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Report

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June 1, 2007

Hon. Jaclyn A. Brilling
Secretary
New York State Public Service Commission
Three Empire State Plaza
Albany, New York 12223-1350

Re: Proceeding on Motion of the Commission as to the Rates, Charges, Rules and Regulations of Consolidated Edison Company of New York, Inc. For Gas Service

Dear Secretary:

As directed by the Commission's May 16, 2007 "Order Establishing Gas Efficiency Program for 2007-08 Heating Season" ("Order") in the above-referenced proceeding, enclosed for filing on behalf of the New York State Energy Research and Development Authority ("NYSERDA") please find a proposed Program Plan ("Plan") describing the implementation of a gas efficiency program in the service territory of the Consolidated Edison Company of New York, Inc. ("Con Edison"). The Plan has been designed to address the specific directions as well as the objectives expressed by the Order.

In several respects, the Plan proceeds upon assumptions with regard to matters not expressly addressed by the Order. Specifically, while the Order directs that NYSERDA is to administer the program and to perform the associated measurement and verification activities, the Order does not address NYSERDA's entitlement to administrative fees. On the assumption that the Commission intended that NYSERDA's "standard" fees should apply, the Plan and the budgets included therein reflect administration (7%) and evaluation (2%) fees, as well as 1% which represents an estimation of the allocable portion of the cost recovery fee imposed by Public Authorities Law § 2975.

The Plan and budgets also reflect an assumption that the fees are to be funded out of, rather than in addition to, the overall $14 million budget provided by the Order. If the Commission approves NYSERDA's entitlement to these fees, and advises that the fees should be funded as

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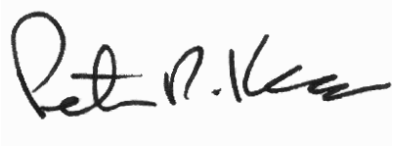
additional to the $14 million program budget, NYSERDA will revise the program budgets accordingly.

Section 7.0 of the Plan describes the measurement, verification and evaluation plan ("MV&E Plan") that NYSERDA proposes to employ upon commencement of the program. Given that the Order entitles Con Edison to request recovery of lost revenues attributable to the program, the MV&E Plan was designed, in part, to collect data and information sufficient to support such a request. Based on the testimony filed in Con Edison's pending gas rates case (06-G-1332), it appears that a revenue decoupling or similar rate adjustment mechanism may become operable as early as October 1, 2007. If a rate adjustment mechanism becomes operable and such mechanism obviates, in whole or in part, the need to measure lost revenues, NYSERDA may file a revised MV&E Plan reflecting appropriate changes. If no such mechanism becomes operable, or if the mechanism excludes service classes or sectors within which there is significant program participation, NYSERDA anticipates that the 2% assumed MV&E fee will be exhausted well before the end of rate year one.

Finally, in light of the Commission's direction that implementation of the program is to begin "immediately," we respectfully request that the Commission employ expedited procedures in its consideration of the Plan. Copies of this letter and the Plan will be provided to all active parties to Cases 03-G-1671 and 06-G-1332, by electronic mail.

Respectfully submitted,



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Natural Gas Efficiency Program
for the Service Territory of
Consolidated Edison Company of New York, Inc.

Pursuant to Case 03-G-1671

Program Plan

Prepared by:

For the New York State Department of Public Service
June 1, 2007

Natural Gas Efficiency Program

1.0 Introduction

On March 26, 2007, the New York State Public Service Commission (Commission) issued a *Notice Seeking Comment on Gas Efficiency Program for Consolidated Edison Company of New York, Inc.* (the Company) *for 2007-08 Heating Season* (Notice), in Case 03-G-1671[1]. The Notice sought comments regarding the establishment of a "transitional" gas efficiency program (Gas Program). The Notice, and the accompanying Staff Position Paper, expressed the concern that, given the timeframe of the pending gas rates case proceeding (Case 06-G-1332)[2] and the September 30, 2007 termination of the pilot program currently underway pursuant to the *Order Approving Gas Efficiency Plan*, ("Pilot Order") issued on June 13, 2005 in Case 03-G-1671, a gap in program coverage might exist for the 2007-08 heating season.

On May 16, 2007, the Commission issued its *Order Establishing Gas Efficiency Program for 2007-2008 Heating Season* (Order). The Order directs the Company and the New York State Energy Research and Development Authority (NYSERDA) to immediately begin to implement a gas efficiency program in the Company's service territory for the 2007-2008 heating season. The Commission's Order includes a requirement that NYSERDA file a plan for the gas program on June 1, 2007.

This gas efficiency program plan (Plan) outlines a seamless, uninterrupted, and expanded Gas Program that will prevent any gap in program coverage. Pursuant to the Order, the Gas Program will be funded at $14 million; eligible customers will include all firm gas customers (including transportation customers). The Gas Program continues the allocation of program benefits of 50% to low-income residential customers, 25% to other residential customers, and 25% to commercial and industrial customers as was directed by the Pilot Order. The current Pilot Gas Program (Pilot), administered by NYSERDA pursuant to the Commission's Pilot Order, will form the basis of the Gas Program through September 30, 2008, with such modifications as are described below.

2.0 Summary of Natural Gas Efficiency Program

NYSERDA will administer the Gas Program so as to ensure that there will be no gap in program availability between the Pilot and the Gas Program through September 30, 2008. NYSERDA will work with New York State Department of Public Service (DPS) Staff, the Company, the City of New York (City), the County of Westchester (County), and other interested parties to implement the Gas Program, which will commence upon

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[1] Case 03-G-1671. Proceeding on Motion of the Commission as to the Rates, Charges, Rules and Regulations of Consolidated Edison Company of New York, Inc. for Gas Service.

[2] Case 06-G-1332. Proceeding on Motion of the Commission as to the Rates, Charges, Rules and Regulations of Consolidated Edison Company of New York, Inc. for Gas Service.

approval of the Plan. The Plan describes the program offerings, funding allocations, and evaluation protocols to be employed by measure and by customer type.

The Gas Program will be administered in a collaborative manner, so as to incorporate the market knowledge, customer relationships and experience available from interested parties. NYSERDA will work with interested parties throughout the course of the Gas Program to share information and expertise regarding implementation strategies and opportunities that will maximize the Gas Program's effectiveness. The Gas Program will continue any outreach NYSERDA currently performs and will incorporate any newly available customer information and requests from the Company (e.g. requests for interconnection, new customer referrals, expanded load, etc.), as well as customer information that may be provided by the City, County, or other interested parties to increase the Gas Program's effectiveness.

3.0 PROGRAM FUNDING

The Order provides funding for the Gas Program in the amount of $14 million. Subject to approval by the Commission, NYSERDA will be entitled to 7% of program funding for administration and 2% for measurement, verification and evaluation (MV&E), as well as any allocable portion of the cost recovery fee imposed by Public Authorities Law § 2975. The original funding allocations by sector established pursuant to the Pilot Order will continue for the additional $14 million funding level (low-income - 50%; residential - 25%; commercial/industrial - 25%). Efforts undertaken in the implementation of the Plan will seek to ensure that all geographic areas of the Company's service territory will receive an equitable share of the Gas Program funding. The proposed budget allocations for the Gas Program are depicted in Table 3.1.

Table 3.1. Con Edison Gas Program Funding

Sector	Percentage Allocation	Dollar Value
Low-Income	50%	$6.3M
Residential Energy Efficiency	25%	$3.15M
Commercial/Industrial Energy Efficiency	25%	$3.15M
Total Program Incentive	**100%**	**$12.6M**
Administration & Evaluation, NYS Cost Recovery Fee		*$1.4M*
Total Rate Plan Funding		**$14.0M**

NYSERDA and the Company will enter into a funding agreement to effectuate NYSERDA's administration of the Gas Program. Such funding agreement will provide for payments to NYSERDA amounting to $14 million in total on a quarterly, graduated payment schedule. Interest earned on Gas Program funds while they are in NYSERDA's

possession will be added to Gas Program funding. To the extent that any unencumbered funds remain at the end of the 2007-2008 Gas Program, they will be returned to the Company, unless otherwise provided for under the Company's pending gas rates case, 06-G-1332, or a collaborative established thereunder.

4.0 Gas Program Portfolio Goals

The Gas Program Plan's portfolio of programs and individual initiatives will ensure that: (1) natural gas customers in the Company's service territory continue to receive needed and enhanced value-added gas services; (2) the environmental quality of New York's air, land, and water resources is maintained or enhanced; (3) system-wide gas reliability is strengthened; and (4) work is integrated with electric efficiency programs and federal energy efficiency programs. Building on the progress and success of the **New York Energy $mart,**[SM] Power Saving Partners, and Pilot programs, the Gas Program will provide an expanded portfolio of programs that address the public policy goals of the Gas Program. In sum, those goals are primarily to effectuate energy efficiency improvements and to address the specific gas energy efficiency needs of lower income consumers:

> Energy Efficiency. The Gas Program will improve the efficient use of gas through the use of comprehensive, effective incentive and financing packages. This includes providing technical and financial assistance to both residential and commercial customers. The Gas Program will maximize current resource acquisition while continuing development of a viable energy services industry and supporting the transformation of markets to higher levels of energy efficiency.
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> Low-Income. The low-income residential programs are designed to reduce the energy burden of low-income consumers by improving energy efficiency and providing energy management that improves the market position and energy self-sufficiency of low-income consumers. These programs will build on the existing infrastructure of other publicly-sponsored programs by coordinating the delivery of programs and services that reduce gas use and costs to low-income households in the Con Edison service territory.

The Gas Program timeline, listing milestones through September 30, 2008, is depicted on Table 4.1, and includes information for both the ongoing Pilot Program and anticipated dates and milestones associated with the Gas Program for 2007-2008.

Table 4.1. Pilot and 2007-08 Gas Program Timeline

Date	
June 1, 2007	NYSERDA files Gas Plan for 2007-2008 Gas Program Approval triggers allowable start of 2007-08 Gas Program
August 27, 2007	NYSERDA to file Quarterly Report for Pilot Program
September 27, 2008	Pilot Program under Case 03-G-1671 ends
November 30, 2007	NYSERDA to file final Quarterly Report for Pilot Program NYSERDA to file first Quarterly Report for 2007-08 Program, if warranted
January 30, 2008[a]	NYSERDA to file Comprehensive Report Evaluating Pilot Program
February 29, 2008	NYSERDA to file second Quarterly Report for 2007-08 Pilot Program
May 30, 2008	NYSERDA to file third Quarterly Report for 2007-08 Pilot Program
August 29, 2008	NYSERDA to file fourth Quarterly Report for 2007-08 Program
September 30, 2008	2007-08 Heating Season Gas Program Ends
March 31, 2009[b]	NYSERDA to file Comprehensive Report Evaluating 2007-08 Program

[a] NYSERDA will file the Comprehensive Report earlier if evaluation results show that a significant amount of measures have been implemented under the Pilot at an earlier date

[b] NYSERDA will file the Comprehensive Report earlier if evaluation results show that a significant amount of measures have been implemented.

5.0 Low-Income and Residential Program Portfolio

NYSERDA will leverage its existing **New York Energy $mart℠** programs and incorporate lessons learned from the three-year natural gas Pilot Program to deliver technical and implementation assistance to eligible New York City and Westchester County participants. The residential and low-income components[3] of the Gas Program will assist Con Edison natural gas customers in managing their natural gas utility costs and in operating their buildings and appliances more efficiently. Eligible firm gas customers will be provided with simple, one-stop assistance for energy efficiency opportunities. Consistent with NYSERDA's delivery of electric energy efficiency programs, to the extent warranted, gas efficiency programs may be adjusted during the course of the program to realize maximum gas savings potential for participants.

The residential and low-income gas efficiency program will be iplementated through NYSERDA's Residential Efficiency and Affordability Program (REAP), using delivery mechanisms that include financial incentives to building owners for the installation of gas efficiency measures. Multifamily buildings (5 units or more) are served through NYSERDA's newly-launched Multifamily Building Performance Program (MFBP) that targets new and existing, low-income and market-rate buildings. Buildings with one-to-four family units are served through the New York ENERGY STAR® Labeled Homes

[3] For purposes of participation in NYSERDA's low-income programs, eligibility has generally been determined by the following: 25% of the tenants of an eligible building are at either 60% (EmPower Program) or 80% (Assisted Home Performance Program) of the State's Median Income (SMI), or less, depending on the low-income program. However, the 80% or less than State Median Income methodology is biased in the Downstate market due to higher cost of living in these areas. To address this, as of June 30, 2007, NYSERDA will change the threshold to use either 80% of SMI levels, or 80% of Area Median Income levels. Whichever figure is higher will be used to determine the guidelines in that County.

Program (NYESLH) and the Home Performance with ENERGY STAR® Program (HPWES), both of which include a low income component, as well as the EmPower New York℠ Program that serves low-income households.

In serving multifamily buildings, two types of projects are eligible for participation in the Gas Program: (1) projects eligible for SBC programs and, (2) projects of Con Edison firm gas customers who do not pay into the SBC fund. Buildings eligible through the SBC are served by taking a whole-building, fuel-neutral approach. For non-SBC projects, prescriptive incentives for pre-qualified, energy-efficient measures, as well as custom incentives for site-specific measures, are provided to help accelerate the availability of such efficiency measures into the marketplace. For non-SBC projects, NYSERDA will coordinate with the New York Power Authority (NYPA), as appropriate, to market and serve these customers as comprehensively as possible.

The Small Homes component of the program serves one-to-four family buildings and will focus on new and existing residences. Incentives will be provided for the installation of higher-efficiency gas equipment than that specified in existing programs in both market rate residential buildings and low-income homes. The EmPower New York℠ Program will provide gas efficiency measures to low-income Con Edison natural gas customers at no cost to the income eligible households. The program has developed an effective referral process with community-based organizations and the New York State Department for the Aging.

The Residential and Low-Income Program Portfolio budget by program is depicted in Table 5.1. During implementation, funds may be reallocated within the specific residential programs or within the specific low-income programs to meet market demand, thereby maximizing gas efficiency achievements.

Table 5.1. Residential and Low-Income Budget by Program

Multi-Family Building Program	Gas Efficiency Performance Program	Home Performance with ENERGY STAR®	New York ENERGY STAR® Homes	EmPower NY	Marketing	**Total**
$1,450,000	$3,500,000	$1,500,000	$1,500,000	$1,000,000	$500,000	**$9,450,000**

Multi-Family Building Performance

SBC Eligible Firm Gas Customers: The existing building portion of the Program provides technical assistance, financial packaging and incentive funding to owners of existing multi-family buildings. Technical assistance is provided in the form of benchmarking the energy efficiency of buildings and development of an energy reduction plan, wherein engineers assess the condition of the building and make recommendations for installation of energy saving measures. Costs of installation are estimated, and compared to an estimated energy performance target; buildings must strive for a 20% minimum performance improvement.

Multi-Family Building Program: Implementation of all of the existing multi-family programs will be handled through the Multifamily Building Performance Program that recently launched Statewide. This strategy provides a single point of entry for program participation. The Gas Program will fund building-specific incentives, energy assessments, financial packaging, construction monitoring, commissioning, and data collection for Gas Program buildings. Incentives, provided in four payments, will be higher for owners of low-income buildings.

The new construction portion of the multi-family Program also provides technical assistance and incentive funding to owners and developers of new multi-family buildings. Technical assistance is provided in the form of modeling the new building and comparing the model to a building that meets the energy efficiency requirements of ASHRAE 2004.1 Appendix G, which dictates that the new building design must exceed the energy efficiency requirements of the ASHRAE-compliant building by at least 20% through better design and installation of new technologies, and high efficiency measures.

Gas Efficiency Performance Program for Non-SBC Firm Gas Customers: The Gas Program will be open to owners of multi-family buildings who are Con Edison firm gas customers but do not contribute to the SBC, or have conducted whole-building energy efficiency improvements and require additional gas efficiency measures. NYSERDA will coordinate with NYPA to target these customers and address both gas and electric opportunities comprehensively, whenever possible. Owners will follow a process similar to the Enhanced Commercial Industrial Performance Program, whereby a simple application form will be completed by owners and will require an energy assessment of the proposed gas efficiency improvement. The information will be reviewed and an incentive amount associated with the gas savings of the measure(s). In addition, these projects will be eligible for custom incentives for gas efficiency measures not offered prescriptively.

One-to-Four Family Homes

NYSERDA offers two programs designed to transform the way energy efficiency services are delivered in the one-to-four family residential markets, by addressing both new home construction and existing homes. The New York ENERGY STAR Homes (NYESH) Program has resulted in nearly 9,000 efficient homes built to date, with 160 of these located within the Con Edison service territory). Through the Home Performance with ENERGY STAR (HPwES) Program, over 15,000 projects have been completed on existing homes, with more than 165 in the Con Edison service territory. Both programs provide enhanced consumer incentives for eligible low-to-moderate income families

Home Performance with ENERGY STAR. The HPwES is a market transformation program that is designed to change not only the way home improvement contractors deliver their services, but also the types of services that customers demand. Emphasis is on the development of a robust energy efficiency service infrastructure, balanced with mechanisms for ensuring consumer awareness and demand. Contractor training, certification, accreditation, and robust quality assurance procedures ensure that high-

quality services are delivered. The HPwES Program's activities in this area have increased steadily of late, with a 250% increase in completions in the past 10 months compared with the initial phase of the program. NYSERDA is committed to further establishing these programs to capture as much potential as possible.

With regard to the HPwES Program, in addition to identifying and recruiting qualified contractors, it is necessary to establishing safeguards to ensure consumer protection and the responsible use of ratepayer funds. NYSERDA will address this issue using a two-pronged approach:

- *For contractors new to the HPwES Program,* an accelerated one-on-one training and enhanced technical assistance effort will be employed. This, along with assurances of an expedited certification and accreditation schedule from the Building Performance Institute[4] (BPI), will significantly reduce the time for preparing contractors for full participation in the Program. An enhanced Quality Assurance process will quickly and effectively identify areas of improvement.

- *For contractors currently participating in the HPwES Program,* enhanced administrative and technical assistance will be made available to increase the completion rate of successful projects for these participating contractors.

New York ENERGY STAR Homes. The NYESH Program is an enhanced version of an Environment Protection Agency (EPA) sponsored initiative. Through the Program, NYSERDA works with residential home builders and Home Energy Rating System (HERS) Raters to encourage the construction of homes that are tested to be 30% more energy efficient than homes built to current energy codes. The NYESH Program offers a $500 enhanced incentive to low-income eligible new homebuyers. The NYESH also has a minimum installed electric savings requirement (currently 600 kWh) and these savings can be accomplished through the installation of ENERGY STAR appliances and lighting. Under the program, certain appliances (gas heating equipment, domestic hot water tanks, clothes dryers, stoves, etc.) are also combustion safety-tested to ensure safety.

NYSERDA also plans to leverage its solid relationship with the New York State Builders Association to increase awareness and acceptance of the Program. Based on experience, NYSERDA is confident that the program message of providing safe, durable and energy-efficient new homes will resonate with homebuyers. Along with the efforts to develop an infrastructure of qualified builders and contractors, the effort to increase public awareness of and demand for the product and services provided by participating NYESH builders and HPwES contactors is essential. NYSERDA will couple the infrastructure development efforts with a two-pronged approach designed to create consumer demand:

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[4] The Building Performance Institute (BPI) supports the development of a professional building performance industry through individual and organizational credentialing and a vigorous quality assurance program. Additional information on BPI is available at www.bpi.org.

- *Enhanced program equipment* In an effort to achieve increased gas savings, NYSERDA will enhance the minimum efficiency requirements for equipment installed through the Program, and will focus on emerging and renewable technologies such as photovoltaics, geothermal heating and cooling systems. As identified by home show feedback and call center information, these particular technologies resonate well in the downstate markets.

- *Enhanced Program incentives.* In addition to an aggressive and targeted marketing campaign, NYSERDA will restructure the incentives schedule for builders, contractors and consumers in the ConEd service territory. Specifically, NYSERDA will offer higher project incentives to builders and contractors with enhanced consumer incentives (i.e. increased interest rate buy-down through the Energy $mart Loan Fund, decreased interest rates for ENERGY STAR Loans, and increased subsidies for income-eligible families). NYSERDA is also considering creative ways to address the contractor and builder markets, while simultaneously analyzing the messages and financial benefits that will drive consumers to request services. A comprehensive, aggressive and well thought out process will be used to achieve the Gas Program goals.

EmPower New York[SM]

EmPower New York[SM] provides energy efficiency services to low-income households with income below 60% of State median income, at no cost to the eligible participant. Using SBC funds, the focus is on electrical efficiency, including high-efficiency lighting and ENERGY STAR® refrigerators. However, under the Gas Program, using a comprehensive energy assessment, the installation of non-electric home performance measures, including blower door- assisted air sealing, attic and side-wall insulation, and heating system service and replacement are eligible. The goal is to target measures that can reduce household energy costs by an average of $300 per year, in approximately 370 households. The average cost for the non-electric component is estimated at $2,700.

Gas efficiency measures will be selected in priority order based on the cost-effectiveness of the measures in accordance with the comprehensive energy assessment. Electric reduction measures will be provided to these eligible households through SBC funding. In addition, services will be coordinated with the Weatherization Assistance Program to ensure comprehensive services, whenever feasible.

On-site energy-use management education will be conducted in the home by a member of the energy efficiency services contractor team at the time services are delivered. The cost associated with this service is built into the per unit budget. All participants in the Gas Program will be invited to energy use management and financial management workshops conducted under the EmPower New York Program in neighborhoods throughout the service territory. There is no cost to the Gas Program for these workshops, as the effort is funded by the SBC and capacity exists to include additional households.

Residential and Low-Income Marketing

All marketing efforts of the Gas Program components will be coordinated with staff at Con Edison and the DPS, as well as NYPA, when appropriate. Gas Program funds earmarked for marketing will be used to promote special incentives for gas efficiency in the residential market. Marketing efforts for the one-to-four family building sector will focus on multi-media advertising, supplemented with outreach activities delivered through the **New York Energy $mart**[SM] Communities Program. Marketing to the multi-family sector will be largely direct in nature, including direct mail, trade publications, print advertisements and articles, as well as direct outreach. Marketing activities will target both consumers, contractors and builders and may include the following tools and efforts:

Articles and print advertisements in trade journals targeted to the Westchester and New York City audience;

- Print advertisements in local newspapers;
- Brochures and flyers at community events;
- Information on the GetEnergySmart.org and nyserda.org web sites;
- Press releases and case study stories provided to local press outlets;
- Direct outreach through trade organizations and direct mail;
- Contacts with and marketing through local community organizations;
- Cooperative advertising with local home performance contractors;
- Television advertising and other video-based venues.

6.0 COMMERCIAL AND INDUSTRIAL PROGRAM PORTFOLIO

NYSERDA will leverage the effectiveness of the existing **New York Energy $mart℠**, Power Saving Partners, and Con Edison Gas Pilot Programs to deliver technical and implementation assistance to eligible New York City and Westchester County participants. The commercial and industrial component of the Gas Program will help Con Edison gas customers manage their gas costs and operate more productively and efficiently. Using existing **New York Energy $mart℠** and Power Saving Partners programs provides eligible customers a simple, one-stop assistance for energy efficiency opportunities. Marketing and outreach will be targeted geographically, and by sector, to specifically address eligible segments of gas customers.

For SBC customers, gas efficiency improvements, as under the Pilot Program, will be integrated with current **New York Energy $mart℠** and Power Saving Partners electricity-focused programs. As an objective, fuel-neutral third party, NYSERDA will offer reasonable and consistent incentives for gas saving opportunities. Offered programs will be continuously monitored and adjusted, when warranted, to achieve maximum gas savings.

For non-SBC customers, gas efficiency services will be similar to those under the integrated programs, but will focus only on gas efficiency measures. When possible, NYSERDA will coordinate with NYPA to deliver comprehensive electric and gas services and to perform outreach.

NYSERDA will use existing program mechanisms to deliver and implement the Gas Program, allowing NYSERDA to build on existing program success, market awareness and branding. Gas efficiency will be further integrated into an expanded portfolio of program services. The existing program portfolio will be refined to ease customer access and streamline applications. NYSERDA staff, retained contractors, project facilitators, and others will assist with information gathering and technical assistance, financing gas-efficiency measures; and installing gas-efficient systems and equipment.

NYSERDA will continue to upgrade its website to streamline the application process, maximize participation and improve customer and contractor satisfaction. Since the implementation of the Pilot Program, NYSERDA has increased its commercial and industrial program staff to further enable effective program expansion, and increased its staff presence to better serve the Con Edison territory.

The Commercial and Industrial Program Portfolio budget by program is depicted in Table 6.1. During implementation, funds may be reallocated among commercial and industrial programs to meet market demand, thereby maximizing gas efficiency achievements.

Table 6.1. Commercial and Industrial Gas Program Budget by Program

Technical Assistance Programs	High Performance Buildings	Enhanced C/I Performance Pro m	Loan Fund	Marketing	**Total**
$150,000	$750,000	$1,900,000	$150,000	$200,000	**$3,150,000**

Technical Assistance

FlexTech Program. FlexTech provides objective, cost-shared analysis of cost-effective efficiency improvements, energy-related process improvements, waste minimization opportunities, and improved productivity. Each project receives a customized cost proposal from one of NYSERDA's 22 pre-qualified FlexTech consultants providing services in Con Edison territory, or through a customer-selected service provider (with NYSERDA providing 50% cost share for approved studies). Projects can include feasibility, energy operations management, retro-commissioning, and energy procurement investigations. In addition, the evaluation of load shaping, aggregation, and other gas cost savings opportunities will be eligible. Building on the success of the Pilot Program, the FlexTech program will be objective, flexible in scope to meet customer needs, and will emphasize gas efficiency analysis when integrated in whole-building studies.

Energy Audit Program. The Energy Audit Program provides walkthrough energy audits to small businesses and other facilities to help them make informed energy decisions and implement energy-efficiency strategies. Audits provide a standardized approach to help identify economically viable improvements that yield energy savings. The Energy Audit Program has been augmented to capture and define gas savings potential for eligible customers, and specific gas efficiency measures have been added to the Energy Audit Program.

Implementation Assistance

Three existing **New York Energy $mart**[SM] implementation assistance programs will be used to provide incentives for the installation of gas efficiency improvements. The new High Performance Building Program, Enhanced Commercial\Industrial Performance Program (ECIPP) and the Loan Fund provide cost-effective assistance.

High Performance Building Program. The High Performance Building Program is a new addition to the natural gas program. This commercial new construction program provides technical and financial assistance to improve the energy efficiency of new buildings and substantial renovation projects. Each project is eligible for pre-qualified, custom-measure and whole-building incentives, with incentives for both electric and gas measures in the Con Edison service area of up to $1,000,000 per building. Assistance in achieving U.S.

Green Buildings Council's LEED[5] certification, and building commissioning are also available. All technical services are provided on a cost-shared basis with the customer. Customers may submit applications for up to three separate building projects.

Gas incentives will be made available to all building types and eligible customers. Under the whole-building approach, the interactive effects of improvements on both the heating and cooling energy use will be analyzed, and incentives provided based on the overall energy improvement of the design. This integrated approach promotes sustainable design, leverages maximum potential from ally service providers and eligible participant sites, and optimizes gas and electricity benefits.

Enhanced Commercial Industrial Performance Program. The ECIPP consists of three tiers: prescriptive incentives for pre-qualified measures, custom path-technical study, and performance-based incentives for energy efficiency (formerly the Commercial/Industrial Performance Program).

Tier I: Prescriptive Incentives for Pre-qualified. Tier I provides prescriptive incentives for the installation of energy-efficient equipment which will help accelerate the incorporation of such energy efficiency measures into the marketplace. This tier provides eligible customers with an opportunity to obtain flat-rate incentives for purchase and installation of pre-qualified gas efficiency equipment. These pre-qualified measures have prescribed efficiency levels that are specified for natural gas equipment.

Tier II: Custom Path-Technical Study. The custom path incentives are based on energy savings demonstrated in an approved engineering study. Studies completed under the Energy Audit Program, FlexTech or Technical Assistance Program may be submitted as the required Technical Study, or a customer may complete their own study. Tier II offers performance-based financial incentives to develop verifiable annual energy savings for efficiency improvements and gas combined heat and power (CHP) upgrades.

Tier III: Performance-based Incentives for Energy Efficiency. Tier III offers performance-based financial incentives to energy service companies (ESCOs) that develop verifiable annual energy savings for efficiency improvements and gas combined heat and power (CHP) upgrades. The program offers a standard performance contract between the ESCO and NYSERDA. The amount of incentive passed through to the rate-paying customer is negotiable between the ESCO and the customer, but full incentive disclosure to the customer is required.

Loan Fund. The Loan Fund Program provides interest rate reductions on loans for energy-efficiency improvements, gas CHP upgrades, and renewable technologies (i.e. solar thermal technologies). Customers choose from a network of participating lenders including banks, credit unions, and community development financial institutions. Through participating lenders, the program offers loans at 6.5 percent below the interest rate normally available. The maximum loan is $1,000,000 with a ten-year term. Natural

[5] The Leadership in Energy and Environmental Design (LEED) Green Building Rating System™ is the nationally accepted benchmark for design, construction, and operation of high-performance green buildings. Additional information on LEED is available at www.usgbc.org.

gas efficiency process improvements will be supported by an appropriate engineering analysis. The Loan Fund has a list of pre-qualified measures. Measures approved for incentives through other NYSERDA programs will be eligible for financing through the Loan Fund.

Commercial and Industrial Marketing

The Gas Program will target marketing efforts to appropriate organizations of customer and vendor groups to inform them of program value and opportunities. For example, these organizations include the New York City Economic Development Corporation, New York Energy Consumers Council, The Business Council of Westchester, Consumer Power Advocates, the New York State Restaurant Association, and others. In an effort to leverage existing outreach mechanisms and word-of-mouth endorsement by customer and vendor organizations, it also includes coordination with regional business development organizations and Con Edison's Economic Development and Gas Marketing efforts. The marketing will be developed in a manner that integrates Gas Program incentives with **New York Energy $mart**[SM] and Power Saving Partner electricity incentives.

Joint marketing materials, presentations, and web-site connections will be pursued with Con Edison. Close coordination with Con Edison's account executives and contractors, New York City, Westchester County, trade groups, and other key organizations and associations to leverage existing and new business contacts will be used to develop program participation. Public relations and press releases will highlight specific customer success stories and savings opportunities. Informational meetings and educational seminars will be held, with particular emphasis to be placed on dissemination of information electronically.

Through the **New York Energy $mart**[SM] and Power Savings Partners programs, NYSERDA has initiated sector-based approaches to target resources and address unique customer needs. NYSERDA will use these efforts to locate specific customers that can benefit from gas efficiency measures. Examples include restaurants and hotels which use commercial kitchen equipment for which there are more efficient products available, many K-12 schools which have higher gas-to-electric use ratios than typical commercial and institutional buildings, and commercial laundries which can deploy more efficient processes and systems for drying and hot water generation and use.

7.0 EVALUATION AND REPORTING

NYSERDA will implement a Measurement, Verification and Evaluation (MV&E) Action Plan to fully inform the Commission, the DPS, Con Edison, and other interested parties on its progress in meeting the goals of the Gas Program. Efforts will be consistent with the evaluation model and framework used for the **New York Energy $mart**[SM] program and will use the existing measurement and verification contractor to ensure that data are collected, analyzed and reported consistent with and comparable to existing program protocols and metrics.

The overall goal of M&V is to verify and quantify estimates for the gross savings impacts caused by Gas Program operations. M&V accounts for operational changes, and other adjustments that can increase or decrease long-term savings. The analysis consists of checking the accuracy of the savings calculations as well as checking adherence to program rules and industry standard savings calculation methods. Projects are further reviewed through site visits designed to verify equipment installation and operation and may involve judicious short term monitoring or spot measurement of key performance parameters. Specifically, site visits collect operating hour information, verify efficiency levels, and collect manufacturer and model information for use in calculating energy savings. Refer to Appendix A for more detail on the specific approach per measure category.

In order to support Con Edison lost revenue calculations, M&V will be conducted on 100% of large savings projects within each program offering with a lower bound to be determined. The lower bound will depend upon the level of effort needed to meet lost revenue requirements and the other evaluation needs specified by the Department of Public Service.

M&V is one of a number of endeavors conducted to fully evaluate a program. Process evaluation is being done for the existing SBC program, and since the same processes will be used, it will not be included in the Gas Program evaluation efforts. The plan will also cover market characterization, market assessment and causality (MCAC) work, within budget constraints:

- market characterization describes energy markets and provides the background information required to define delivery concepts, target markets, and assess potential for different types of programs;

market assessment tracks changes in markets with a specific focus on market indicators that are likely to be impacted by programs; and

- causality, or attribution, identifies the impacts of the program interventions beyond what would have happened without the program.

This component will be further developed to meet the needs of the DPS and the funds available. A cost-effectiveness analysis, using the Total Resource Cost test[6], will be conducted on the Gas Program at the conclusion of the Program. Measure life and incremental cost data will be extracted from the Deemed Savings Database for use in the analysis.

Measurement and Verification Protocols

NYSERDA's programs employ pre-qualified measures that are eligible for set incentives, along with custom measures determined through site-specific studies. Pre-qualified measures are used in programs that encourage an upgrade in efficiency upon failure of the original equipment. The customer is assumed to be in the market for a replacement and NYSERDA's incentive encourages the customer to install a model of higher efficiency. Therefore, the savings are calculated using the standard efficiency equipment as the baseline, rather than the existing equipment.

NYSERDA has developed the Deemed Savings Database (DSD) which contains New York State-specific energy savings, baseline information, measure life, operating hours and incremental cost data for each pre-qualified measure. This method allows NYSERDA to claim typical savings for installations of widely-accepted technologies. For programs such as Tier I of the Enhanced Commercial/Industrial Performance Program, the customer applies to NYSERDA for an incentive for pre-qualified measures only after the measure has been purchased and installed. This precludes the possibility of a pre-installation site visit.

Invoices submitted by the customer are accepted as evidence of installation for purposes of paying an incentive. Any information collected during a site visit that differs from information in the Deemed Savings Database or the customer application is used to recalculate the savings impact.

Other NYSERDA programs complete comprehensive technical assistance studies that produce recommendations for implementation of specific energy-saving measures. Energy saving estimates for these projects is tailored to the site's operation and existing equipment. Given the nature of these projects, where the deliverable is a study and the measures recommended are often complex and expensive, implementation by the facility may lag for several months or years. For these projects, M&V will commence 6 months after the study is complete to allow time for installation. The baseline determined in the study will be accepted for use in the M&V analysis.

M&V procedures will vary in detail and rigor depending on the measures installed. The procedures will depend upon the predictability of equipment operation, the availability of evaluation data and the accuracy and precision levels achieved by the chosen M&V approach. M&V procedures may be classified according to three distinct approaches that represent decreasing levels of detail and rigor.

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[6] The Total Resource Cost test determines the cost-effectiveness of a program by summing all the customer and program costs and comparing them to the benefits accrued.

- *Expanded M&V.* Savings are estimated using a higher level of rigor than in the deemed savings or standard M&V. Expanded M&V approaches include conducting billing analysis, or computer simulation. Any billing data collected will be with the express permission of the customer using a standard billing release form.
- *Standard M&V.* Savings values are based on engineering calculations using site-specific measurements, equipment characteristics, and operating schedules developed for particular applications.
- *Deemed savings.* Savings values from the NYSERDA DSD for measures particular to the project are verified and adjusted if necessary. DSD savings values are deemed based on engineering calculations using typical equipment characteristics and operating schedules for particular applications, without on-site testing or metering. Savings estimates are based on industry-accepted performance standards.

NYSERDA's contractor, Nexant, will apply one or a combination of the M&V procedures detailed above to all measure categories. The order of detail and rigor will be based on the evaluation data available and the relative size and uncertainty of each project's savings impacts. The M&V approach will be similar for all customer classes (residential, commercial or industrial). M&V procedures for each measure category are described in Appendix A.

Reporting

As depicted in Table 4.1, NYSERDA will file regularly-scheduled reports to the PSC and will include, for each gas efficiency program, the following information: the number of participating customers; gas savings; bill savings; environmental and societal benefits; the amount and percentage of incentives provided; the amount expended for the Rate Year, the total amount expended to date, and descriptions of the outreach and marketing programs conducted. The last quarterly report will contain a comparison of costs and benefits using the Total Resource Cost test and a comparison of the progress of the Gas Program with the progress of programs in other locales, as necessary.

APPENDIX A.

Measurement and verification procedures for each measure category currently being promoted in the Gas Program are provided below. A single site visit will be conducted following completion of a project. Procedures will be developed to evaluate any new measure categories added to the gas efficiency programs. While we recognize that these measures will experience a natural degradation in savings over time, this is not expected to occur within the reporting timeline, as a result the savings reported will be first year MMBtu savings.

Furnaces, Boilers, Infrared Unit Heater Replacements and Tune-ups

Description of measures:

Replace old boilers and heating furnaces (condensing and non-condensing) with high efficiency units (efficiency exceeds minimum required by code). Replace old unit heaters with gas infrared heaters instead of a standard gas unit heater. Tune-up old furnace/boiler by reducing excess air, cleaning boiler tubes, recalibrating controls etc.

M&V Procedure: Nexant will employ the expanded M&V approach for furnace, boiler replacements and infrared heater installation measures. Billing data will be downloaded from the Con-Edison website and analyzed for the baseline and retrofit scenarios. A regression analysis will be used if the heating degree day difference for the post installation period compared to the pre installation period is significant (greater than 5%) and the reported savings for the project are greater than 10-20% of the baseline energy consumption. The independent variable is outside air temperature. The results are statistically valid if the calculated energy savings for each heating month are greater than the 90% confidence prediction interval obtained from the regression analysis. If billing data is not available or the level of savings does not support a billing analysis approach, Nexant will follow the standard M&V approach. The order of operations is listed below:

1. Obtain baseline and retrofit period utility billing data.
2. Obtain site specific weather data.
3. Record equipment nameplate information including model number, serial number, rated capacity and efficiency.
4. Obtain baseline equipment information including model number, rated capacity and efficiency. If baseline equipment model numbers and efficiencies are not available, use baseline efficiency reported in the NYSERDA DSD.
5. Record operating schedules, temperature set-points, and other information relative to operations during baseline and retrofit period. Annual effective full load hours are calculated and used in determining savings.
6. Conduct billing analysis (Expanded M&V) or calculate energy savings based on simple engineering calculations using known rated capacities and efficiency of baseline and retrofit equipment (Standard M&V).

Nexant will employ the deemed savings approach to evaluate the furnace tune-up measures. Nexant reported savings will be based on savings values reported in the NYSERDA DSD, adjusted for actual operating conditions.

Vent Dampers

Description of measures:

Install vent dampers to shut off vent flue pipe intakes to prevent heat loss when burner is not operating.

M&V Procedure: Nexant will employ the deemed savings M&V approach for the vent damper measures. Nexant will follow the order of operations listed below:

1. Record boiler/furnace rating and efficiency. If the baseline boiler/furnace efficiency is not available, Nexant will use the baseline efficiency reported in the NYSERDA DSD.
2. Record equipment nameplate information including model number, type and installed locations of the vent dampers.
3. Record operating schedules and temperature set-points.

Nexant reported savings will be based on deemed savings values reported in the NYSERDA DSD adjusted for actual operating conditions.

Pipe and Duct Insulation

Description of measures:

Insulate un-insulated steam or hot water pipes in boiler rooms and unoccupied spaces. Insulate air supply and return air ducts in conditioned spaces and provide aerosol based duct sealing.

M&V Procedure: Nexant will employ the standard M&V approach for all measures in this category. The order of operations is listed below:

1. Record the insulation type, insulation thickness, and pipe diameter/duct dimensions.
2. Based on inspector's judgment, verify the installed total length of insulation is reasonable given the building's attributes. No adjustments will be made to account for valves, T's, and other pipe fittings.
3. Record operating hours for the heating system, operating temperature for the steam/water/air, steam pressure (if applicable), and boiler efficiencies (if applicable).
4. Calculate energy savings using engineering calculations and/or engineering heat loss calculations software (e.g. EPlus).

Programmable Thermostats

Description of measures:

Install programmable thermostats to enable temperature setback during unoccupied periods.

M&V Procedure: Nexant will employ the deemed savings approach for evaluating this measure. Billing analysis may be used if project does not include inter-dependent measures.

The order of operations is listed below:

1. Record the degree of temperature set-back and duration of the unoccupied period.
2. Record the capacity and efficiency of the boilers.
3. Record operating schedules.
4. Calculate the baseline energy consumption and energy savings (Nexant may utilize billing data if available to establish the baseline energy consumption).

The NYSERDA Deemed Saving Database reports 10% energy savings for programmable thermostat installations. Nexant reported savings will be based on the savings reported in the NYSERDA DSD adjusted for actual operating conditions.

Demand Control Ventilation

Description of measures:

The Demand Control Ventilation system modulates the outside air flow rate when there are significant variations in the CO_2 levels which typically coincide with occupied periods.

M&V Procedure: Nexant will employ the deemed savings approach for evaluating this measure. The order of operations is listed below:

1. Record CO_2 levels and set-points from CO_2 sensors during occupied periods (if accessible).
2. Record modulation settings from the building energy management system. Obtain trend data if available. The EMS will be set-up to trend the CO_2 levels for the operating hours of the facility, Nexant may also trend the outside air handler damper positions on a few units to observe the variations if possible. If trend data is unavailable, the DSD value will be accepted.
3. Adjust savings reported in the NYSERDA DSD for actual operating conditions. If justified, simulation modeling may be used to determine actual savings.

Oxygen Trim Control, Blow-down Heat Recovery, Boiler Stack Economizer

Description of measures:

Automatically remove excess air from boilers to improve efficiency. Recover heat from the blow-down stream to preheat boiler makeup water. Provide blow-down controls for increased savings. Recover boiler stack gas heat to preheat boiler make-up water.

M&V Procedure: Nexant will employ the deemed savings M&V approach for evaluating all measures in this category. Billing analysis may be used if measures are not inter-dependent and billing data is available. The order of operations is listed below.

1. Verify installation of excess air control equipment, installation of heat exchangers to recover heat from the blow down stream or flue stack.
2. Record boiler nameplate data including rated capacity, efficiency (if available), operating schedules, steam pressure, make-up water temperature, rate of steam production (pounds per hour).

Nexant reported savings will be based on deemed savings values reported in the NYSERDA DSD adjusted for boiler input capacity. NYSERDA DSD reports 20% excess air savings for Oxygen Trim Controls, 90% heat recovery for blow down heat recovery equipment installations and 50% heat recovery for boiler stack economizers. In addition to adjusting savings for actual boiler input capacities, Nexant will also make adjustments for operating hours, steam production rates and boiler and heat exchanger efficiencies, if necessary.

Hot Water Heaters, Tank Insulation and Circulation Controls

Description of measures:

Replace old water heaters with new high efficiency units (efficiency exceeds minimum required by codes and standards). Insulate domestic hot water tanks to prevent heat loss. Reduce standby losses by installing time clocks on pumps and reducing set-points during off-peak periods.

M&V Procedure: Nexant will employ the standard M&V approach for the hot water heater replacement measures. If billing data is available and the site employs separate meters for the domestic water heating system, Nexant will employ the expanded M&V approach. Regression analysis will be used if necessary. For tank insulation and circulation controls measures, Nexant will employ the standard M&V approach. The order of operations is listed below:

1. Record the type of insulation, insulation thickness, and pipe diameter/duct dimensions.
2. Based on inspector's judgment, verify the installed total length of insulation is reasonable given the building's attributes.
3. For circulation controls measures record the time-clock settings on hot water pumps and changes in hot water temperature set-points and operating hours.

4. Calculate energy savings using simple engineering calculations and/or engineering heat loss calculations software (e.g. EPlus).

Window Insulation Panels

Description of measures:

Window insulation panels are mounted in existing high thermal conductance windows to prevent air infiltration and reduce heat loss/gain from windows.

M&V Procedure: Nexant will employ the expanded M&V approach for window insulation panel measures. Billing data will be downloaded from the Con-Edison website and analyzed for the pre and post installation scenarios. Regression analysis will be used if necessary. If billing data is not available or the level of savings does not support a billing analysis approach, Nexant will follow the standard M&V approach. The order of operations is listed below:

1. Obtain pre and post installation period utility billing data.
2. Obtain site specific weather data.
3. Record window(s) dimensions, total quantity of windows, type (single/double pane, thermal break, frame type, insulation, orientation etc.).
4. Record heating equipment information including model number, rated capacity and efficiency.
5. Conduct billing analysis (Expanded M&V) or calculate energy savings based on heat loss calculations as a function of window quantity, size, U-values, temperature differential, window orientation and heating system efficiency (Standard M&V).

ENERGY STAR Windows, Doors, Skylights and Roofing

Description of measures:

Install ENERGY STAR rated high efficiency windows (0.35 U-factor). Install or retrofit ENERGY STAR rated doors, skylights, and/or roofing.

M&V Procedure: Nexant will employ the expanded M&V approach for the ENERGY STAR façade measures (windows, doors, skylights and roofing). Billing data will be downloaded from the Con-Edison website and analyzed for the pre and post installation scenarios. Regression analysis will be used if necessary. If billing data is not available or the level of savings does not support a billing analysis approach, Nexant will follow the standard M&V approach. The order of operations is listed below:

1. Obtain pre and post installation period utility billing data.
2. Obtain site specific weather data.
3. Record window(s), doors, skylights, and/or roof dimensions, total quantities, type and thermal properties (e.g., U factor or R value).
4. Record heating equipment information including model number, rated capacity and efficiency.

5. Conduct billing analysis (Expanded M&V) or calculate energy savings based on heat loss calculations as a function of window quantity, size, U-values, temperature differential, façade measure equipment, orientation and heating system efficiency (Standard M&V).

Weather-stripping

Description of measures:

Use weather-stripping to seal air leaks around movable joints, such as windows or doors. M&V Procedure: Nexant will follow the standard M&V approach. The order of operations is listed below:

1. Obtain site specific weather data.
2. Record weather-stripping dimensions (length and width).
3. Record heating equipment information including model number, rated capacity and efficiency.
4. Record room air temperature set-points and ambient conditions for the heating season.
5. Calculate energy savings based on heat loss calculations as a function of weather-stripping dimensions, temperature differential, heating system efficiency, and heating degree days.

Low-flow, Pre-rinse Spray Valves

Description of measures:

Install low-flow pre-rinse spray valves in dish washing applications to save energy by reducing the hot water used in kitchen rinsing applications, thereby reducing hot water heater energy consumption.

M&V Procedure: Nexant will employ the standard M&V approach for evaluating all measures in this category. Billing analysis may be used if the project does not include inter-dependent measures. The order of operation is described below:

1. Record flow rates for the installed spray valves. Obtain flow rates for baseline (replaced) spray valves. If baseline flow rates are not available, use baseline flow rates reported in the NYSERDA DSD.
2. Record heating equipment capacities, efficiencies (if available) and operating schedules.
3. Calculate baseline heating energy consumption.
4. Calculate energy savings using simple engineering calculations based on flow rates, heating energy consumption and equipment efficiencies.

Fryers, Broilers, Steamers, Griddles and Ovens

Description of measures:

Improve burner efficiency and heat transfer using advanced technologies such as infrared and powered burners, convection etc. Install cross-flow convection ovens. Replace conventional steamers with connectionless steamers.

M&V Procedure: Nexant will employ the standard M&V approach for all the measures in this category. The order of operations is listed below:

1. Obtain baseline equipment information including size, type and efficiency. If baseline information is not available, use values reported in the NYSERDA DSD.
2. Record retrofit equipment nameplate information including size, type, efficiency and duty cycle.
3. Record operating schedules and load profiles.
4. Calculate energy savings using engineering calculations based on equipment sizes, efficiencies, duty cycles, and annual operating hours.

Commercial Steam Trap Replacement

Description of measures:

Test, maintain and replace leaking steam traps.

M&V procedure: Nexant will employ the expanded M&V approach for the steam traps replacement measures if billing data is available and impact is greater than 10% of the baseline energy consumption. Regression analysis will be used if necessary. Otherwise, Nexant will follow the deemed savings approach. The order of operations is listed below:

1. Record boiler nameplate information including model number, serial number, rated heating capacity, and efficiency.
2. Verify replacement of steam straps and record the new steam strap nameplate information such as manufacturer's name and model number.
3. Calculate energy savings based on deemed savings values reported in the NYSERDA DSD adjusted for actual operating conditions.