

STATE OF NEW YORK  
PUBLIC SERVICE COMMISSION

At a session of the Public Service  
Commission held in the City of  
Albany on July 24, 2009

COMMISSIONERS PRESENT:

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

- CASE 08-E-1127 - Petition of Consolidated Edison Company of New York, Inc. for Approval of an Energy Efficiency Portfolio Standard (EEPS) Utility-Administered Electric Energy Efficiency Program.
- CASE 08-E-1129 - Petition of New York State Electric & Gas Corporation for Approval of an Energy Efficiency Portfolio Standard (EEPS) Utility-Administered Electric Energy Efficiency Program.
- CASE 08-E-1130 - Petition of Rochester Gas and Electric Corporation for Approval of an Energy Efficiency Portfolio Standard (EEPS) Utility-Administered Electric Energy Efficiency Program.
- CASE 08-E-1132 - Petition of New York State Energy Research and Development Authority (NYSERDA) for Approval of an Energy Efficiency Portfolio Standard (EEPS) NYSERDA-Administered Electric Energy Efficiency Program.
- CASE 08-E-1133 - Petition of Niagara Mohawk Power Corporation for Approval of an Energy Efficiency Portfolio Standard (EEPS) Utility-Administered Electric Energy Efficiency Program.
- CASE 09-G-0363 - Petitions for Approval of Energy Efficiency Portfolio Standard (EEPS) Gas Energy Efficiency Programs.
- CASE 07-M-0548 - Proceeding on Motion of the Commission Regarding an Energy Efficiency Portfolio Standard.

ORDER APPROVING MULTIFAMILY ENERGY  
EFFICIENCY PROGRAMS WITH MODIFICATIONS

(Issued and Effective July 27, 2009)

BY THE COMMISSION:

INTRODUCTION

In this order, the Commission approves, with modifications, selected Energy Efficiency Portfolio Standard (EEPS) electric and natural gas energy efficiency programs designed to serve the multifamily building customer market segment. The approved programs include two electric and gas programs to be administered by the New York State Research and Development Authority (NYSERDA); one electric and gas program to be administered by Niagara Mohawk Power Corporation d/b/a National Grid (Niagara Mohawk); one electric and gas, and one gas-only program to be administered by Consolidated Edison Company of New York, Inc. (Con Edison); one electric-only program to be administered by New York State Electric & Gas Corporation (NYSEG) and Rochester Gas and Electric Corporation (RG&E); and one gas-only program to be administered by Brooklyn Union Gas Company d/b/a/ National Grid (KEDNY) and KeySpan Gas East Corporation d/b/a National Grid (KEDLI).

BACKGROUND AND SUMMARY

On June 23, 2008, the Commission created an Energy Efficiency Portfolio Standard (EEPS) program for New York State to develop and encourage cost-effective energy efficiency programs.<sup>1</sup> The Commission initially invited NYSERDA and the six

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

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. This order is focused on program proposals designed for the multifamily building customer market segment.

NOTICE OF PROPOSED RULEMAKING

A Notice of Proposed Rulemaking concerning the energy efficiency program proposals under consideration was published in the State Register on May 20, 2009 [SAPA 09-G-0363SP1]. The minimum period for the receipt of public comments pursuant to SAPA regarding that notice expired on July 6, 2009. The comments received are summarized below.

NOTICES 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 on multifamily programs were summarized in our June 24, 2009 Order on multifamily electric-only programs.<sup>2</sup>

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<sup>2</sup> Case 08-E-1132, et al., New York State Energy Research and Development Authority (NYSERDA) - Energy Efficiency Program, Order Approving Electric Energy Efficiency Programs with Modifications (issued June 24, 2009).

On June 18, 2009, the Secretary issued a Notice Soliciting Comments that invited interested parties to comment on how to estimate energy savings from the energy efficiency programs under consideration here on a standardized basis and, in particular, on a document prepared by TecMarket Works, a contractor, entitled "New York Standard Approach for Estimating Energy Savings from Energy Efficiency Programs, 90 Day Program Residential & Commercial Measures, Public Comment Draft" dated June 16, 2009 (Technical Manual). The June 18, 2009 Notice established a deadline of June 29, 2009 for the submission of comments. The comments received regarding multifamily program measures are summarized below.

#### REVIEW OF PROGRAM PROPOSALS

##### NYSERDA Multifamily Performance Program and Low-Income Multifamily Performance Program (Electric & Gas)

NYSERDA originally filed plans for its Multifamily Performance Program and Low-Income Multifamily Performance Program on September 22, 2009, as part of its overall EEPS program administrator proposal. NYSERDA submitted an update to the residential and low-income sector programs on May 19, 2009. On June 9, 2009, the Commission approved two NYSERDA electric-only multifamily programs with modifications (geothermal heat pump systems and an electric reduction in master-metered multifamily buildings program). "Geothermal heat pump systems" is a module within the existing Multifamily Performance Program.<sup>3</sup> The remaining program described in NYSERDA's May 19, 2009 update, a proposed expansion of NYSERDA's existing Multifamily

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<sup>3</sup> A third program, involving a solar water heating module, was not approved for funding at that time.

Performance Program<sup>4</sup>, for both electric and gas savings, is described here.

The target markets for the proposed expansion of the Multifamily Performance Program are low-income and market rate multifamily buildings with five or more dwelling units, located in all utility service territories where system benefits charge (SBC)/EEPS revenues are collected. NYSERDA proposes to use both gas and electric EEPS funds for the Multifamily Performance Program expansion. Currently, the Multifamily Performance Program is funded through June 30, 2011 with \$141 million of electric SBC funds, but not with gas SBC funding. According to NYSERDA, current approved and encumbered funding from all sources totals approximately \$222 million. For the proposed incremental expansion of Multifamily Performance Program, NYSERDA is requesting total additional funding of \$10.6 million (electric) and \$65.2 million (gas) for the period 2009 through 2013.

NYSERDA estimates that the program expansion will provide funding for new projects at a rate of approximately 16,600 total units annually, with total annual electric savings of 18,111 MWh, gas savings of 382,305 dekatherms, and water savings of 428 million gallons per year. Sixty percent of the program funds would be directed to the low-income market under NYSERDA's proposal.

NYSERDA proposes to continue its "whole building" approach to energy efficiency for the incremental Multifamily Performance Program expansion. Under this approach, the sum of all efficiency measure savings must reach a minimum total of 20% savings for a project to be eligible for NYSERDA performance incentive payments. In addition, the cumulative energy costs

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<sup>4</sup> NYSERDA's Multifamily Performance Program began in 2007. It was constructed from previous multifamily programs that began in 1998.

and savings must meet a Savings to Investment Ratio (SIR) of 1.0 or greater for the project to be approved.<sup>5</sup> Both in-unit and common area measures are evaluated under program guidelines using prescriptive and custom approaches.

NYSERDA also proposes to continue using a payment approach that makes payments directly to the building owner(s) based on four stages of project completion and energy savings measurements. Payments vary based on whether the project involves new construction or an existing building and whether the building is classified as low-income or non-low-income. New construction payments are generally based on energy savings and project square footage, while existing building payments are based on the number of units involved, as well as energy savings. Under the NYSERDA approach, either the building owner or the program "partner"<sup>6</sup> can make the initial program application, subsequent to which an Energy Reduction Plan, which assesses and recommends energy efficiency measures, is completed. When the Energy Reduction Plan is completed and approved by NYSERDA, the first of the four payments is paid to the building owner, who then decides whether to move forward to implement the measures.<sup>7</sup> If the project moves forward, construction must begin within six months of the first payment, and payments number two and three are then paid when construction is 50% and 100% completed, respectively. Overall, construction must be completed within eighteen months of the first payment. The final (the fourth) payment is paid one year

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<sup>5</sup> SIR results are a different approach to measuring program outcomes. They do not yield the same results as TRC measurements.

<sup>6</sup> Partners are building performance contractor/consultants certified by NYSERDA.

<sup>7</sup> There is no penalty or repayment of the first payment required should the building owner choose not to proceed with implementation.

after construction is completed and a demonstration that performance targets have been met.<sup>8</sup> Included in the last payment are additional monies for any metered savings over and above the 20% minimum.

Program services are delivered to customers by a network of eligible energy partners, who are trained energy engineers/consultants/contractors deemed eligible by NYSERDA. The program partners work with building owners to help them apply for the program and develop Energy Reduction Plans. NYSERDA also uses the services of an implementation contractor that oversees the detailed administration of the program and performs functions such as reviewing all Energy Reduction Plans, monitoring project construction and implementation status, and verifying project achieved energy savings.

NYSERDA proposes to continue administering the Multifamily Performance Program portion of the Con Edison interim gas program that NYSERDA has administered for the last two years, and to administer multifamily building programs in other gas utility service territories. NYSERDA also proposes to coordinate with utilities on outreach and to develop a process to minimize the potential for duplicate incentives. NYSERDA also plans to continue to coordinate the low income portion of the Multifamily Performance Program with the New York State Division of Housing and Community Renewal's Weatherization Assistance Program (WAP) and the New York City Housing Preservation and Development (HPD) program.

NYSERDA updated its quality assurance program on February 24, 2009. It provides building principles, policies, and protocols to achieve program goals. The plan employs a

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<sup>8</sup> The building owner may also choose to implement the project in up to three one-year phases with a specified implementation schedule, and with performance targets fully met at the end of the final phase.

quality assurance contractor to oversee Quality Assurance/Quality Control and to accomplish tasks such as assessing the quality of Energy Reduction Plans and completing pre- and post-retrofit inspections of both random and underperforming projects.

NYSERDA proposes a total budget for outreach and marketing of \$150,000 of electric funds and \$922,000 of gas funds during the period 2009-2011 for Multifamily Performance Program expansion. NYSERDA expects that program partners will primarily market the program, with additional outreach provided by metering vendors and energy efficiency vendors and suppliers.

Niagara Mohawk Energy Wise  
Program (Electric & Gas)

On September 22, 2008, National Grid filed its proposed EnergyWise Multifamily Energy Efficiency Gas and Electric Program (EnergyWise) for the Niagara Mohawk service territory. The company submitted an update to the electric proposal on May 11, 2009 and an update to the gas proposal on May 28, 2009.

Niagara Mohawk's September 22, 2008 proposal addressed multifamily buildings with five or more dwelling units. The updated proposals address only multifamily facilities with between 5 and 50 dwelling units. The program would provide eligible building owners a comprehensive energy audit of their building's energy use, payments to encourage installation of energy efficiency measures, and recommendations for ways that participants can improve energy efficiency.

Niagara Mohawk proposes to deliver the program as a joint gas and electric program in areas where Niagara Mohawk provides both gas and electric services. Where Niagara Mohawk is the electric utility and not the gas utility, it proposes to provide services that reduce electric usage only.



Niagara Mohawk's proposed overall gas budget is \$2,704,810 and its proposed electric budget is \$7,470,259, through 2011. Its projected participation level for the gas portion of the program is 4,475 dwelling units through 2011, with cumulative annualized gas savings of 39,470 dekatherms. The proposed participation level for the electric portion of the program is 8,075 dwelling units, with a proposed annualized electric savings of 8,602 MWh through 2011.

Niagara Mohawk proposes that installation of low cost measures, such as dwelling unit lighting, low flow shower heads, aerators, minimal domestic hot water pipe wrap, and domestic hot water tank wrap would be provided at no cost. The customer or association would pay \$20 per new lighting fixture in common areas. Major building envelope weatherization measures would be installed at 75% of the cost of the measures. Niagara Mohawk also notes that multifamily building owners who apply for residential-sized and non-residential sized heating equipment, central heating plant, and domestic hot water systems could receive payments through the existing Residential Gas HVAC program, the existing interim Commercial High-Efficiency Heating Program, and the proposed Energy Initiative program, respectively.

**Niagara Mohawk EnergyWise**  
**Proposed Gas and Electric Measures and Payments**

Attic insulation	25% of measure cost
Wall insulation	25% of measure cost
Basement/crawl space insulation	25% of measure cost
Rim joint insulation	25% of measure cost
Duct insulation	25% of measure cost
Heating system pipe insulation	25% of measure cost
Attic ventilation (in conjunction with attic insulation)	25% of measure cost
Ductwork leakage testing	25% of measure cost
Ductwork leakage sealing	25% of measure cost
Air infiltration testing	25% of measure cost
Air infiltration sealing for electric heated property where NG is the electric utility	25% of measure cost
Air infiltration sealing for gas heated property where NG is the gas utility	25% of measure cost
Refrigerators	\$300
Lighting fixtures	Participant will pay \$20.

Niagara Mohawk proposes to deliver the EnergyWise program through an implementation contractor. Major measures in facilities that have greater than 20 dwelling units would be put out for bid by the implementation contractor. Niagara Mohawk did not provide details on how it will coordinate the program with NYSERDA, nor did it provide a plan for quality assurance of measure installations.

Niagara Mohawk provided a breakdown of the EnergyWise program costs for the years 2009- 2011, as follows:

**Niagara Mohawk EnergyWise**  
**Propose Electric program costs for the years 2009- 2011**

<b>EnergyWise</b>	<b>2009</b>	<b>2010</b>	<b>2011</b>	<b>Total</b>
Program Planning and Administration	\$50,000	\$100,000	\$100,000	\$250,000
Program Marketing & Trade Ally	\$50,000	\$100,000	\$100,000	\$250,000
Customer Incentives or Services	\$306,250	\$2,520,000	\$2,520,000	\$5,346,250
Program Implementation	\$150,000	\$400,000	\$400,000	\$950,000
Evaluation and Market Research	\$27,813	\$156,000	\$156,000	\$339,813
Performance Incentive	\$36,213	\$148,991	\$148,991	\$334,196
Total Utility Cost	\$620,276	\$3,424,991	\$3,424,991	\$7,470,259

**Niagara Mohawk EnergyWise**  
**Propose Gas program costs for the years 2009- 2011**

<b>EnergyWise</b>	<b>2009</b>	<b>2010</b>	<b>2011</b>	<b>Total</b>
Program Planning and Administration	\$24,015	\$48,030	\$48,030	\$120,075
Program Marketing & Trade Ally	\$18,087	\$35,340	\$35,471	\$88,899
Customer Incentives or Services	\$427,000	\$878,400	\$878,400	\$2,183,800
Program Implementation	\$23,000	\$23,000	\$23,000	\$69,000
Evaluation and Market Research	\$24,605	\$49,239	\$49,245	\$123,089
Performance Incentive	\$23,453	\$48,247	\$48,247	\$119,948
Total Utility Cost	\$540,161	\$1,082,256	\$1,082,393	\$2,704,810

KEDNY/KEDLI Multifamily Program (Gas)

On September 22, 2008, KEDNY/KEDLI filed Multifamily Energy Efficiency Gas Program proposals. The companies submitted updates on June 5, 2009 in response to a Notice Requesting Proposals dated April 20, 2009, which allowed parties that had submitted gas proposals within their 90-day program filings to supplement their proposals.

The original KEDNY/KEDLI filing, dated September 22, 2008, did not separate out the goals, participants, and budgets for the multifamily program from the proposed Commercial and Industrial Energy Efficiency Program. The updated proposed gas programs address multifamily facilities having between 5 and 50 dwelling units. The program would provide multifamily building owners financial incentives and technical assistance to encourage participation. The companies propose to provide technical assistance through a contracted engineering firm consisting of whole building energy modeling and energy savings-related engineering used to determine potential energy savings. The program could also evaluate energy savings associated with specialized applications. Financial inducements (with limits and maximum spending amounts) would be offered for installation of gas energy efficiency measures including clock thermostats; boiler resets; roof, wall, floor, pipe, and duct insulation; and energy efficient windows.

**KEDNY/KEDLI Gas Energy Efficiency Multifamily Component Proposals  
Proposed Measures and Incentives**

<b>Measure</b>	<b>Incentive</b>	<b>Limitations</b>
Clock Thermostat	\$25	Limit 5
Boiler Reset (1 Stage)	\$150	Limit 2
Boiler Reset (2 Stage)	\$250	Limit 2
Steam Traps	\$25	Limit 100
R-19 Roof Insulation	20% of installed cost	Maximum \$10,000/account
R-30 Roof Insulation	20% of installed cost	Maximum \$10,000/account
Wall Insulation	20% of installed cost	Maximum \$10,000/account
Floor Insulation	20% of installed cost	Maximum \$10,000/account
Pipe Insulation	\$1.50/linear ft	500 linear ft
Duct Insulation	\$1.50/linear ft	500 linear ft
U ≤ 0.35 Windows	\$1.00/sq ft	2,500 sq ft

KEDNY's proposed multifamily program budget is \$4,958,086 for the period 2009 - 2011; the projected participant level is 350 accounts; and the proposed annualized gas savings is 94,500 dekatherms. KEDLI's proposed multifamily program budget is \$1,080,652 for the period of 2009 - 2011; the projected participant level is 115 accounts and proposed annualized gas savings through 2011 is 25,875 Dekatherms. KEDNY/KEDLI indicate that the number of participants refers to the number of accounts/meters receiving services, not individual dwelling units. Only master-metered buildings would be served by this program and a building may have more than one meter.

KEDNY/KEDLI propose to administer the multifamily program with in-house staff and outside contractors. The companies did not provide details on how coordination with NYSERDA, LIPA and other program coordinators will take place other than proposing that coordination will take place. The companies did not specifically address plans for quality assurance of installations.

KEDNY/KEDLI provide a breakdown of the multifamily program costs for the years 2009- 2011 by category, as follows:

**KEDNY/KEDLI Program Gas Energy Efficiency Multifamily Component Proposals  
Proposed Program Total Budgets (2009-2011)**

<b>Multifamily Component</b>	<b>KEDNY</b>	<b>KEDLI</b>
Program Planning and Administration	\$376,000	\$85,000
Program Marketing & Trade Ally	\$562,000	\$128,000
Customer Incentives or Services	\$3,037,500	\$646,875
Program Implementation	\$470,000	\$103,000
Evaluation and Market Research	\$225,400	\$48,144
Performance Incentive	\$287,186	\$69,198
Total Utility Cost	\$4,958,086	\$1,089,217

Con Edison Refrigerator Replacement Plus Program (Electric & Gas)

On September 22, 2008, Con Edison filed a set of proposed electric-only energy efficiency programs. On May 18, 2009, it updated the proposed Multifamily Energy Efficient Equipment Rebate Program proposal to include a component that would combine electric and gas efficiency. The resulting proposal, the proposed Refrigerator Replacement Plus Program targets the 5 to 50 dwelling unit multifamily building market, but allows for participation from buildings with up to 75 dwelling units. The proposed program would provide dwelling unit energy surveys; incentives for the pick up and recycling of old, inefficient room air conditioners; pick up and recycling of old inefficient refrigerators; incentives for high efficiency room air conditioners and ENERGY STAR<sup>®</sup> refrigerators; and prescriptive rebates for common area and building weatherization measures.

Con Edison initially proposed an overall combined gas and electric budget of \$69.5 million dollars through 2011. The company made a minor correction to its budget which resulted in a reduced combined gas and electric budget of \$69.2 million dollars through 2011. This combined budget includes approximately \$54.2 million for the electric program, with an annual energy savings goal of 71,150 MWh, and approximately \$15

million dollars for the gas program, with an annual savings goal of 249,106 dekatherms through 2011. Using the combined gas and electric funding, Con Edison expects to install measures in 73,077 dwelling units through 2011.

Con Edison's proposed incentives include both in-unit and common area, or building level, measures. The proposed program would address measures in dwelling units using directly-installed low cost electric and gas energy efficiency measures, at no cost to the customer. Under the proposed program, participants would also be offered payments for recycling existing room air conditioners and for purchasing high efficiency room air conditioners. ENERGY STAR® refrigerator payments are separately proposed for various sectors within the multifamily market. The market sectors include: free market housing, consisting of rentals and resident-owned units (includes coops and condos); rent-stabilized; and rent-controlled dwelling units. As proposed, the payment for a rent-stabilized unit is split between the tenant and the landlord or building owner. In rent-controlled units the refrigerator is provided at no cost to the building owner or tenant, whereas in free market dwelling units a payment of \$100 is offered to either the landlord or the unit owner to purchase a replacement refrigerator. The Company would also pick up and recycle old, inefficient refrigerators. A complete list of proposed in-unit measures and associated payments is shown in the table below.

**Con Edison Refrigerator Replacement Plus Program  
Proposed In-Unit Measures and Payment Levels**

<b>Measure</b>	<b>Rating</b>	<b>Amount</b>
Energy Survey	Eligibility Rating	FREE
6 Installed compact fluorescent lamps	Energy Star	FREE
Smart Strip	N/A	FREE
Low flow showerhead	1.25 GPM	FREE
Dual spray swivel kitchen aerator	1.25 GPM	FREE
Refrigerator pick up and disposal	Working unit; >10 cu ft; 10+ yrs old	FREE
New refrigerator - rent controlled	Energy Star	FREE
New refrigerator - rent stabilized	Energy Star	\$200/tenant \$125/landlord
New refrigerator - free market, rental and resident-owned unit (condos and coops)	Energy Star	\$100 landlord or condo/coop owner
Room air conditioner <10,000 Btu	Energy Star	Up to 70% of incremental cost but no more than \$75
Room air conditioner >10,000 Btu	Energy Star	Up to 70% of incremental cost but no more than \$100
Room air conditioner (wall)	Working unit	free pick up and disposal; \$50/unit
Room air conditioner (window)	Working unit	free pick up and disposal; \$50/unit

Building owners would be offered prescriptive payments for common area and specific building measure upgrades to help offset the cost of installing high efficiency equipment and cost-effective building improvements. These measures include boilers, furnaces, lighting, controls, motors, and building shell improvements. A complete listing of Con Edison's proposed common area measures and their corresponding payment levels is provided in the table below.

**Con Edison Refrigerator Replacement Plus Program  
Proposed Common Area Measures and Incentives**

<b>Measure</b>	<b>Rating</b>	<b>Amount</b>
(DX) Packaged Air Conditioner System	Minimum 11.0 EER	70% of incremental measure cost
Bi-Level Control, Stairwell Lighting	50% Lighting power during unoccupied time	70% of measure cost
Cooling Tower - Decrease Approach Temperature	6 Degrees Fahrenheit	70% of incremental measure cost
Direct Digital Control System - Wireless Performance Monitoring	Energy Management System DDC Retrofit	70% of measure cost
HE Fixtures/Design	Exceeds federal code	70% of measure cost
HE Fixtures/Design	Above federal code by 15%	70% of incremental measure cost
LED Exit Lighting	5 Watts	70% of measure cost
Motor - premium efficiency	PE Motors for HVAC Applications	70% of incremental measure cost
Motor - Pump & Fan System - Variable Frequency Drive	Pump and Fan system Optimization w/ VFD	70% of measure cost
Occupancy Sensor Control, Fluorescent	Occupancy Sensor Control, Fluorescent	70% of measure cost
VSD Centrifugal Chiller (>=300 tons) with Load control tower	Water cooled VSD centrifugal chiller (0.461 kW/ton)	70% of incremental measure cost
High Efficiency Gas Furnaces	AFUE>=90%	70% of incremental measure cost
High Efficiency Hot Water Boiler	AFUE>=85%	70% of incremental measure cost
High Efficiency Steam Boiler	AFUE>=82%	70% of incremental measure cost
Gas Heating and Hot Water Controls	N/A	70% of incremental measure cost
Building Shell Improvements (Gas heating customers)	Must meet TRC of greater than 1.0	20% of project, max \$10,000

Con Edison did not specifically include a plan for quality assurance of measure installations. Con Edison proposed the use of a quality assurance contractor, but provided no detail on the specifications for such a contract, measuring an implementation contractor's performance, or the plan's operation.

The program would ramp up slowly during the first year to allow time to competitively select contractors, refine delivery procedures, and design work scopes for contractors. During the following years of the program, the program would function with one or more contractors. Con Edison would provide the training for contractors on program requirements, oversight, and delivery. Con Edison would work with NYSERDA to offer



complementary programs and offer customers a range of efficiency options to meet their needs.

Con Edison provided a breakdown of both the gas and electric budgets by category, shown in the tables below.

**Con Edison Refrigerator Replacement Plus  
Proposed Total Gas Budget Breakdown by Function**

	<b>2009</b>	<b>2010</b>	<b>2011</b>	<b>Total</b>
Direct Utility Costs	\$1,398,376	\$6,121,526	\$7,445,995	\$14,965,896
Customer Incentives or Services	\$201,376	\$4,899,326	\$6,198,095	\$11,298,796
Program Planning and Administration	\$157,000	\$160,300	\$163,700	\$481,000
Program Implementation Costs	\$446,000	\$455,400	\$465,000	\$1,366,400
Program Marketing and Trade Ally	\$352,000	\$359,400	\$366,900	\$1,078,300
Evaluation and Market Research	\$242,000	\$247,100	\$252,300	\$741,400

**Con Edison Refrigerator Replacement Plus  
Proposed Total Electric Budget Breakdown by Function**

	<b>2009</b>	<b>2010</b>	<b>2011</b>	<b>Total</b>
Direct Utility Costs	\$8,658,000	\$19,064,000	\$26,526,000	\$54,248,000
Customer Incentives or Services	\$1,201,000	\$11,451,000	\$18,753,000	\$31,405,000
Program Planning and Administration	\$2,919,000	\$2,980,000	\$3,043,000	\$8,942,000
Program Implementation Costs	\$1,696,000	\$1,732,000	\$1,768,000	\$5,196,000
Program Marketing and Trade Ally	\$1,780,000	\$1,817,000	\$1,855,000	\$5,452,000
Evaluation and Market Research	\$1,062,000	\$1,084,000	\$1,107,000	\$3,253,000

Con Edison's program would be marketed to existing multifamily electric and gas customers in 5 to 50 unit buildings. Con Edison proposed marketing to building owners, managing agents, and tenants through press releases, bill inserts, targeted mail and follow-up calls, one page success stories, print media, the company's website and portal, direct

outreach to tenant organizations, informational sessions and seminars, and through other outreach opportunities.

Con Edison Multifamily  
Low-Income Program (Gas)

On September 22, 2008, Con Edison filed a set of proposed electric-only energy efficiency programs; provided updates on April 30, 2009; and provided a further update on May 20, 2009. The proposed program would target existing residential multifamily low income buildings within the New York City<sup>9</sup> (NYCHA) and Westchester County<sup>10</sup> (WCHA) Housing Authorities. The program budget includes funds designated for both NYCA and WCHA housing. Con Edison proposes that NYSERDA should address the remaining needs of the multifamily low-income sector. The proposed program would offer equipment and weatherization assistance in the form of building shell improvements to low-income customers in multifamily buildings. Funding would target income-eligible multifamily residential buildings with natural gas heating and oil-to-gas conversion customers. NYCHA and WCHA have developed income guidelines and eligibility parameters for participants. Con Edison estimates that its service territory contains approximately 4,902 low-income multifamily buildings.

Con Edison proposes an overall gas budget of approximately \$3 million dollars through 2011 for the Multifamily Low-Income Program. This budget would provide for 3,722 dekatherms savings in 2009, 11,925 dekatherms in 2010, and 15,702 in 2011, for a cumulative gas savings of 31,350

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<sup>9</sup> NYCHA provides affordable housing throughout the five boroughs to low and moderate-income residents, including Section 8 and public housing.

<sup>10</sup> WCHA provides affordable housing and rental assistance to home owners and tenants who are income eligible based on 80 percent of area medium income.

dekatherms through 2011. Con Edison based its estimates of annual natural gas savings and useful life on assumptions included in the Technical Manual. The Multifamily Low Income Program is projected to install measures in 1,596 dwelling units through 2011.

Con Edison's proposes payments for installation of energy efficiency measures, including both in-unit and common area building level measures. The proposed Multifamily Low-Income Program plans to offer prescriptive rebates of up to 100 percent of the incremental cost of qualifying cost-effective gas heating equipment and up to 100% of the installed cost for building weatherization measures. Incentives would be capped at \$1,500 per dwelling unit. Con Edison would distribute the funding directly to the New York City Housing Authority and Westchester County Housing Authority. Payments would be targeted to income-eligible multifamily residential buildings that have natural gas heating and oil-to-gas conversion customers.

The program energy efficiency measures for gas heating equipment include high efficiency water and steam boilers and high efficiency gas furnaces. The weatherization measures include, but are not limited to: attic, basement, floor, wall, and pipe insulation; weather stripping and door sweeps; dryer vent/bath fan replacements; and HVAC tune-up and repair.

The Multifamily Low-Income Program would be delivered by New York City Housing Authority and Westchester County Housing Authority with oversight from Con Edison staff, with implementation based on core components - implementation management; quality assurance; transparent, orderly data tracking and information systems; and monitoring, verification, and evaluation.

Con Edison has provided a breakdown of the budget by category, shown in the table below.

**Con Edison Multifamily Low-Income  
Proposed Budget Breakdown by Function**

	2009	2010	2011	Total
Direct Utility Costs	\$265,000	\$1,134,000	\$1,569,000	\$2,968,000
Customer Incentives or Services	\$232,050	\$761,850	\$1,027,565	\$2,021,465
Program Planning and Administration	\$8,300	\$82,800	\$103,300	\$194,400
Program Implementation Costs	\$5,500	\$75,800	\$100,900	\$182,200
Program Marketing and Trade Ally	\$10,200	\$131,300	\$206,200	\$347,700
Evaluation and Market Research	\$8,600	\$82,000	\$130,600	\$221,200

Con Edison's plans to support NYCHA and WCHA in their marketing efforts and will work with the housing authorities to explore marketing strategies. Con Edison will refer all low-income customers outside of the jurisdiction of the housing authorities to NYSERDA.

Con Edison Multifamily Energy  
Efficient Equipment Rebate Program (Gas)

On September 22, 2008 Con Edison filed a set of proposed electric-only energy efficiency programs. On April 30, 2009, the company provided a gas multifamily program proposal, and updated that proposal on May 20, 2009. The Multifamily Energy Efficient Equipment Rebate Program targets new and existing customers in existing non-low income multifamily buildings with five or more dwelling units.<sup>11</sup> The proposed program would provide payments for high efficiency natural gas

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<sup>11</sup> Con Edison's gas territory consists of approximately 55,000 multifamily buildings of which approximately 18,000 have gas heat.

space and water heating equipment, ENERGY STAR® programmable thermostats, building weatherization measures, and controls for furnaces and boilers. Payments would be available to current heating and water heating customers, building owners, or building managers with owner approval in multifamily housing. Payments would also be available for customers converting from oil-to-gas. The program would replace the multifamily building component of the Rate Year 3 Gas Plan that was filed within the company's interim gas efficiency program under its current rate agreement.<sup>12</sup>

Con Edison proposes an overall gas budget of \$24.9 million through 2011. This budget would provide for 7,500 dekatherms of savings in 2009, 181,669 dekatherms in 2010, and 225,801 in 2011, for total gas savings of approximately 415,000 dekatherms through 2011. Con Edison based its estimates of annual natural gas savings and useful measure life on assumptions included in the Technical Manual, developed as part of the EEPS Proceeding. The program is expected to install measures in 21,090 dwelling units through 2011. Con Edison estimates that program costs, number of participants, and expected savings levels would be reduced by approximately 60 percent if the Commission approves the Refrigerator Replacement Plus Program, a program update introduced in a filing Con Edison made on May 18, 2009.

Con Edison's proposed incentives include both in-unit and common area building level measures. The proposed Multifamily Energy Efficient Equipment Rebate Program would offer prescriptive rebates of up to 70 percent of the

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<sup>12</sup> Case 06-G-1332, Consolidated Edison Company of New York, Inc. - Gas Rates, Order Continuing Gas Energy Efficiency Programs (issued September 18, 2008) and Order Adopting In Part the Terms and Conditions of the Parties' Joint Proposal (issued September 25, 2007).

incremental cost of qualifying cost-effective gas heating equipment and up to 70% of the installed cost for building weatherization measures. Rebates would be capped at \$1,200 per dwelling unit.

The energy efficiency measures for gas heating equipment include high efficiency water and steam boilers, and high efficiency gas furnaces. The weatherization measures would include, but not be limited to: attic, basement, floor, wall, and pipe insulation; weather stripping and door sweeps; dryer vent/bath fan replacements; and HVAC tune-up and repair.

The Company proposes the use of a quality assurance contractor. The Company plans to implement quality control measures at various stages of program implementation. Con Edison would develop protocols for contractor recruitment, develop a list of equipment vendors and installation contractors, provide assistance through support staff, use third party contractors to inspect installed measures, ensure customer satisfaction through follow-up calls, and remedy any customer problems by working with the contractor.

Con Edison's Energy Efficient Equipment Rebate Program would ramp up slowly during the first year to allow time to competitively select contractors, refine delivery procedures, and design work scopes for contractors. During the following years of the program, the program would function with one or more contractors. Con Edison would provide the implementation and training of contractors on program requirements, program oversight, and delivery. Con Edison would work with NYSERDA to offer complementary programs and offer customers a range of efficiency options to meet their needs.

The Multifamily Energy Efficient Equipment Rebate Program would be delivered by an outside implementation contractor and Con Edison staff, with implementation based on

core components - implementation management; quality assurance; transparent, orderly data tracking and information systems; and monitoring, verification, and evaluation. Con Edison would cross-market offerings with other approved EEPS programs and expand opportunities to achieve deeper energy savings for customers.

Con Edison provided a breakdown of the budget by category, shown in the table below.

**Con Edison Multifamily Energy Efficient Equipment Rebate Program  
Proposed Budget Breakdown by Function**

	2009	2010	2011	Total
Direct Utility Costs	\$1,625,000	\$10,055,000	\$13,252,000	\$24,932,000
Customer Incentives or Services	\$330,120	\$8,146,501	\$10,339,049	\$18,815,670
Program Planning and Administration	\$156,000	\$273,000	\$367,000	\$796,000
Program Implementation Costs	\$936,000	\$507,000	\$825,000	\$2,268,000
Program Marketing and Trade Ally	\$57,000	\$694,000	\$1,059,000	\$1,810,000
Evaluation and Market Research	\$145,659	\$434,000	\$662,000	\$1,241,659

Con Edison plans to leverage its existing customer relationships by using its ability to interact with customers through bill inserts; during site visits, emergencies, meter readings, information requests, and speaking engagements; and using brand recognition. The company plans to use its knowledge of its territory to target outreach efforts to specific geographic areas, customer classes, market sectors, and individual customers.

The Company plans to cross-promote programs and provide sales training to personnel, contractors, and trade allies to achieve greater energy savings. Con Edison would provide referrals to NYSERDA programs and to other New York

utilities, while developing a consistent marketing message and materials where appropriate. Con Edison will collaborate with NYSERDA to avoid rebate duplication, double counting of savings, customer confusion, and to increase participation and program referrals.

NYSEG/RG&E Residential/  
Non Residential  
Multifamily Program (Electric)

NYSEG/RG&E propose the same Residential/Non-residential Multifamily Program for both service territories to reduce electric usage in multifamily buildings. The companies updated their original September 22, 2008 program proposal on April 22 with further updates on April 30, 2009 and May 15, 2009. The program focus is on replacing older, less-efficient refrigerators with high-efficiency ENERGY STAR® models and making lighting efficiency improvements. The companies propose targeting multifamily buildings with 5 to 50 dwelling units for both low or limited-income residents and non-limited income residents. A limited-income household is defined as a household earning 60% - 80% of the median New York State household income and low-income customers earn less than 60% of the median-income. The companies state that the number of buildings having more than 50 units constitutes a negligible portion of the consumer market in their service territories.

NYSEG proposes a budget of \$732,424 for each program year (2010 and 2011), for a total two-year budget of \$1,464,848. Projected total estimated electric savings of 2,932 MWh is evenly split between 2010 and 2011, with an estimated 1,820 participating dwelling units per year.

RG&E proposes a budget of \$648,370 for each program year (2010 and 2011), for a total two-year budget of \$1,296,740. Total estimated electric savings of 2,706 MWh is evenly split



between 2010 and 2011, with an estimated 1,680 participating dwelling units per year.

The companies propose to provide rebates for the replacement of older, less-efficient refrigerators with newer ENERGY STAR® models that use half (or less) of the energy of the older models that would be replaced. Installation contractors would test existing equipment, which must be in working order at the time of measurement, and obtain baseline energy consumption information. The companies propose to test the energy use of each type of refrigerator represented in a building to determine if it meets the threshold for replacement. At the time of refrigerator energy consumption measurement and/or replacement in a dwelling unit by a third-party contractor, the companies proposed that the contractor would install compact fluorescent light bulbs (CFLs) to replace up to five existing incandescent bulbs. The companies also propose providing common area lighting efficiency measures, including CFL installation and the installation of new lighting fixtures.

Rebates would be provided at \$600 per refrigerator for low and limited-income installations, and \$300 per unit for market-rate income installations. In rental units where the appliance is provided by the landlord, the landlord would receive the rebate. Where a tenant owns the appliance, the tenant would receive the rebate. In owner-occupied dwelling units (condominiums or cooperatives), the actual dwelling unit owner would receive the rebate. In-unit CFLs would be provided free of charge and the common area lighting retrofits would be provided at 50% of the incremental cost of the retrofit, with the landlord assuming the remaining cost obligation.

The companies propose to direct those few building owners with more than 50 dwelling units per structure to apply for participation in the NYSERDA Multifamily Performance

Program. The companies also propose direct coordination with NYSERDA. Coordination would also occur in areas of utility territory overlap in order to eliminate customer confusion over the appropriate program source and application process.

No Quality Assurance plans have been provided. The companies propose to use competitive bidding for these services.

The companies provided the following breakdown of annual program budgets:

**NYSEG and RG&E Residential/Non-residential Multifamily  
Proposed Program Budgets**

	<b>NYSEG</b>	<b>RG&amp;E</b>	<b>NYSEG</b>	<b>RG&amp;E</b>
	<b>2010</b>	<b>2010</b>	<b>2011</b>	<b>2011</b>
Program Marketing	\$54,600	\$50,400	\$54,600	\$50,400
Trade Ally Training	\$2,500	\$2,500	\$2,500	\$2,500
Incentives & Services	\$399,642	\$368,900	\$399,642	\$368,900
Direct Program Implementation	\$240,805	\$195,695	\$240,805	\$195,695
Evaluation	\$34,877	\$30,875	\$34,877	\$30,875
<b>Total</b>	<b>\$732,424</b>	<b>\$648,370</b>	<b>\$732,424</b>	<b>\$648,370</b>

DISPOSITION OF PROGRAM PROPOSALS

Comments on the programs were received from NYSERDA, NYSEG/RG&E, Multiple Intervenors (MI), and the Community Environmental Center (CEC). The MI and CEC comments were discussed in the June 24, 2009 Order in Cases 08-E-1132 and 07-M-0548 and are not further addressed here. Any comments within those filings addressing large industrial programs are also not addressed here. The NYSERDA and NYSEG/RG&E comments are summarized below.

NYSERDA

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 could jeopardize energy and cost savings opportunities. NYSERDA notes that several utilities have submitted updated multifamily building program proposals to target buildings containing between 5 and 50 dwelling units, whereas NYSERDA's 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 per building.

NYSEG/RG&E

NYSEG/RG&E comment that they had originally anticipated that NYSERDA and the utility programs would serve the same market, allowing customers to choose between programs based on customer needs and the offerings of the respective 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 originally designed their program to be applied to any building with 5 or more dwelling units, but later updated it 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.

In their comments, NYSEG and RG&E propose entirely new natural gas energy efficiency programs for multifamily buildings. The purpose of the newly proposed Residential/Non-Residential Multifamily Gas Program is to reduce gas usage in multifamily buildings with between five and fifty dwelling units. The gas program would provide customized rebates for improvements to the central heating and water heating systems. The target market would include heating and domestic hot water measures in individual dwelling units, and common area heating and hot water.

### Discussion

The total amount of funding we shall approve at this time for the multifamily building customer market segment reflects in part our calculation of the proportional share of the expected cost of EEPS electric and gas programs divided pro rata by customer market segment. The funding of gas programs further reflects the fact that some of the gas programs will replace existing interim programs.

#### 1. Roles of NYSERDA and the Utilities

NYSERDA's current Multifamily Performance Program requires participants to take a comprehensive approach to energy savings. The program is making greater inroads in large multifamily buildings than in smaller buildings. Due to the comprehensive nature of the energy reduction plan required for

participation in NYSERDA's program, the upfront investment needed to participate in the program can be a major hurdle for smaller multifamily building owners. The utility programs do not require each participant to undertake such a significant investment at one time and are, therefore, more feasible for owners of smaller multifamily buildings that likely have less available revenues to invest. As the five to fifty dwelling unit multifamily building segment is currently being underserved, Staff urged the utilities to address this market need, and the utilities have responded by updating their filings to concentrate initially on these smaller buildings. We conclude that the utilities may be able to more effectively reach smaller multifamily buildings than NYSERDA's program.

We do not believe it advisable at this time to create a strict division between the NYSERDA and utility programs based on the size of multifamily buildings because we are persuaded that some owners of smaller multifamily buildings may find NYSERDA's program design preferable to a utility offering, and should have an opportunity to choose between utility and NYSERDA programs. We also do not want to undercut existing commitments made within the current NYSERDA multifamily programs that are largely subscribed but not largely implemented.<sup>13</sup> In addition, it may be more appropriate for NYSERDA to use its resources to serve some smaller buildings in the low-income category. However, it is not our intent that NYSERDA should actively compete against the utilities for the service of these smaller buildings. Rather, NYSERDA and utility programs should be able

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<sup>13</sup> Customers should not be participating in both NYSERDA and utility programs. If a customer that is current a participant in NYSERDA's Multifamily Performance Program chooses to instead participate in a utility multifamily program, this will be allowed, but the customer will be required to return all payments that it has received from the NYSERDA's Multifamily Performance Program.

to coexist within each service territory as complementary, rather than as competing, programs. NYSERDA should continue its emphasis on primarily serving multifamily programs to buildings of greater than fifty dwelling units and low-income buildings, but shall be permitted to provide its multifamily programs to smaller buildings if the owners find NYSERDA's program design preferable to a utility offering. The Utilities should limit their multifamily programs to the five to fifty dwelling unit per building market. NYSERDA's marketing, outreach and education design should reflect this noncompetitive philosophy.

2. Funding Principles

As a general principle for all EEPS programs, monies collected from electric ratepayers should be used to fund only electric energy efficiency measures and monies collected from gas ratepayers should be used to fund only gas efficiency measures. Heating efficiency measures in buildings heated by a fuel source other than natural gas or electricity should not be funded by EEPS resources. Measures that are not cost effective on a stand-alone basis, and measures that do not contribute directly to achieving the Commission's electricity or gas usage reduction targets (except extremely low cost and incidental measures like low-flow water restrictors) should not be funded by EEPS resources. Each type of measure to be installed must be cost effective on a stand-alone basis such that the type of measure has a total resource cost (TRC) value of at least one. Further, program administrators should determine that the project as a whole will be cost effective after inclusion of all program administrative and evaluation, measurement, and verification costs. The determination of total resource benefits must be based on avoided costs and carbon reduction per unit values approved by the Commission.

To minimize double-counting of program funding or energy savings, NYSERDA and the utilities should develop an enrollment form with common elements across program administrators, for all of the multifamily programs funded with EEPS funds, to facilitate coordination and prevent duplicate enrollment and double counting of energy savings.

3. Energy Savings Principles

The program proposals included TRC calculations and representations by NYSERDA and the utilities that the programs as a whole would be cost effective with the total resource benefits exceeding the total resource costs. The program administrators provided the following TRC scores:

<u>Administrator</u>	<u>Program</u>	<u>TRC</u>
NYSERDA	Multifamily Performance Program (Electric)	1.30
NYSERDA	Multifamily Performance Program (Gas)	1.10
NYSERDA	Low Income Multifamily Performance Program (Electric)	1.30
NYSERDA	Low Income Multifamily Performance Program (Gas)	1.10
KEDNY	Multifamily Program (Gas)	2.70
KEDLI	Multifamily Program (Gas)	2.66
Con Edison	Refrigerator Replacement Plus Program (Electric)	1.77
Con Edison	Refrigerator Replacement Plus Program (Gas)	1.94
Con Edison	Multifamily Energy Efficient Equipment Rebate Program (Gas)	1.98
Con Edison	Multifamily Low Income Program (Gas)	1.65
Niagara Mohawk	EnergyWise Program (Electric)	1.10
Niagara Mohawk	EnergyWise Program (Gas)	1.14
NYSEG	Residential/Non-residential Multifamily Program (Electric)	1.69
RG&E	Residential/Non-residential Multifamily Program (Electric)	1.74

We note the proposed TRC ratios indicate potential for positive net benefits from program implementation. However, the information filed with the program proposals did not, in every case, provide details about how the programs would be implemented, including, in particular, the relative balance of

measures that would be implemented. Given the diversity of multifamily housing stock, such estimates involve a considerable amount of judgment. To inform our decisions on the potential of the programs to produce positive net benefits, the major program measures have been tested with our cost/benefit assumptions. Most of the major program measures passed the TRC test. Measures that failed the test are to be culled from the programs, except that on a project by project basis if it can be demonstrated that the installation of a measure would be cost effective in that instance, the measure could be included in that particular project. The following table reports the results of testing the major program measures:

<b>Measure</b>	<b>TRC B/C Ratio with CO2</b>
90%AFUE boiler MF Upstate	8.2
90%AFUE boiler MF Downstate	2.5
85% AFUE Hot Water boiler MF Upstate	3.9
85% AFUE Hot Water boiler MF Downstate	4.1
82% AFUE steam boiler MF Upstate	4.0
82% AFUE steam boiler MF Downstate	2.8
90% AFUE furnace MF Upstate	3.7
90% AFUE furnace MF Downstate	2.5
Duct sealing/insulation Upstate	1.5
Duct sealing/insulation Downstate	1.3
Window Air Conditioner Upstate	6.7
Window Air Conditioner Downstate	12.3
Thru-Wall Air Conditioner Upstate	2.7
Thru-Wall Air Conditioner Downstate	5.0
Refrigerator Upstate (Note)	1.0
Refrigerator Downstate (Note)	1.0
CFL bulb Upstate	5.6
CFL bulb Downstate	7.5
Wall Insulation Upstate (Note)	1.7
Wall Insulation Downstate (Note)	2.1
Roof/attic Add Insulation Upstate (Note)	1.7
Roof/attic Add Insulation Downstate (Note)	2.1
Rim Joist Insulation Statewide (Note)	1.3
Floor/basement Insulation Statewide (Note)	0.5
Energy Star DP Window Statewide (Note)	
<b>Notes:</b>	
1. All measures are modeled without administrative costs, free rider estimates and costs, and shareholder performance incentives.	
2. Downstate electric TRCs are representative of Con Edison. Upstate is representative of O&R, CHG&E, Niagara Mohawk, NYSEG, and	



- RG&E.
3. Downstate gas TRCs are representative of Con Edison, KEDNY, KEDLI, and O&R. Upstate is representative of CHG&E, Niagara Mohawk, NYSEG, and RG&E.
  4. For refrigerators, the program administrators would be required to select refrigerators for replacement such that the average TRC ratio would be 1.0 or higher.
  5. For wall and roof/attic insulation, the TRC ratios would likely approximate those which would occur under a program rule that each project/measure needs an individual TRC ratio of at least 1.0.
  6. For rim joist and floor/basement (crawl space) insulation (and all other measures besides refrigerators), the TRC ratios shown represent general averages for the measure.
  7. New Energy Star double pane window installed instead of a new non-energy star double pane window.

The remaining program measures, which could be expected to have lesser impact on total energy savings, will be permitted to proceed only if the program administrator can demonstrate that they meet the criteria that we have established to maintain cost-effectiveness. All measures that are advocated and/or subsidized in any program must have resource benefits that exceed the measure's resource costs and any (multifamily) project undertaken must have total resource benefits that exceed all total resource costs (including a pro rata allocation of administration, marketing, evaluation and shareholder performance related costs, etc). The determination of the total resource benefits must be based on avoided costs and carbon reduction per unit values we have approved using methodologies we have set forth previously in this proceeding.

As we have done for other programs, program administrators will be required to file implementation plans that provide additional program details, including information on measures, quality assurance, marketing, administration, and program evaluation. We have assigned energy savings goals for each of the programs we are approving as set forth in Tables 1 and 2 of Appendix 1 of this order.

4. Marketing

With respect to outreach and education/marketing, the program administrators' multifamily building filings update previously-filed EEPS plans, covering a wide range of individual programs. These plans included general descriptions of marketing approaches that would be used for a variety of energy efficiency programs that were not broken down into program-specific marketing plans. Consistent with prior orders, and as part of the implementation plans for the multifamily building energy efficiency programs, each of the program administrators will submit program-specific marketing plans for certification by the Director of the Office of Consumer Services.

5. Additional Modifications to Programs

For all of the multifamily programs involving refrigerator replacements, the refrigerators targeted for replacement must be demonstrated to be serviceable equipment currently in use within the dwelling units. The replacement decision must be based on a building specific pre-screening criteria that incorporates, at a minimum, the energy savings estimation protocol for refrigerators delineated in the Technical Manual.<sup>14</sup> We are not approving a bounty type program. Refrigerator replacement efforts will need to be very carefully managed to ensure that the process leads to cost effective results.<sup>15</sup> To achieve a TRC ratio of 1.0 on average for refrigerator replacements (without administrative loading), the program administrators will be required to achieve on average a

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<sup>14</sup> "New York Standard Approach for Estimating Energy Savings from Energy Efficiency Measures in Multifamily Programs" dated July 9, 2009.

<sup>15</sup> Total resource cost results vary depending on the cost of the new refrigerators being installed, the age and usage characteristics of the refrigerators being removed, and the long run avoided costs (LRACs) in the area (i.e., upstate and downstate LRACs differ).

minimum level of energy savings for refrigerator replacements which will differ by the avoided costs applicable for the geographic location. The actual average savings per refrigerator replacement should be determined in accordance with the procedures delineated in the applicable Technical Manual, as referenced above, and the determination of the total resource benefits must be based on avoided costs and carbon reduction per unit values approved by the Commission and correctly applied.

Some of these programs, as proposed, also include replacement of fixtures for compact fluorescent light (CFL) bulbs. As we have previously directed, CFL lighting fixtures should not be included in EEPS programs because this technology could easily become obsolete as LED lighting applications become readily available. The affected program administrators should, consequently, remove CFL lighting fixtures from the eligible measures included in their multifamily programs.

6. Approved Programs

- a. NYSERDA Multifamily Performance Program and Low-Income Multifamily Performance Program (Electric & Gas)

The following table compares NYSERDA's funding requests (on an annualized basis) with the amounts we are approving in this order:

<b>NYSERDA</b>	<b><u>Requested</u></b>	<b><u>Approved</u></b>
Multifamily Performance Program (Electric)	\$1,700,000	\$577,653
Low-Income Multifamily Performance Program (Electric)	\$2,552,000	\$867,160
Multifamily Performance Program (Gas)	\$10,440,000	\$8,203,994
Low-Income Multifamily Performance Program (Gas)	\$15,660,000	\$2,050,998

The funding amounts approved for the electric programs represent a proportional share of the base amount of incremental funding (\$10,302,652) we determined should be available to the multifamily building customer segment in relation to the total amount of funding requests received (\$30,320,097). The funding amounts approved for the gas programs represent the remainder of the base amount of incremental funding (\$12,600,000) we determined should be available to the multifamily building customer segment after funding of the utility programs that we are approving. Of these remaining gas funds, 20% were allocated to the low-income program.

NYSERDA received electric funding for multifamily programs in our June 2009 EEPS Order and has a large amount of encumbered electric funds that need to be processed and used for installation of efficiency measures. As part of that process, NYSERDA should manage the program to shorten the time period between receipt of customer applications and the completion of measure installations and ensure that necessary resources are available to projects so that they can move forward quickly with installation of appropriate energy efficiency measures.

NYSERDA proposes to expand its existing Multifamily Performance and Low-Income Multifamily Performance programs using EEPS funding. Currently, the programs are funded solely with electric SBC funds but many of the measures being funded do not provide electric savings. In fact, the majority of funds currently are spent to promote non-electric energy savings.

We understand that it is NYSERDA's intention to use supplementary EEPS funding to pay for only electric measures with electric funds and gas measures with gas funds. In that regard, we reiterate the principle that going forward, for all EEPS programs, electric funds should pay for electric measures and gas funds should pay for gas measures. NYSERDA can fund

measures that target other fuels, especially measures to conserve heating oil, from other funding sources.

The program has already encumbered most of its five-year SBC budget, although the program still has nearly two years to run. NYSERDA has proposed a reduction in the level of incentive payments offered to moderate the rate of intake and that suggestion should be implemented until a better determination of how many of the currently encumbered funds will result in actual efficiency measure installations. Some near term moderation in program intake would be preferable to periodically putting a stop to new applications. To help the Department better monitor NYSERDA's progress in managing the program's workflow, NYSERDA should provide monthly progress reports on how many projects have been completed and metrics at each of the milestone payment steps including total incentive payments made to program participants by payment step.

The program, as currently implemented, requires a minimum of 20% overall energy savings for each project. With the addition of gas funding, this formula will need to be modified. We will instead require that each project implement those measures that will result in at least 80% of identified cost effective electric and gas energy savings and that the program's incentive payment structure be modified as appropriate to support this new objective.

Under the current program rules, participants can claim savings resulting from behavioral changes, such as encouraging building owners to change heating temperature settings. We are concerned about relying on this type of behavioral change in determining progress toward the State's energy efficiency goals. For the EEPS program expansion, savings that are attributable to behavioral changes should not be eligible for incentive payments, with the exception that

behavioral energy savings associated with installation of submetering (up to 40% of total savings) will be allowed.<sup>16</sup>

In our June 24, 2009 Order,<sup>17</sup> we discussed meter requirements for the submetering program, such as ensuring that all submeters are capable of being upgradeable to allow collection of hourly pricing information and requiring that all submeters will meet the Commission's safety and accuracy requirements. Those requirements should be applied generally to the Multifamily Performance programs for all new submetering installations. Further, as explained in our June 24, 2009 Order, until pending rehearing petitions involving submetering are decided and until the collaborative effort to revise existing submetering regulations is completed, we will limit participation in submetering activities for new projects under the Multifamily Performance programs to market-rate rental buildings, cooperatives, and condominiums.

Finally, under the current Multifamily Performance programs, the final program payment to a participant can be increased from a base level if the project achieves more than 20% energy savings, resulting in a large range of potential incentive payments possible for projects in existing buildings. Given this large range of potential incentives, there is considerable uncertainty about the final savings outcome for projects in the queue for completion, which leads to a large potential financial exposure that makes financial planning for the program difficult. We applaud building owners' desire to

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<sup>16</sup> In keeping with guidance in our June 24, 2009 Order in Case 08-E-1132, et al., no more than 8 of the 20% savings (40% of total electric energy savings for the program) can be attributed to submetering.

<sup>17</sup> Cases 08-E-1132, et al., New York State Energy Research and Development Authority (NYSERDA) - Energy Efficiency Program, Order Approving Electric Energy Efficiency Programs with Modifications (issued June 24, 2009).

maximize energy savings, but recognize the need to do this at a reasonable cost per MWh saved. To minimize future program liabilities, while balancing the desire to achieve as much cost effective energy savings as practicable, the final payment level for the EEPS funded program will be capped at a level associated with energy savings of 30%.

b. Niagara Mohawk Energy Wise Program (Electric & Gas)

The following table compares Niagara Mohawk's funding requests (on an annualized basis) with the amounts we are approving in this order:

<b>Niagara Mohawk</b>	<b><u>Requested</u></b>	<b><u>Approved</u></b>
Energy Wise Program (Electric)	\$2,988,103	\$1,015,346
Energy Wise Program (Gas)	\$1,081,924	\$1,081,924

The funding amount approved for the electric program represents a proportional share of the base amount of incremental funding (\$10,302,652) we determined should be available to the multifamily building customer segment in relation to the total amount of funding requests received (\$30,320,097). The funding amount approved for the gas program represents the full amount requested by Niagara Mohawk.

Niagara Mohawk's proposed Energy Wise Program includes a number of measures that are included in its "fast track" rebate programs. The company should establish appropriate controls to ensure that costs and energy savings attributed to participants who receive rebates for residential sized heating equipment, central heating plant, and domestic hot water systems as part of residential rebate programs are properly tracked and that double counting does not occur.

c. KEDNY/KEDLI Multifamily Program (Gas)

The following table compares the KEDNY/KEDLI funding requests (on an annualized basis) with the amounts we are approving in this order:

<b>KEDNY/KEDLI</b>	<b><u>Requested</u></b>	<b><u>Approved</u></b>
KEDNY Multifamily Program (Gas)	\$2,019,890	\$2,019,890
KEDLI Multifamily Program (Gas)	\$435,861	\$435,861

The funding amounts approved for both gas programs represent the full amount requested by KEDNY/KEDLI. We note that the current KEDNY/KEDLI rate plans provide for the substitution of EEPS energy efficiency programs for interim programs and that the two programs approved in this order replace two existing interim programs that have higher budgets.<sup>18</sup> At this time, KEDNY/KEDLI should not adjust their surcharge collection rates to account for that change. The KEDNY/KEDLI surcharge collection rates will be revisited in the near future when we consider additional programs.

d. Con Edison Refrigerator Replacement Plus Program (Electric & Gas)

The following table compares the Con Edison funding requests (on an annualized basis) with the amounts we are approving in this order:

<b>Con Edison</b>	<b><u>Requested</u></b>	<b><u>Available Interim Funds</u></b>	<b><u>Approved Incremental Funds</u></b>	<b><u>Total Approved</u></b>
Refrigerator Replacement Plus Program (Electric)	\$21,699,200	\$0	\$7,373,304	\$7,373,304
Refrigerator Replacement Plus Program (Gas)	\$5,986,359	\$4,728,380	\$1,257,979	\$5,986,359

<sup>18</sup> The annual interim multifamily program budgets are \$3,529,645 for KEDNY York and \$1,136,504 for KEDLI.



The funding amount approved for the gas program represents the full amount requested by Con Edison. We note that although the current Con Edison gas rate plan does not provide for the automatic substitution of EEPS energy efficiency programs for interim programs, Con Edison requested such substitution in its program proposals. Con Edison's request for substitution is approved. We further note that this gas program replaces an existing interim gas program that has a slightly lower budget.

To alleviate the problems associated with rate increases that can be triggered when capital improvements are made in rent-stabilized apartments, Con Edison should add a new tier in the rent-stabilized incentives that would allow incentive payments for energy efficiency improvements for this class of customer to be made solely to the landlord in return for foregoing rent increases associated with implementation of energy efficiency measures (especially refrigerators) installed as part of the Refrigerator Replacement Plus Program.

e. Con Edison Multifamily  
Low-Income Program (Gas)

The following table compares the Con Edison funding request (on an annualized basis) with the amount we are approving in this order:

<b>Con Edison</b>	<b><u>Requested</u></b>	<b><u>Available Interim Funds</u></b>	<b><u>Approved Incremental Funds</u></b>	<b><u>Total Approved</u></b>
Multifamily Low-Income Program (Gas)	\$1,187,200	\$1,182,095	\$5,105	\$1,187,200

The funding amount approved for the electric program represents a proportional share of the base amount of incremental funding (\$10,302,652) we determined should be

available to the multifamily building customer segment in relation to the total amount of funding requests received (\$30,320,097). The funding amount approved for the gas program represents the full amount requested by Con Edison.

f. Con Edison Multifamily Energy  
Efficient Equipment Rebate Program (Gas)

The following table compares the Con Edison funding request (on an annualized basis) with the amount we are approving in this order:

<b>Con Edison</b>	<b>Requested</b>	<b>Approved</b>
Multifamily Energy Efficient Equipment Rebate Program (Gas)	\$9,972,800	\$0

Con Edison's Multifamily Energy Efficiency Equipment Rebate Program is not approved since it is largely superseded by the Refrigerator Replacement Plus Program. In September 2008, Con Edison proposed both the Multifamily Energy Efficient Equipment Rebate Program and the Multifamily Low Income Program. Con Edison later updated its proposals by proposing the Refrigerator Replacement Plus Program which is directed to smaller multifamily buildings (five to fifty dwelling units). This updated program contains many of the measures that had been part of the Multifamily Energy Efficient Equipment Rebate Program, except that the rebate program had been designed for multifamily buildings of all sizes, including those larger than fifty dwelling units, while the new program is designed for smaller buildings. With our emphasis on utilities serving the smaller multifamily buildings, some of these rebate program offerings are no longer appropriate. Therefore, the superseding Refrigerator Replacement Plus Program is more desirable and is the program which is approved.

g. NYSEG/RG&E Residential/  
Non Residential  
Multifamily Program (Electric)

The following table compares the NYSEG/RG&E funding requests (on an annualized basis) with the amounts we are approving in this order:

<b>NYSEG/RG&amp;E</b>	<b><u>Requested</u></b>	<b><u>Approved</u></b>
NYSEG Residential/Non Residential Multifamily Program (Electric)	\$732,424	\$732,424
RG&E Residential/Non Residential Multifamily Program (Electric)	\$648,370	\$648,370

The funding amounts approved for both programs represent the full amount requested by NYSEG/RG&E. These programs had small funding requirements and will be fully funded, at the levels NYSEG/RG&E requested in their filings, without regard to the pro rata allocation methodology we are applying to the large programs. We note that the NYSEG/RG&E proposals to implement gas efficiency programs for multifamily buildings were received too late for consideration at this time, so no funding has been allocated to those proposals.

7. National Fuel Gas Distribution Corporation

National Fuel Gas Distribution Corporation (NFG) also has an interim gas energy efficiency program that provides measures for multifamily buildings. As explained in our June 23, 2008 EEPS Order, NFG will be allowed to continue its current gas efficiency programs and has not requested incremental funding for a multifamily program. Consequently, its programs are not being considered in this allocation of available incremental funding. NFG customers will, however, participate in the NYSERDA statewide gas programs.

8. Collections

Any change to System Benefits Charge (SBC) or other energy efficiency surcharge collection amounts or rates indicated by the budgets approved in this order will be considered by the Commission in the near future when it considers a broader range of energy efficiency issues or programs for electric and gas customers. At this time it appears that the current rate of collections by all utilities will exceed their expense commitments through the end of Calendar Year 2009, except for NFG. As to NFG, we expect NFG to shortly receive a refund of unspent monies from NYSERDA that will more than offset the increase in collections that would be necessary to fund NFG's share of the NYSERDA statewide gas programs.

#### DISPOSITION OF TECHNICAL MANUAL

Comments on how to estimate energy savings from the energy efficiency programs under consideration here on a standardized basis, and in particular, on the proposed Technical Manual were received from E-Cubed, NYSEG/RG&E, Central Hudson Gas & Electric Corporation (Central Hudson), Niagara Mohawk, KEDNY, KEDLI, Con Edison, Orange and Rockland Utilities, Inc. (O&R), NYSERDA, National Association of Energy Service Companies (NAESCO) and the New York Independent System Operator (NYISO).

The comments on the Technical Manual focused on three general areas: the manual development and review process, the applicability of the Technical Manual to certain energy efficiency measures, and the technical reliability of the estimates and formulas. In addition to the summary provided below, the more technical comments, ranging from minor comments about location of measures in the document to questions or recommendations regarding a specific estimation approach or

options within that approach, are summarized in chart form in Appendix 2 to this order.

Several parties provided comments focused on the way the Technical Manual had been prepared and distributed. Many parties expressed a desire for a more interactive process in which the estimation approach could be discussed, with the intent of developing a consensus approach for estimating impacts. Other comments involved the limited amount of time available for review and comment (10 days). They explained that the Technical Manual reflected a complex set of engineering equations that needed to be carefully reviewed, and suggested that more time is needed to conduct the necessary analysis.

NYSERDA indicates that using the Technical Manual for estimating energy savings for certain measures may not be cost effective because of the cost of additional data collection and investment to modify its commercial/industrial energy efficiency program database. It suggests that adopting the current Technical Manual as standard practice, and developing more comprehensive future iterations, should be weighed against the impact on overall program administration and evaluation costs, and program cost effectiveness. As an alternative to the Technical Manual, NYSERDA recommends using estimates derived from its "Deemed Savings Database" for measures in its program portfolio. NYSERDA and its evaluation consultants developed the Deemed Savings Database over several years.

NYISO expresses an opposite opinion that it would be insufficient to provide only deemed energy savings without also performing market baseline studies, billing analysis and interval metering of energy usage where appropriate. The NYISO supports adoption of the Technical Manual.

NAESCO expresses concern that the Technical Manual ignores NYSERDA's Deemed Savings Database. NAESCO's specific

concern is that the Technical Manual would require using a uniform general net to gross ratio of 0.9 instead of specific individual net to gross ratios specified for certain NYSERDA programs in the Deemed Savings Database. E Cubed raises a similar concern.

Discussion

We are initiating and approving a comprehensive set of efficiency programs across all customer segments on an accelerated basis to meet the goals of our ambitious Energy Efficiency Portfolio Standard (EEPS). As part of this effort, we are engaging the electric and gas utilities in the delivery and administration of energy efficiency programs, along with NYSERDA. To ensure the wise use of ratepayer funds and to evaluate program performance in ways that are both transparent and comparable across all program administrators, we are endeavoring to put in place administrative oversight processes and procedures for the measurement of energy savings concurrently with program approvals. This approach should provide clarity to all observers about what has been accomplished during a given performance period on a fair basis and should establish a measure of accountability for program administrators and improve comparability of program reporting. Secondly, it should provide for timely recovery of earned incentives and other related revenues. In many jurisdictions the standardization process for the measurement of energy savings has evolved over a decade or more, but given our ambitious goals, it is necessary for us to act in a compressed timeframe. The evaluation standards we are setting for the measurement of energy efficiency programs may differ in some respects from practices that are currently in place for similar activities in other jurisdictions in which some of our multi-state utilities operate and, therefore, may engender

modifications to some existing data base systems to meet New York State's requirements.

It has not been possible to fully review the Technical Manuals with the Evaluation Advisory Group prior to program approval since such a step would necessarily have the unfortunate consequence of significantly slowing the pace of program approval and implementation. We understand that the pace of current activities is challenging and demanding for all parties and we appreciate the efforts of all involved. The Commission is striving to achieve a workable balance between the pace of program approvals and the timing required for meaningful party input. We congratulate the Evaluation Advisory Group on its efforts over several months to successfully collaborate on the preparation of a monthly progress reporting format and specifications of the ongoing program data collection requirements. This effort demonstrates that the Evaluation Advisory Group can and is working effectively, using a highly interactive process.

The Technical Manual installments we are approving simultaneously with program approvals will put interim approaches for estimating energy savings in place until they can be validated or updated through the Evaluation Advisory Group, using results from evaluation studies conducted in accordance with approved protocols or with results from other credible data sources. An Evaluation Advisory Group subcommittee is being organized for this purpose. It is our expectation that recommendations for future adjustments to approved Technical Manuals will come to us periodically from the Evaluation Advisory Group through the Director of the Office of Energy Efficiency and the Environment. The Technical Manuals are not static documents and we have confidence that the Evaluation Advisory Group will make reasoned and fair recommendations.

When we increased significantly the budget for evaluation from two percent to five percent of the overall program budgets, it was in recognition that then-current evaluation efforts needed to be upgraded. One of the concerns identified by Staff in its review of recent NYSERDA evaluation plans was the methodology used to determine the net to gross ratios. Even if the estimates were accurate at the time they were developed, we can still not be sure that they remain accurate as the program designs evolve, energy prices fluctuate, and economic conditions change. We are concerned that much of the data in the NYSERDA Deemed Savings Database that has been collected in the past employs sample designs that were not of the statistical precision that we are now requiring and that past budget limitations may have inhibited severely the amount of pre- and post-installation physical measurement of energy usage of efficiency measures needed to inform past impact analyses. We are also seeking, going forward, comparability and transparency in the calculation of energy savings across all program administrators. In that context, we conclude that using a uniform general net to gross ratio of 0.9 at this time is an appropriate way to proceed.

For these reasons, we will direct NYSERDA to continue to completion efforts underway to conform to the evaluation and reporting protocols we have caused to be issued, including the use of the Technical Manual methodologies we have approved, for comparable measures delivered through NYSERDA programs. We understand that in complying with our direction NYSERDA will need to successfully manage that transition. NYSERDA's priority should be in complying with the evaluation and reporting requirements for programs that have received funding through the EEPS processes before bringing the remaining SBC funded programs into compliance. NYSERDA must keep the Director of the Office



of Energy Efficiency and the Environment regularly informed on its progress in affecting this transition. We ask the Evaluation Advisory Group to consider the appropriateness of using selected information in the NYSERDA Deemed Savings Database or other savings estimation protocols as an alternative to the procedures in the Technical Manual.

In consideration of the evaluation issues described above, we will approve the methodologies, numerical parameters, and protocols for the estimation of energy savings for energy efficiency measures implemented for multifamily programs, as delineated in the Technical Manual as modified by this order. The chart in Appendix 2 of this order identifies where the Technical Manual has been modified to address specific comments. Where the comment raised requires more review and discussion, the comment, as indicated on the chart, is being referred to the Evaluation Advisory Group subcommittee on the Technical Manual for further review and development of recommendations. These savings estimation procedures will be in effect for measures installed from now until such time as we may modify them based on recommendations from the Director of the Office of Energy Efficiency and the Environment after consultation and collaboration with the Evaluation Advisory Group.

#### 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, electric and gas energy efficiency programs designed to serve the multifamily building customer market segment. The programs are to be administered by NYSERDA, Niagara Mohawk, Con Edison, NYSEG/RG&E, and KEDNY/KEDLI.

#### The Commission orders:

1. System Benefits Charge (SBC) funding for Energy Efficiency Portfolio Standard (EEPS) programs to be administered by Niagara Mohawk Power Corporation d/b/a National Grid (Niagara Mohawk), Consolidated Edison Company of New York, Inc. (Con Edison), New York State Electric & Gas Corporation and Rochester Gas and Electric Corporation (NYSEG/RG&E), and The Brooklyn Union Gas Company d/b/a/ National Grid and KeySpan Gas East Corporation d/b/a National Grid (KEDNY/KEDLI), collectively, the "Utilities", and the New York State Research and Development Authority (NYSERDA) is approved by program as set forth in Tables 1 and 2 of Appendix 1 of this order. The annual program budgets, evaluation budgets, and energy savings goals for the programs shall be as set forth in Tables 1 and 2 of Appendix 1 of this order. Funding may not be reallocated among programs

without further approval by the Commission. For NYSERDA, this treatment is dissimilar to that afforded existing non-EEPS SBC programs where NYSERDA may reallocate funding between programs within program categories.

2. NYSERDA should continue its emphasis on primarily serving multifamily programs to buildings of greater than 50 dwelling units, but shall be permitted to provide its multifamily programs to smaller buildings if the owners find NYSERDA's program design preferable to a utility offering. In allowing NYSERDA to serve smaller buildings, it is not the Commission's intent that NYSERDA should actively compete against the Utilities for the service of these smaller buildings. NYSERDA's marketing, outreach and education design should reflect this philosophy. The Utilities should limit their multifamily programs to the 5 to 50 dwelling unit per building market.

3. 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, and Staff Guidelines for preparing the supplemental revision of the SBC Operating plan to be provided by the Director of the Office of Energy Efficiency and the Environment within 15 days of the issuance of this order. The programs, including measures, quality assurance, marketing, administration, and evaluation plans, should be described and implemented in a manner that is consistent with the discussion in this order. In the supplemental revision to the SBC Operating Plan, NYSERDA shall also provide an estimate of the penetration expected for each energy efficiency measure.

4. The Utilities shall, within 60 days of the issuance of this order, submit Implementation Plans for these EEPS

programs, to be implemented respectively as soon as Staff determines that they properly reflect this order, and Staff Guidelines for preparing the implementation plans to be provided by the Director of the Office of Energy Efficiency and the Environment within 15 days of the issuance of this order. The programs, including measures, quality assurance, marketing, administration, and evaluation plans, should be described and implemented in a manner that is consistent with the discussion in this order. In the Implementation Plans, the Utilities shall also provide an estimate of the penetration expected for each energy efficiency measure.

5. NYSERDA and the Utilities shall each 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 programs they administer. NYSERDA and the Utilities shall track their expenditures on evaluation-related market research in such a manner that they may be reported and scrutinized in the future. Within sixty days of the issuance of this order, the Director of the Office of Energy Efficiency and Environment will provide to these entities guidance on any specific periodic reporting requirements applicable to these specific programs.

6. In the supplemental revision to the SBC Operating Plan, and in the implementation plans, NYSERDA and the Utilities are directed to also include the following information related to their outreach and education (O&E)/marketing programs and, if necessary, to submit new budgets:

- (a) specific budget amounts for each individual element of the O&E/marketing budget for each year of the program;
- (b) a list and description of the O&E/marketing vehicles to be used;

- (c) an explanation of the target audiences for each program component;
- (d) a timeline for the development, implementation and evaluation of the O&E/marketing efforts;
- (e) how the O&E/Marketing programs relate to the entity's general and other O&E/Marketing programs; and
- (f) the efforts that will be undertaken to minimize any overlap and/or customer confusion that may result from O&E/marketing activities in the same or adjacent market areas.

7. Annual reports of each calendar year's O&E/marketing program achievements, as available to date, and updated plans for the upcoming calendar year, shall be submitted each year with the third quarter status report so that they can be reviewed prior to the end of each program year.

8. All O&E/marketing plan components of the compliance filings will be subject to review and certification by the Director of the Office of Consumer Services that they conform to the requirements of this order.

9. 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 3 of Appendix 1 of this order.

10. The technical manual entitled "New York Standard Approach for Estimating Energy Savings from Energy Efficiency Measures in Multifamily Programs" dated July 9, 2009 shall be used to standardize energy savings estimation approaches, calculations, and assumptions at the measure level for estimating energy savings from the programs approved in this order. A copy of the manual is available for download on the Internet at the following link:

[http://www.dps.state.ny.us/Phase2\\_Case\\_07-M-0548.htm](http://www.dps.state.ny.us/Phase2_Case_07-M-0548.htm)

11. NYSERDA is directed to continue to completion efforts underway to conform to the evaluation and reporting protocols we have caused to be issued, including the use of the Technical Manual methodologies we have approved, for comparable measures delivered through NYSERDA programs. NYSERDA must keep the Director of the Office of Energy Efficiency and the Environment regularly informed on its progress in affecting this transition.

12. Shareholder incentives and net lost revenues are not addressed by this order. Any utility having a rate plan that provides for either shall consult with Staff and then propose whatever adjustments are necessary in such provisions, if any, due to changes in circumstances arising from this order.

13. The budgets approved in this order are to be funded by an SBC; they do not represent traditional rate allowances in the sense that any under-spending shall result in the utility drawing down less money from the SBC collections. Efficiencies in that regard are for the benefit of ratepayers, not shareholders. NYSERDA and the Utilities shall manage the SBC funds prudently.

14. The Secretary in her sole discretion may extend the deadlines set forth herein.

15. These proceedings are continued.

By the Commission,

(SIGNED)

JACLYN A. BRILLING  
Secretary

**Table 1****Approved Multifamily Electric Program Costs & Savings Targets**

	<u>2009</u>	<u>2010</u>	<u>2011</u>	<u>Total</u> <u>2009-2011</u>	<u>% of</u> <u>Budget</u>
<b><u>NYSERDA</u></b>					
<i>Multifamily Performance Program</i>					
Cumulative Savings (MWhs)	1,570	3,139	3,139	7,848	
Program & Administration Costs	\$137,193	\$548,770	\$548,770	\$1,234,733	95%
<u>Eval./M &amp; V Costs</u>	<u>\$7,221</u>	<u>\$28,883</u>	<u>\$28,883</u>	<u>\$64,986</u>	5%
Total Costs	\$144,413	\$577,653	\$577,653	\$1,299,719	
<i>Low-Income Multifamily Performance Program</i>					
Cumulative Savings (MWhs)	1,508	3,015	3,015	7,538	
Program & Administration Costs	\$205,951	\$823,802	\$823,802	\$1,853,555	95%
<u>Eval./M &amp; V Costs</u>	<u>\$10,840</u>	<u>\$43,358</u>	<u>\$43,358</u>	<u>\$97,556</u>	5%
Total Costs	\$216,790	\$867,160	\$867,160	\$1,951,110	
<b><u>Niagara Mohawk</u></b>					
<i>Energy Wise Program</i>					
Cumulative Savings (MWhs)	317	1,303	1,303	2,923	
Program & Administration Costs	\$241,145	\$964,579	\$964,579	\$2,170,302	95%
<u>Eval./M &amp; V Costs</u>	<u>\$12,692</u>	<u>\$50,767</u>	<u>\$50,767</u>	<u>\$114,226</u>	5%
Total Costs	\$253,837	\$1,015,346	\$1,015,346	\$2,284,529	
<b><u>Con Edison</u></b>					
<i>Refrigerator Replacement Plus Program</i>					
Cumulative Savings (MWhs)	771	9,215	14,190	24,176	
Program & Administration Costs	\$1,751,160	\$7,004,639	\$7,004,639	\$15,760,437	95%
<u>Eval./M &amp; V Costs</u>	<u>\$92,166</u>	<u>\$368,665</u>	<u>\$368,665</u>	<u>\$829,497</u>	5%
Total Costs	\$1,843,326	\$7,373,304	\$7,373,304	\$16,589,934	

**Table 1 (Continued)****Approved Multifamily Electric Program Costs & Savings Targets**

	<u>2009</u>	<u>2010</u>	<u>2011</u>	<u>Total</u> <u>2009-2011</u>	<u>% of</u> <u>Budget</u>
<b><u>NYSEG</u></b>					
<i>Residential/Non-Residential Multifamily Program</i>					
Cumulative Savings (MWhs)	0	872	872	1,744	
Program & Administration Costs	\$0	\$695,803	\$695,803	\$1,391,606	95%
<u>Eval./M &amp; V Costs</u>	<u>\$0</u>	<u>\$36,621</u>	<u>\$36,621</u>	<u>\$73,242</u>	5%
Total Costs	\$0	\$732,424	\$732,424	\$1,464,848	
<b><u>RG&amp;E</u></b>					
<i>Residential/Non-Residential Multifamily Program</i>					
Cumulative Savings (MWhs)	0	805	805	1,610	
Program & Administration Costs	\$0	\$615,952	\$615,952	\$1,231,903	95%
<u>Eval./M &amp; V Costs</u>	<u>\$0</u>	<u>\$32,419</u>	<u>\$32,419</u>	<u>\$64,837</u>	5%
Total Costs	\$0	\$648,370	\$648,370	\$1,296,740	



**Table 2****Approved Multifamily Gas Program Costs & Savings Targets**

	<u>2009</u>	<u>2010</u>	<u>2011</u>	<u>Total</u> <u>2009-2011</u>	<u>% of</u> <u>Budget</u>
<b><u>NYSERDA</u></b>					
<i>Multifamily Performance Program</i>					
Cumulative Savings (Dekatherms)	76,608	153,217	153,216	383,041	
Program & Administration Costs	\$1,948,449	\$7,793,794	\$7,793,794	\$17,536,037	95%
<u>Eval./M &amp; V Costs</u>	<u>\$102,550</u>	<u>\$410,200</u>	<u>\$410,200</u>	<u>\$922,949</u>	5%
Total Costs	\$2,050,999	\$8,203,994	\$8,203,994	\$18,458,987	
<i>Low-Income Multifamily Performance Program</i>					
Cumulative Savings (Dekatherms)	12,267	24,535	24,535	61,337	
Program & Administration Costs	\$487,112	\$1,948,448	\$1,948,448	\$4,384,008	95%
<u>Eval./M &amp; V Costs</u>	<u>\$25,637</u>	<u>\$102,550</u>	<u>\$102,550</u>	<u>\$230,737</u>	5%
Total Costs	\$512,750	\$2,050,998	\$2,050,998	\$4,614,746	
<b><u>Niagara Mohawk</u></b>					
<i>Energy Wise Program</i>					
Cumulative Savings (Dekatherms)	7,718	15,876	15,876	39,470	
Program & Administration Costs	\$256,957	\$1,027,828	\$1,027,828	\$2,312,613	95%
<u>Eval./M &amp; V Costs</u>	<u>\$13,524</u>	<u>\$54,096</u>	<u>\$54,096</u>	<u>\$121,716</u>	5%
Total Costs	\$270,481	\$1,081,924	\$1,081,924	\$2,434,329	
<b><u>KEDNY</u></b>					
<i>Multifamily Program</i>					
Cumulative Savings (Dekatherms)	14,400	54,000	54,000	122,400	
Program & Administration Costs	\$479,724	\$1,918,896	\$1,918,896	\$4,317,515	95%
<u>Eval./M &amp; V Costs</u>	<u>\$25,249</u>	<u>\$100,995</u>	<u>\$100,995</u>	<u>\$227,238</u>	5%
Total Costs	\$504,973	\$2,019,890	\$2,019,890	\$4,544,753	

**Table 2 (Continued)****Approved Multifamily Gas Program Costs & Savings Targets****KEDLI***Multifamily Program*

Cumulative Savings (Dekatherms)	3,375	11,250	11,250	25,875	
Program & Administration Costs	\$103,517	\$414,068	\$414,068	\$931,653	95%
<u>Eval./M &amp; V Costs</u>	<u>\$5,448</u>	<u>\$21,793</u>	<u>\$21,793</u>	<u>\$49,034</u>	5%
Total Costs	\$108,965	\$435,861	\$435,861	\$980,687	

**Con Edison***Multifamily Low-Income Program*

Cumulative Savings (Dekatherms)	3,722	11,925	15,702	31,349	
Program & Administration Costs	\$281,960	\$1,127,840	\$1,127,840	\$2,537,640	95%
<u>Eval./M &amp; V Costs</u>	<u>\$14,840</u>	<u>\$59,360</u>	<u>\$59,360</u>	<u>\$133,560</u>	5%
Total Costs	\$296,800	\$1,187,200	\$1,187,200	\$2,671,200	

*Refrigerator Replacement Plus Program*

Cumulative Savings (Dekatherms)	4,666	113,545	132,210	250,421	
Program & Administration Costs	\$1,421,760	\$5,687,041	\$5,687,041	\$12,795,842	95%
<u>Eval./M &amp; V Costs</u>	<u>\$74,829</u>	<u>\$299,318</u>	<u>\$299,318</u>	<u>\$673,465</u>	5%
Total Costs	\$1,496,590	\$5,986,359	\$5,986,359	\$13,469,308	

**Table 3****EEPS Electric Collections to be Transferred from Utilities to NYSERDA**

<b><u>NYSERDA Electric Programs</u></b>	<b><u>2009</u></b>	<b><u>2010</u></b>	<b><u>2011</u></b>	<b>Total</b> <b><u>2009-2011</u></b>	
<i>Multifamily Performance Program</i>	\$144,413	\$577,653	\$577,653	\$1,299,719	
<i>Low-Income Multifamily Performance Program</i>	<u>\$216,790</u>	<u>\$867,160</u>	<u>\$867,160</u>	<u>\$1,951,110</u>	
TOTAL ELECTRIC	\$361,203	\$1,444,813	\$1,444,813	\$3,250,829	
	<b>October 1,</b>			<b>Total</b>	<b>Percentage</b>
<b><u>Transfers to NYSERDA</u></b>	<b><u>2009</u></b>	<b><u>2010</u></b>	<b><u>2011</u></b>	<b><u>2009-2011</u></b>	<b><u>of Total</u></b>
Central Hudson	\$21,069	\$84,276	\$84,276	\$189,621	5.833%
Con Edison	\$132,892	\$531,570	\$531,570	\$1,196,032	36.792%
NYSEG	\$50,889	\$203,557	\$203,557	\$458,003	14.089%
Niagara Mohawk	\$116,213	\$464,850	\$464,850	\$1,045,913	32.174%
O&R	\$15,583	\$62,333	\$62,333	\$140,250	4.314%
<u>RG&amp;E</u>	<u>\$24,557</u>	<u>\$98,226</u>	<u>\$98,226</u>	<u>\$221,010</u>	<u>6.799%</u>
TOTAL ELECTRIC	\$361,203	\$1,444,813	\$1,444,813	\$3,250,829	100.000%

**Table 4****EEPS Gas Collections to be Transferred from Utilities to NYSERDA**

<b><u>NYSERDA Gas Programs</u></b>	<b><u>2009</u></b>	<b><u>2010</u></b>	<b><u>2011</u></b>	<b><u>Total 2009-2011</u></b>	
<i>Multifamily Performance Program</i>	\$2,050,999	\$8,203,994	\$8,203,994	\$18,458,987	
<i><u>Low-Income Multifamily Performance Program</u></i>	<u>\$512,750</u>	<u>\$2,050,998</u>	<u>\$2,050,998</u>	<u>\$4,614,746</u>	
<b>TOTAL GAS</b>	<b>\$2,563,748</b>	<b>\$10,254,992</b>	<b>\$10,254,992</b>	<b>\$23,073,732</b>	
				<b><u>Total</u></b>	<b><u>Percentage</u></b>
<b><u>Transfers to NYSERDA</u></b>	<b><u>2009</u></b>	<b><u>2010</u></b>	<b><u>2011</u></b>	<b><u>2009-2011</u></b>	<b><u>of Total</u></b>
Central Hudson	\$46,949	\$187,798	\$187,798	\$422,545	1.831%
Con Edison	\$652,356	\$2,609,424	\$2,609,424	\$5,871,204	25.445%
Corning	\$22,695	\$90,782	\$90,782	\$204,259	0.885%
NYSEG	\$159,295	\$637,179	\$637,179	\$1,433,652	6.213%
Niagara Mohawk	\$299,226	\$1,196,902	\$1,196,902	\$2,693,030	11.671%
O&R	\$71,305	\$285,220	\$285,220	\$641,744	2.781%
RG&E	\$152,763	\$611,053	\$611,053	\$1,374,869	5.959%
KEDLI	\$352,720	\$1,410,880	\$1,410,880	\$3,174,481	13.758%
KEDNY	\$525,271	\$2,101,086	\$2,101,086	\$4,727,443	20.488%
NFG	\$265,324	\$1,061,296	\$1,061,296	\$2,387,917	10.349%
<u>St. Lawrence</u>	<u>\$15,843</u>	<u>\$63,372</u>	<u>\$63,372</u>	<u>\$142,588</u>	<u>0.618%</u>
<b>TOTAL GAS</b>	<b>\$2,563,748</b>	<b>\$10,254,992</b>	<b>\$10,254,992</b>	<b>\$23,073,732</b>	<b>100.000%</b>

**Technical Manual Comment Summary**

<b>No.</b>	<b>Party</b>	<b>Document</b>	<b>Pg</b>	<b>Measure</b>	<b>Comment</b>	<b>ACTION</b>		
						<b>None</b>	<b>CHG</b>	<b>EAG</b>
1	E cubed	NYSDPS 07M0548 Joint Supporters Comments Tech Manual.pdf	1	All	NTG ratio default too general			x
2	NYSEG/ RG&E	07-M-0548 NYSEG RG&E comments on 6-16-09 EEPS manual 6-29-09.pdf	2	Boiler and boiler reset controls	Missing from manual		x	
3			2	CFL	Change op hours from 3.2 to 2.3			x
4			2	CFL fixture	Change op hours from 2.5 to 2.3			x
5			2		Coincidence factor should be < CFL since op hours are also less			x
6			2	Refrigerators	HVAC interaction factors missing		x	
7			2		Therm interactions missing		x	
8			3	Clothes washer	Change water savings from 7397 to 9511			x
9			3		Change therm savings from 2.2 to 8.78			x
10			3		No interactions with water heater measures	x		
11			3	Shell insulation	MF low rise, no AC, kW savings negative, should be zero		x	
12			3		MF HR, negative savings for adding insulation		x	
13			3	High performance windows	Show savings by orientation			x
14			3		Calculate impacts on daylighting	x		
15			4	Air leakage sealing	Different kW savings for AC and heat pump			x
16			4		AC kW savings in Binghamton are 0		x	
17			4	Central AC	Use SEER instead of EER bar			x
18			4		CLH average and Old reversed			x
19			4		Peak EER for AC and HP too high (12.72, 12.32)			x
20			4	Heat pump	HSPF of 8.8 too high			x
21			4		No winter peak savings	x		
22			4		HLH for avg > old in Syracuse and Massena			x
23			4	GSHP	Use SEER instead of EER bar			x
24			5		Estimate HLH separately for heat pump and supplemental heat			x
25			5	Setback	Use SEER instead of EER bar			x
26			5		Also apply to boilers		x	
27			5		Setback assumption inconsistency between manual and appendix		x	
28			5	Charge correction	No savings for heat pumps in heating mode			x
29			5		Use SEER instead of EER bar			x

No.	Party	Document	Pg	Measure	Comment	ACTION			
						None	CHG	EAG	
30	NYSEG/ RG&E	07-M-0548 NYSEG RG&E comments on 6-16-09 EEPS manual 6-29-09.pdf	5	Gas furnaces	Use same duct efficiency for pre/post case		x		
31			5		NJ HLH are 30% lower than manual after DD adjustment			x	
32			5		RGE UEC of 800 therms per house; savings are lower than manual			x	
33			5		No electric penalty from draft fan			x	
34			5		Footnote needs to state what setback assumptions are		x		
35			6	Duct insulation and sealing		Include heat pumps in measure description		x	
36			6			Include RLF explanation and value		x	
37			6			Include average seasonal efficiency		x	
38			6			20% baseline same as ACCA recommendation for total leakage			x
39			6			Clarify baseline for duct insulation		x	
40			6			HLH issues described above			x
41			6			Include footnote on ducts in unconditioned plenums		x	
42			6			Use leakage rates from testing rather than standard assumptions			x
43			6	Water heating		No calculation for indirect fired water heaters			x
44			6			Water use per person values dated			x
45			6			No draft fan penalty			x
46			7	Room AC		No seasonal average efficiency provided		x	
47			7	HPWH		Weighted participation only done for this measure			x
48			7			Page break, formatting		x	
49			7	Solar water heater		Water use per person values dated			x
50			7			Mention effect of altitude and azimuth on ESF		x	
51			7	Low flow showerheads		Inconsistency between text and table on showerhead flow rates (2.2 vs. 2.5 gpm)		x	
52			7			Interactions between showerhead and water heater measures	x		
53			7			Inconsistency between water inlet temperatures with water heater measure section			x
54			7	Faucet aerators		Inconsistency between water inlet temperatures with water heater measure section			x
55						Change table 4 from .944 MMBtu and 277 kWh to .566 MMBtu and 166 kWh		x	

No.	Party	Document	Pg	Measure	Comment	ACTION			
						None	CHG	EAG	
56	NYSEG/ RG&E	07-M-0548 NYSEG RG&E comments on 6-16-09 EEPS manual 6-29-09.pdf			Carry corrected savings over to lifetime savings table		x		
57					Separate kitchen and lavatory gpm			x	
58						Interactions between aerators and water heater measures	x		
59			8	Tank Wraps		Include water heaters with foam insulation 1 - 3 in. thick			x
60						Missing UA table		x	
61			8	PV		No adjustments for tilt and azimuth		x	
62						Use PV Watts to calculate site output individually			x
63						Peak kW factors high relative to other sources			x
64			13	Small retail		Include economizers in base case			x
65			13	Full service restaurant		Inconsistency between thermostat setpoints vs. March 25 manual		x	
66			CHG&E	CHG&E_90 Day Tech Manual Comments_FINA L.pdf	1	Add freezers, dehumidifiers, ECM, refrigerator, freezer and room AC recycling			
67	1	Add additional cities for CLH and HLH calcs						x	
68	2	Aggregate into downstate, midstate and upstate for values with small differences							x
69	3	CFL			Revise op hours from 3.2 to 2.3				x
70	3				Express op hours as hours per year rather than hours per day				x
71	3				Change terminology from bulb to lamp			x	
72	4	Refrigerator recycling			Add section			x	
73	5	Custom measures			Add "large scale data analysis" to custom measure section				x
74	Niagara Mohawk, KEDNY, KEDLI, ConEd, O&R	Comments on NY Saving Manual for 6 29 09 filing (2) DIJ.pdf	1	HVAC	Average savings over building types			x	
75			2	Chillers	Add more building types			x	
76			2	Cool roofs	Include large office and MFHR			x	
77			3	Interaction factors	Consolidate factors			x	
78			3	All	Existing tracking system uses different calculations; costly to change			x	
79			3	HPWH	Changes to tracking system not justified due to small savings			x	
80			3	All	Combine coincidence and diversity factors			x	

<u>No.</u>	<u>Party</u>	<u>Document</u>	<u>Pg</u>	<u>Measure</u>	<u>Comment</u>	<u>ACTION</u>		
						<u>None</u>	<u>CHG</u>	<u>EAG</u>
81	Niagara Mohawk, KEDNY, KEDLI, ConEd, O&R	Comments on NY Saving Manual for 6 29 09 filing (2) DJJ.pdf	3	Heating and cooling	Use EFLH instead of HLH, CLH and RLF			x
82			4	Boilers, reset controls, instantaneous water heaters	Sections missing		x	
83			4	NTG	Provide NTGR by program rather than default 0.9			x
84			5	Refrigerators	Use same load factor for standard and efficient models			x
85			5		Combine unit savings and interactive effects into single number			x
86			5		Base savings on average refrigerator, not combinations of sizes and features			x
87			5		Update table to reflect 20% savings for Energy Star		x	
88			6	Shell insulation, leakage sealing, duct sealing, windows	Vintage and HVAC type not tracked			x
89			6		Combine diversity and coincidence factors			x
90			6	Windows	Eliminate measure - not cost effective	x		
91			6	AC and heat pump	Use EFLH instead of HLH, CLH and RLF			x
92			6	Heat pumps	Use HSPF instead of COP bar			x
93			6	GSHP	Oil or gas heat as the baseline			x
94			6		Use EFLH instead of HLH, CLH and RLF			x
95			7		Use HSPF instead of COP bar			x
96			7		Use SEER instead of EER bar			x
97			7	setback thermostat	Use 6.8% as ESF for gas heat			x
98			7		Site specific vs. deemed calculation			x
99			7	Refrigerant charge correction	show reference for 10% savings		x	
100			7	ROOM AC	EFLH are about 200			x
101			8	HPWH	Calculation too complex given savings			x
102			8	Solar water heater	DF and CF missing		x	
103			8		ESF provided only for family of 4		x	
104			8		Aux pump kWh missing			x
105			8		Add space heating and pool heating			x
106			8		Change from ESF to "displaced system energy savings factor"			x



No.	Party	Document	Pg	Measure	Comment	ACTION		
						None	CHG	EAG
107	Niagara Mohawk, KEDNY, KEDLI, ConEd, O&R	Comments on NY Saving Manual for 6 29 09 filing (2) DJJ.pdf	7	Showerheads and faucet aerators	Average vs site specific data			x
108			8		Don't want to collect and track all parameters			x
109			9		inconsistency with entering water temperatures in water heater section			x
110			9	Tank Wraps	Small savings, calculations too complex			x
111	NYSERDA	NYSERDA Comments Technical Manual.pdf	2	All	Differences between manual calcs and NYSEDA deemed savings database			x
112					Additional programming needed to track additional data			x
113					Not all measures in NYSEDA database covered			x
114					Exclude manual from custom or site specific calculations			x
115	NAESCO	Case 07-M-0548, NAESCO Comments on Tech Manual.pdf		CFL	Average op hours vs site specific hours			x
116				All	Applicability of .9 NTGR			x
117	Global Energy Partners (for ConEd, O&R, Niagara Mohawk KEDNY, KEDLI)	NYS EE Meas Eval Final Report.pdf	3-2	CFL	Change equivalency factor from 2.4 to 2.53			x
118			3-2		Change operating hours from 3.2/day to 2.2/day			x
119			3-2		Change EUL from a function of measure delivery (coupon, direct install, markdown) to a function of on/off cycles per DEER			x
120			3-2		Add data for exterior applications			x
121			3-3	CFL fixture	Change equivalency factor from 2.4 to 2.53			x
122			3-3		Change operating hours from 2.5/day to 3.2/day			x
123			3-3		Change EUL from 7 yr to 16 yr			x
124			3-3		Restrict to interior applications		x	
125			3-4	HPWH	Extend to MF applications		x	
126			3-4		Change approach to UEC and EF, with baseline UEC provided for each IOU			x
127			3-5	Central AC	Use SEER instead of EER bar			x
128			3-5		Review CLH for inconsistencies across vintages			x
129			3-5		Add cities			x
130			3-5		Drop CF and RLF			x
131			3-5		Change CLH to EFLH			x
132			3-5		Provide EFLH averages by IOU territory			x

<u>No.</u>	<u>Party</u>	<u>Document</u>	<u>Pg</u>	<u>Measure</u>	<u>Comment</u>	<u>ACTION</u>		
						<u>None</u>	<u>CHG</u>	<u>EAG</u>
133	Global Energy Partners (for ConEd, O&R, Niagara Mohawk KEDNY, KEDLI)	NYS EE Meas Eval Final Report.pdf	3-6	Central heat pumps	Use HSPF instead of COP bar			x
134			3-6		Use EFLH instead of HLH			x
135			3-7		Drop RLF			x
136			3-7		Add cities			x
137			3-8	Refrigerant charge correction	Use two tier approach for savings (7% for < 20% adjustment, 16% for > 20% adjustment) instead of 10% average savings			x
138			3-8		Add cities			x
139			4-2	Clothes washer	Document washer size assumptions		x	
140			4-2		Include dryer energy savings			x
141			4-2		Update to current Energy Star values		x	
142			4-2		Drop Energy Star and replace with CEE Tier 1			x
143			4-2		State fuel mix assumptions		x	
144			4-2		Provide early retirement baseline		x	
145			4-3		Coincidence factor seems high			x
146			4-3		Make EUL in section and opening table consistent		x	
147			4-3	Gas furnaces	Provide separate heating capacities for existing and new furnaces			x
148			4-4		Provide baseline furnace efficiency		x	
149			4-4		Provide standard assumption for duct efficiency		x	
150			4-4		Drop RLF			x
151			4-4		Change from HLH to EFLH			x
152			4-5		Add cities in downstate area, combine cities in midstate area			x
153	4-6	setback thermostat	Combine duct efficiency, furnace efficiency, RLF into HLH			x		
154	4-6		Base on annual heating load and ESF			x		
155	4-6		Volatility in savings estimates across states			x		
156	4-6		Market penetration and NTG assumption			x		
157	4-7	Duct insulation and sealing	Make a custom measure			x		
158	4-7		Identify baseline and measure duct efficiencies			x		

No.	Party	Document	Pg	Measure	Comment	ACTION			
						None	CHG	EAG	
159	Global Energy Partners (for ConEd, O&R, Niagara Mohawk KEDNY, KEDLI)	NYS EE Meas Eval Final Report.pdf	4-7		Add discussion on duct location inside or outside thermal envelope		x		
160			4-7		Combine duct efficiency into HLH			x	
161			4-7		Incorporate leakage assumptions into vintage			x	
162			4-7		Combine RLF into HLH			x	
163			4-7		Add cities in downstate area, combine cities in midstate area			x	
164			4-8	Boilers		Combine distribution efficiency into HLH			x
165			4-8			Drop RLF			x
166			4-8			Specify baseline efficiency		x	
167			4-9			Combine climate, building type, vintage into revised HLH and efficiency constant			x
168			4-9			Combine cities into down, mid and upstate			x
169			4-9			Combine baseline efficiency, distribution efficiency and HLH into new vs. retrofit categories			x
170			4-9			Add efficiency options (high, very high)			x
171			4-9			Add efficiency data for steam and HW boilers		x	
172			4-10	Boiler reset controls		Drop RLF			x
173			4-10			Combine climate, building type, vintage into revised HLH and efficiency constant			x
174			4-10	Instantaneous water heater		Change from instantaneous to tankless		x	
175			4-10			Actual water flow not known			x
176			4-10			Baseline water heater efficiency not known			x
177			4-10			Tie water flow to water heater size			x
178			4-10			Develop size tiers			x
179	4-10			State baseline efficiency		x			
180	4-10			State compliance efficiency		x			
181	4-11	Solar water heater		Move to custom measure			x		
182	4-11			ESF for various types of systems (direct, indirect, batch)			x		
183	4-12	Low flow showerheads		High market penetration			x		
184	4-12			Correct inconsistency in gpm		x			

<u>No.</u>	<u>Party</u>	<u>Document</u>	<u>Pg</u>	<u>Measure</u>	<u>Comment</u>	<u>ACTION</u>		
						<u>None</u>	<u>CHG</u>	<u>EAG</u>
185	Global Energy Partners (for ConEd, O&R, Niagara Mohawk KEDNY, KEDLI)	NYS EE Meas Eval Final Report.pdf	4-12		Correct inconsistency in inlet water temperature			x
186			4-12		Express as a function of baseline consumption			x
187			4-13	Faucet aerators	Market acceptance and penetration			x
188			4-13		Correct inconsistency in inlet water temperature			x
189			4-13		Express as a function of baseline consumption			x
190			4-14	Tank Wraps	Inconsistencies between NY and CT results			x
191			6-1	Additional measures	Add appliance recycling		x	
192			6-1		Add pipe insulation			x
193			NYISO	NYISO Comments Technical Manual		Applicability of Technical Manual	Need market baseline studies, billing analysis and interval metering.	x