed cost to defray relatively high heat pump installation costs). Federal tax incentives, currently available, could provide further cost savings. NYSERDA estimates that the payback period for a building using electricity for heating and domestic hot water could be as short as 4 years (with use of tax incentives).

NYSERDA did not specifically address quality assurance in its evaluation protocols. NYSERDA proposed the use of a quality assurance contractor, but provided no detail on the specifications for such a contract, the contractor's measurable performance, or the plan's operation.

NYSERDA anticipated that in addition to the Multifamily Performance Program partners, equipment vendors and suppliers could also market the program. NYSERDA has committed to coordinate the overall marketing of the Multifamily Performance Program. NYSERDA proposed to work with the utilities on cooperative advertising within their respective territories, to collaborate on joint press releases, and to conduct events for building openings and other significant project milestones. NYSERDA would develop a library of case studies for use by utilities in promoting the program.

Program commitments would occur on a first-come, first-served basis. System installer qualifications have not yet been established. The program administrator and quality assurance contractors for the Multifamily Performance Program (of which this program would be a component) were chosen through NYSERDA's standard procurement process.

Discussion

If the amount of funding that NYSERDA requested is scaled in proportion to the total funding that has been requested for all electric programs for the multifamily building customer market segment by all program administrators, and in proportion to the total expected cost of non-"Fast Track" programs divided by customer market segment, the resulting program can still have significant energy savings potential. The resulting amount is an annual budget of $930,562 (which would cover about 367 dwelling unit participants per year).[3] The estimated TRC test ratio for the Geothermal Heat Pump Program using 100 unit buildings as the basis for the analysis would be approximately 0.8 with annual energy savings of about 2.5 million kWh. We wish to encourage this technology but are concerned that the benefits derived from this program will be driven by the size and construction of the building being retrofitted and therefore will be specific to each individual project. We therefore will require that a rigorous project pre-screening benefit-cost analysis be conducted to qualify appropriate cost effective building configurations. These analyses will also likely prove to be useful in any future redesign of the program. We direct NYSERDA to establish appropriate administrative criteria in the operating plan amendment to ensure that each geothermal installation is cost effective on its own - meaning each installation must be estimated to achieve a minimum TRC of 1.0.

System installer qualifications must be established as part of NYSERDA's operating plan amendment. Quality assurance

[3] If utilities include geothermal installations as part of multifamily offerings, there will be a need to ensure that duplicate customer rebates/payments are avoided through the use of a common application form and collaboration with the utilities.

for the Multifamily Performance Program is referenced in NYSERDA's program proposal, but details were not provided. NYSERDA should provide its quality assurance plan for the Multifamily Performance Program Geothermal Heat Pump Systems Program as part of its operating plan amendment.

While NYSERDA proposes a 50/50 split between low income and market rate participation for the geothermal initiative, we want to provide some flexibility in the allocation of resources to allow these installations to proceed as quickly as possible on a first-come first-served basis to maximize installations in the near term. We will set a cap of 50 percent of the geothermal funding for installations in low income buildings, but no cap on market rate participation.

We view geothermal heat pump technology as an increasingly accepted and reliable new technology that would benefit from more widespread implementation, in terms of providing experience to New York installation contractors, potentially bringing down prices as a result of more systems being installed, and achieving greater visibility and acceptance of the technology. We therefore approve this program with the requirement that in its operating plan amendment, NYSERDA will provide specific quality assurance metrics and incorporate other program features described herein.

Electric Reduction in Master-Metered Multifamily Buildings Program

NYSERDA proposed a program to provide incentives for the installation of advanced electric submeters,[4] cost-effective in-unit electric reduction measures, and energy efficient common area lighting and washing machines in both low-income and market-rate master metered buildings. The program proposal

[4] An advanced master meter is also installed in each building.

assumes that building would continue to be master metered by the local utility but that an advanced master meter and new electric submeters would be installed. The program design further assumes that as a result of implementation of submetering, the residents would reduce their energy usage once they would begin receiving current information and a payment obligation for their individual energy usage. Rebates to purchase energy efficient appliances, to further reduce energy usage, would also be available.

Under NYSERDA's proposal, building owners would receive rebates on a per-measure basis to replace and install lights and appliances in dwelling units and common areas. This program feature attempts to address the issue of split incentives[5] for this market by encouraging landlords to install energy efficient measures and giving tenants (residents in condominiums and cooperatives) a stake in using these measures appropriately since the tenants would be paying individually for the electricity they use. The program would allow for bulk purchasing of appliance and lighting, which in turn would lower installation costs for the owner installing the measures. NYSERDA's proposal would allow low income building owners to receive higher rebates than market-rate building owners. NYSERDA proposed that the rebate for low income buildings would be 100% of the incremental cost of installed measures; for market rate buildings, the rebate would be equal to 50% of the incremental cost.

The proposed electric efficiency measures involve a prescriptive list of measures with rebates paid only after

[5] "Split incentives" refers to the situation that neither renters nor landlords have a clear incentive to make improvements in rental property. When landlords do not pay energy bills, they lack incentive to install energy efficiency measures. Similarly, renters do not have an incentive to make investments in property they do not own.

measure installation and implementation of the submetering plan in the relevant building. The submeter rebate would be $500 for low income units and $250 for market rate units. The advanced master meter rebate would be $2,000 for low income buildings and $1,000 for market-rate buildings.

NYSERDA also proposed to fund the conversion of electric clothes dryers to gas dryers. NYSERDA proposed, on average, one dryer conversion for every 10 units in a master metered building. NYSERDA explained that the replacement of old appliances with new more efficient clothes washers and gas dryers would produce electric and natural gas savings while decreasing water usage.

NYSERDA expects some program referrals to come from existing Multifamily Performance Program partners, submetering vendors marketing the program directly to their clients, utilities, and from New York City and state agencies.

NYSERDA originally proposed a program budget with administration and measurement, verification, and evaluation costs of $44.823 million for 2009-2012. NYSERDA further broke down the budget between the low income ($26.9 million) and market rate ($17.9 million) sectors. The estimated annual energy savings were 85,296 MWh for the period 2009-2015. This assumes that the program would target 16,000 units annually.

On May 19, 2009, NYSERDA filed an update to its original proposal. The update places more emphasis on market rate buildings, including condominiums and cooperatives. NYSERDA now proposes that electrically-heated, low-income buildings that are rent stabilized, rent controlled, or regulated by state or local agencies, might require the installation of two submeters in each dwelling unit – one for electric needs and another for heat. The installation of two separate meters would allow the low-income resident to continue

to have their heat included in the rent, while the tenants would assume responsibility for their individual non-heating electricity usage.

The updated proposal would have a budget, including administration and measurement, verification, and evaluation costs, of $42.93 million for the period 2009-2015. The updated program would target $25.76 million for low-income and $17.17 million for the market-rate sectors. The proposed budget was allocated using a 60/40 split to low-income and market-rate buildings, with the rationale that since the incentives are double for the low-income sector, fewer buildings would be completed per dollar spent on incentives when compared to market-rate buildings. The proposed updated program would target 22,000 units, or 500 buildings annually.

NYSERDA's proposed program (both the original and updated versions) claims an annual energy savings of 20% or more due to behavioral changes alone, based on the installation and implementation of submeters in master metered buildings. Its documentation of kWh savings was based on data for master metered multifamily buildings that were converted to submeters under the Comprehensive Energy Management program[6]. This analysis did not analyze whether residents had installed energy efficiency measures on their own that would have contributed to the total energy savings achieved.

In addition to budget differences, the original NYSERDA program proposal required participants to follow the same procedures for program enrollment as the Multifamily Performance Program. The updated program proposal is simpler and does not require the building owner to submit an Energy

[6] The Comprehensive Energy Management program was superseded by the current Multifamily Performance Program in 2007.

Reduction Plan or to implement a comprehensive 20% reduction in energy usage.

NYSERDA did not provide a description of its Quality Assurance plans as part of the proposed Master-metered Multifamily Buildings Program in either the original or updated proposal. NYSERDA's original proposal called for an education/marketing budget of $1 million for the years 2009, 2010, and 2011. The update includes a proposed 2009 education/marketing plan budget of $500,000, with $1 million annually for years 2010 and 2011, without an explanation of how these funds would be used. NYSERDA's program would allow building owners to take advantage of utility rebates which might be available for lighting and appliances to help offset costs and provide more services within the building. NYSERDA proposes to cross-market appropriate programs with utilities.

Discussion

The Electric Reduction in Master-Metered Multifamily Buildings Program, as updated, would be a new program for multifamily customers. One of the features of the current Multifamily Performance Program is that participants can receive rebate payments for submetering installations only if a 20% energy reduction target is met. The cost to reach the 20% savings level, including the costs associated with undergoing a full-scale energy audit, has been a barrier to participation, especially for smaller buildings and for the cooperative and condominium multifamily market segments. This newly proposed Electric Reduction in Master-Metered Multifamily Buildings Program would not require the minimum 20% total building energy savings level to be met for participation. Nevertheless, the new program would be expected to produce significant energy savings as a result of the information customers would gain, and

their payment obligation for, their energy usage via submetering and as a result of energy efficiency measures that customers and/or landlords would install as a result of rebates provided for the purchase of energy efficient appliances. The absence of the 20% requirement is likely to attract customers that previously have not elected to participate in the current Multifamily Performance Program.

NYSERDA's claims of 20% energy savings, strictly as a result of the installation of submetering (in the absence of further steps to reduce energy usage), appear overly optimistic. The Electric Power Research Institute (EPRI) cites studies examining the effect on customer behavior of obtaining better information on their energy usage. These studies show decreases in electric usage of between 5 and 15%.[7] For the purpose of modeling expected energy savings, Staff assumed an energy savings rate of 8%, achieved strictly as a result of better information available to customers, and a payment obligation, as to their energy usage as a result of the installation of individual metering.

In its program evaluation efforts, going forward, NYSERDA needs to establish more detailed requirements and specifications for examining the effects of the introduction of submeters on tenants' energy use than those that were required under the previously offered Comprehensive Energy Management Program (administered by NYSERDA) so that the energy savings relating to behavioral change, in the absence of other factors, can be isolated.

NYSERDA determined its target for the number of buildings to be served within its proposed program budget on the

[7] From EPRI Presentation "Is a Smart Grid a Green Grid?: What is the Value for Enabling Clean Energy Development Today?" Presented by Omar Siddiqui, Program Manager, Energy Efficiency, February 24, 2009.

basis of its program rebate levels. This target calculated the number of buildings that could be completed within the budget at the prescribed rebate levels. It is unclear whether there will be sufficient resources to complete and properly evaluate the number of submetering petitions envisioned by this program as proposed (i.e., 500 building conversions annually through 2011). Furthermore, the funding that would be needed for a program of that magnitude would consume more funding for the multifamily building sector than a pro rata share of the total expected cost of the EEPS programs allocated among market sector based on energy usage. We, therefore, will scale down the program to be approved.

Another factor that will affect the size of the program involves the low-income segment of the multifamily market sector. As a result of our role in approving submetering plans within New York State, we are aware of concerns that have arisen in conjunction with installation of submetering in buildings with low-income residents. At the time of this order, rehearing petitions are pending before the Commission and original orders approving submetering are stayed. The concerns raised are building-specific and will be addressed by the Commission. General concerns raised on the topic of submetering in the low-income sector are being addressed through a collaborative effort to update the Commission's submetering rules and regulations. Until the pending rehearing petitions are decided and until the collaborative effort to revise the regulations is completed, we will limit participation in the new Master-Metered Multifamily Buildings Program to market-rate rental buildings, cooperatives, and condominiums. These are market segments that could greatly benefit from this program.

The benefit-cost analysis for the conversion of electric clothes dryers to gas dryers indicates that it would

not be cost effective, by a large margin, and therefore we do not approve the dryer conversion component at this time.

To better inform future decisions regarding the participation of low-income buildings in the new Master-Metered Multifamily Buildings Program, NYSERDA, with guidance from Staff of the Department of Public Service, should undertake a study of the likely impacts of submetering on tenants in low-income buildings, examining their total payments for rent and electricity and how this relationship is affected when submetering is introduced. It should also review impacts associated with various heating sources and building characteristics. We authorize up to $50,000 for this study as a component of the program.

One of the most intractable problems encountered in promoting energy efficiency in rental units is the issue of split incentives. Since various market actors are involved, no one has a clear incentive to put energy efficient measures in place, leading to questions such as “Why would a renter put energy efficient measures in place if he/she will later be moving?” and “Why would a landlord put energy efficient measures in place if payment of electric bills is now the responsibility of the customer?” To help address these thorny issues, we believe that a balance can be struck by requiring landlords participating in this program to offer new ENERGY STAR® refrigerators as replacements (at no cost to tenants) for refrigerators that are ten years or more old. Since refrigerators are among the highest energy use appliances in apartments and the efficiency of refrigerators has increased dramatically in recent years, we believe that this will provide a means to help tenants save energy in a significant way when submetering is implemented. NYSERDA should ensure that as part of the program design for the Master-Metered Multifamily

Buildings Program, appropriate steps are taken to ensure that refrigerator replacements made as part of this program include proper removal and mandatory disposal of old refrigerators.

For all program participants (including market-rate rental units, cooperatives, and condominiums), the Master-Metered Multifamily Buildings Program should encourage the installation of cost-effective measures concurrent with the implementation of submetering by offering incentives to customers and/or building owners for installation of energy efficient appliances including:

- In unit: ENERGY STAR® refrigerators and air conditioning; and
- Common area: ENERGY STAR® commercial clothes washers, as appropriate.

Where appropriate, NYSERDA should arrange for bulk purchasing of efficient appliances that the customers can choose to purchase at a reduced price, or NYSERDA could provide a rebate representing a fraction of the cost differential between a conventional appliance and an appropriate energy efficient model.

NYSERDA did not provide information about how it would spend the dollars it proposes to spend on education and marketing. NYSERDA's operating plan should explain how this money would be spent and justify this level of expenditure.

Obtaining accurate information about customer usage patterns will be an important component of this program. To that end, contractors and building owners participating in the program will be required to use only submeters that meet Commission requirements for safety and accuracy and that are able to be upgraded to accommodate additional functionality, such as so-called "Smart Grid" enhancements, as appropriate.

Before initiating the Master-Metered Multifamily Buildings Program, NYSERDA should meet with Staff to discuss meter qualifications for this program. Building owners or their contractors who receive the submetering incentives will be required to maintain submetered dwelling unit usage historical data and obtain the consent of the affected residents and provide such data to NYSERDA for use by NYSERDA and/or NYSERDA's evaluation contractors, in a manner consistent with appropriate privacy protection requirements, as necessary to evaluate the program.

To ensure the continued viability of the existing Multifamily Performance Program program, we will impose a requirement that customers that have received payments within the Multifamily Performance Program framework, and subsequently choose to switch to the Master-metered Multifamily Buildings Program, will have the value of those payments deducted from the payments they receive as part of the Master-metered Multifamily Buildings Program.

We have determined that the electric Master-Metered Multifamily Buildings Program can be cost-effective with an annual budget of $5.3 million, which would fund about 14,800 submeter installations and energy efficiency measure installations that include window and through the wall air conditioning, energy efficient clothes washers and refrigerators. The TRC (with a carbon adder) is 1.7.[8] The expected annual energy savings for a program of this size would be about 10.5 million kWh.

We view the Master-Metered Multifamily Buildings Program as an important step forward in addressing the needs of buildings that do not necessarily fit well within the existing

[8] The TRC for 14,800 submeters by themselves is 1.2 (with a carbon adder).

Multifamily Performance Program framework, especially small multifamily buildings, cooperatives, and condominiums. The Master-Metered Multifamily Buildings Program proposed by NYSERDA is approved with the modifications described above.

Solar Thermal Program

NYSERDA proposed providing incentives for installation of solar thermal hot water systems in multifamily buildings currently using electricity for domestic hot water purposes. NYSERDA proposed $8.09 million in total annual EEPS spending for this program, which includes administration and cost recovery fees; measurement, verification and evaluation (MV&E); and projected outreach/marketing costs of $40,000 in 2009 and $80,000 in both 2010 and 2011. NYSERDA estimated savings of approximately 1 MW of annual peak demand savings and cumulative annual energy savings of 12,000 MWh from this program.[9] NYSERDA's May 19, 2009 update listed a total resource cost test of 0.8. Staff has estimated that with information provided to date, corroborated with other data, the actual Total Resource Cost (TRC) cost ratio is approximately 0.5 (or 0.6 if a carbon adder is included).

Discussion

Solar thermal technology is a technology which has been successfully installed in the United States, Europe, and many other locations throughout the world, in particular for single family residential and small commercial customer applications. Systems have proven reliable when installed properly by competent installers, and service lives are expected to exceed 20 years with reasonably small maintenance costs. The

[9] NYSERDA proposes that all funds will be committed to projects by the end of 2011, though some projects would not be completed until 2012.

NYSERDA proposal is based on conceptual data regarding the costs and energy savings resulting from applying solar thermal to the multifamily building customer segment in New York. Also, solar thermal technology for the multifamily building customer segment is highly dependent on various site specific parameters, making it difficult to determine the overall cost effectiveness and feasibility of this program. In addition, neither customer acceptance of this technology by this market sector nor the characteristics of the mostly likely cost effective applications in the multifamily sector are well understood at this time.

The calculated benefit cost ratio for this particular solar thermal program is well below 1.0 (i.e., about 0.5), meaning that the program does not meet the Total Resource Cost test. Therefore, we conclude that any action on the program as proposed should be deferred and the program should not be funded as an EEPS program at this time. We encourage NYSERDA to continue discussions with Staff about this technology and its application to multifamily buildings.

DISPOSITION OF OTHER ISSUES

NYSERDA's comments, and NYSEG/RG&E's reply comments, regarding the interplay of NYSERDA and utility programs for the multifamily building customer market segment will be addressed in the future when we consider the remaining program proposals submitted for that market.

MI recommends that the Commission establish a minimum total resource cost test threshold of 2.0 for approval of energy efficiency programs. MI indicates that such a high threshold requirement is needed to provide a cushion of greater certainty that the programs implemented will be cost effective in changing circumstances. We reject this recommendation for the following reasons. First, it is the responsibility of each program

administrator to manage the program implementation process to achieve a cost-effective outcome for the implementation period for which authorization has been received. Second, flexibility is required to be able to achieve important efficiency portfolio objectives, such as the advancement of new technologies and equity across market segments in terms of access to efficiency programs and the ability of programs to reach under-served markets. Finally, establishing a minimum total resource cost test requirement of 2.0 for efficiency programs may hinder New York's ability to achieve the 15x15 energy reduction policy objective. MI's other generic arguments are not new and do not relate to the specific program decisions we are making here. As we have noted previously, such issues, and NYSEG/RG&E's reply comments, will be addressed at an appropriate time in the future.

We appreciate receiving the information provided by CEC regarding solar domestic hot water installations. We expect Staff to take note of that information in its discussions with NYSERDA about that technology and its application to multifamily buildings.

SEQRA FINDINGS

Pursuant to our responsibilities under the State Environmental Quality Review Act (SEQRA), in conjunction with this order we find that programs approved here are within the overall action previously examined by us in Case 07-M-0548 and will not result in any different environmental impact than that previously examined. In addition, the SEQRA findings of the June 23, 2008 Order in Case 07-M-0548 are incorporated herein by reference and we certify that: (1) the requirements of SEQRA, as implemented by 6 NYCRR Part 617, have been met; and (2) consistent with social, economic, and other essential

considerations, from among the reasonable alternatives available, the action being undertaken is one that avoids or minimizes adverse environmental impacts to the maximum extent practicable.

CONCLUSION

For the reasons given in the discussion above, the Commission approves, with modifications, two electric energy efficiency programs designed to serve the multifamily building customer market segment to be administered by NYSERDA. Program proposals made by utilities and NYSERDA that combine electric and gas energy efficiency measures for multifamily and large industrial customers will be considered at a later time to allow an opportunity for all interested parties to submit comments.

The Commission orders:

1. System Benefits Charge (SBC) funding for Energy Efficiency Portfolio Standard (EEPS) programs to be administered by the New York State Energy Research and Development Authority (NYSERDA) is approved by program as set forth in Table 1 of the Appendix to this Order. Funding may not be reallocated among programs without further approval by the Commission. This treatment is dissimilar to that afforded existing non-EEPS SBC programs where NYSERDA may reallocate funding between programs within program categories. NYSERDA shall within 60 days of the issuance of this Order, submit a supplemental revision to the SBC Operating Plan incorporating these EEPS programs, to be implemented as soon as Staff determines that it properly reflects this order. The programs, including measures, marketing, administration and program evaluation plans, should be described and implemented in a manner that is consistent with the discussion in this order.

2. NYSERDA shall incorporate reports on these programs into the periodic quarterly program and evaluation reports, annual program reports and evaluations, and monthly scorecard reports already required for the other EEPS SBC programs being administered by NYSERDA. Within sixty days of the issuance of this order, the Director of the Office of Energy Efficiency and Environment will provide to NYSERDA guidance on any specific periodic reporting requirements applicable to these specific programs.

3. The utilities shall establish by contract with NYSERDA a schedule of payments, no less frequently than quarterly commencing October 1, 2009, to transfer SBC funds to NYSERDA for NYSERDA-administered programs as set forth in Table 2 of the Appendix to this Order.

4. The Secretary is authorized, in her sole discretion, to extend the scheduled deadlines.

5. These proceedings are continued.

By the Commission,

(SIGNED) JACLYN A. BRILLING
Secretary

Table 1

Approved NYSERDA Multifamily Program Costs & Savings Targets

	2009	2010	2011	2008-2011	
NYSERDA					
Geothermal Heat Pump Systems Program					
Cumul. Eff. Savings (MWhs)	1,248	3,745	6,241	6241	
Program & Admin Costs	$440,156	$880,312	$880,312	$2,200,780	95%
M&V Costs	$25,125	$50,250	$50,250	$125,625	5%
Total Costs	$465,281	$930,562	$930,562	$2,326,405	
Electric Reduction in Master-Metered Multifamily Buildings Program					
Cumul. Eff. Savings (MWhs)	5,241	15,723	26,204	26,204	
Program & Admin Costs	$2,503,405	$5,006,810	$5,006,810	$12,517,025	95%
M&V Costs	$131,758	$263,516	$263,516	$658,790	5%
Total Costs	$2,635,163	$5,270,326	$5,270,326	$13,175,815	

Table 2

EEPS Collections to be Transferred from Utilities to NYSERDA

	October 1, 2009	2010	2011	Total 2009-2011
Central Hudson	$100,472	$401,887	$401,887	$904,245
Con Edison	$633,724	$2,534,896	$2,534,896	$5,703,516
NYSEG	$242,675	$970,701	$970,701	$2,184,076
Niagara Mohawk	$554,183	$2,216,731	$2,216,731	$4,987,644
O&R	$74,312	$297,249	$297,249	$668,811
RG&E	$117,103	$468,412	$468,412	$1,053,928
Totals	$1,722,469	$6,889,876	$6,889,876	$15,502,220