

**New York Energy Smart<sup>SM</sup> Products (NYESP) Program  
Program Logic Model Report**

Final Report

Prepared for

**The New York State  
Energy Research and Development Authority**

Prepared by

**GDS Associates, Inc.**

**NYSERDA**

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**NEW YORK STATE ENERGY RESEARCH AND DEVELOPMENT AUTHORITY**  
**NEW YORK ENERGY \$MART<sup>SM</sup> PRODUCTS (NYESP) PROGRAM**  
**PROGRAM LOGIC MODEL REPORT**  
**(FINAL – FEBRUARY 8, 2010)**

**INTRODUCTION**

This document provides:

1. A table showing a list of documents relating to NYSERDA’s **New York Energy \$mart<sup>SM</sup> Products (NYESP) Program**<sup>1</sup> used to provide insight during development of this program logic model report;
2. A high level summary of the context of the markets within which this program operates, the other NYSERDA programs it works with to accomplish the **New York Energy \$mart<sup>SM</sup>** goals, other potential complementary and/or competing programs, and a brief program description. Available market characterization information is also presented in this section including a description of baseline conditions, technical energy and demand potential reductions, and the portion of that potential that the program is expected to achieve;
3. A high level summary of the enhanced funding that NYESP receives due to the CFL Expansion Program as a “Fast Track” program, a separate component within the **New York Energy \$mart<sup>SM</sup> Products Program**, through the Energy Efficiency Portfolio Standard (EEPS);
4. Key program-specific elements, including the ultimate goals of the program, market barriers, targeted market actors, program activities, inputs, anticipated outputs/outcomes, and potential external influences, information on how program activities are expected to change the behavior of market(s)’ actors is also presented in this section;
5. A program logic model diagram showing the linkages between inputs, program activities, outputs and outcomes, and identifying potential external influences;
6. A table listing the key outputs and outcomes, including identification of relevant measurement indicators and potential data collection approaches to guide later prioritization, and development of a monitoring and evaluation plan, and
7. A list of potential researchable issues for consideration within evaluation planning.

**1 - RELATED NYSERDA DOCUMENTS**

The following table identifies NYSERDA and other potentially relevant documents that were reviewed for this report:

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<sup>1</sup> Previously know as the ENERGY STAR Products Program

Table 1 – Relevant Documents Reviewed

NYSERDA Document Description
GDS Associates, Inc. ENERGY STAR Products and ENERGY STAR Marketing Programs Preliminary Program Logic Model. June 2004
New York's System Benefits Charge Programs Evaluation and Status Report, Quarter Ending June 30, 2009, Final Report August 2009.
New York's System Benefits Charge Programs Evaluation and Status Report, Quarter Ending September 30, 2009, Final Report November 2009.
NYSERDA New York Energy \$mart <sup>SM</sup> Products Program. DRAFT Evaluation, Measurement and Verification Plan. August 18, 2009.
Market Support Program Logic Model Report. May 4, 2007
Energy Star Products Program Implementation Strategy Overview. April 2009 Revision
New York Energy \$mart <sup>SM</sup> Products Program Incentive Offering for Lighting Manufacturer Partners. Wave 18 (Effective January 1, 2009 – December 31, 2009)
New York Energy \$mart <sup>SM</sup> Products Program Manufacturer Partnership Incentives, Guidelines & Agreement. Wave 19, Effective January 1, 2010.
New York Energy \$mart <sup>SM</sup> Products Program Retailer Partnership Incentives, Guidelines & Agreement. Wave 19, Effective January 1, 2010.
New York Energy \$mart <sup>SM</sup> Products Program Gold & Platinum Retailer Partnership Incentives, Guidelines & Agreement. Wave 19, Effective January 1, 2010.
New York Energy \$mart <sup>SM</sup> Products Program, Incentives for Retail Partners, Wave 19 (Effective January 1, 2010 – December 31, 2010)
New York Energy \$mart <sup>SM</sup> Products Program, Incentives for Gold Retail Partners, Wave 19 (Effective January 1, 2010 – December 31, 2010)
New York Energy \$mart <sup>SM</sup> Products Program, Incentives for Platinum Retail Partners, Wave 19 (Effective January 1, 2010 – December 31, 2010)
GetEnergySmart.org website now at <a href="http://www.nyserda.ny.gov/residential">http://www.nyserda.ny.gov/residential</a>
NY ENERGY STAR Products Program website <a href="http://www.nyserda.ny.gov/Page-Sections/Residential/Energy-Efficient-and-ENERGY-STAR-Products.aspx">http://www.nyserda.ny.gov/Page-Sections/Residential/Energy-Efficient-and-ENERGY-STAR-Products.aspx</a>
System Benefits Charge Supplemental Revision for <b>New York Energy \$mart<sup>SM</sup></b> Programs 2008-2011 (As amended August 22, 2008 and revised March 12, 2009)
ENERGY STAR Products and Marketing and Stay Cool Market Characterization, Market Assessment and Causality Evaluation Update. Final Report. May 2005.
New York Energy \$mart <sup>SM</sup> Products Program Market Characterization, Market Assessment and Causality Evaluation. Final Report. June 2007.
New York Energy \$mart <sup>SM</sup> Products Program 2008 Annual Report. April 29, 2009
New York Energy \$mart <sup>SM</sup> Upstream HVAC Program. Focus Group Final Report. October 7, 2009
New York Energy \$mart <sup>SM</sup> Products Program Display-Area Survey for Appliances Draft. Wave 11. June 10, 2008
New York Energy \$mart <sup>SM</sup> Products Program 2008 Participant Practices Report. Draft February 27, 2009
Process Evaluation ENERGY STAR Products Program. Final Report. March 2006.
<u>Optimal Energy. Achievable Electric Energy Efficiency in New York State DRAFT November 2008.</u>
DSIRE website, New York Incentives/Policies for Energy Efficiency <a href="http://www.dsireusa.org/incentives/index.cfm?re=0&amp;ee=1&amp;spv=0&amp;st=0&amp;srp=1&amp;state=NY">http://www.dsireusa.org/incentives/index.cfm?re=0&amp;ee=1&amp;spv=0&amp;st=0&amp;srp=1&amp;state=NY</a>

Central Hudson gas and Electric Website: <http://www.savingscentral.com/residential.html>

National Fuel Website: <http://www.nationalfuelforthought.com/rebate-conditions3.html>

National Grid Website: <https://www.powerofaction.com/efficiency/>

New York State Electric and Gas and Rochester Gas and Electric Website:  
<http://www.nyseg.com/UsageAndSafety/usingenergywisely/eeps/default.html>

Con Edison Website: [http://www.coned.com/energyefficiency/residential\\_gas\\_HVAC\\_program.asp](http://www.coned.com/energyefficiency/residential_gas_HVAC_program.asp)

## 2 CONTEXT AND PROGRAM DESCRIPTION

### 2.1 Description of Current Program<sup>2</sup>

NYSERDA's New York Energy \$mart<sup>SM</sup> Products Program (NYESP) previously known as the ENERGY STAR Products Program, which was launched in August 1999, seeks to increase the sale of energy-efficient appliances, lighting, power management and home electronics products, and heating, ventilation and air conditioning (HVAC) equipment. This initiative works in the supply, mid-market (infrastructure) and demand side of the market, positioning ENERGY STAR as a value-added label. The NYESP program is supported by a statewide consumer awareness campaign that promotes ENERGY STAR and its benefits in order to drive customer demand. NYESP is also a key component of the New York \$mart<sup>SM</sup> Market Support Program. This broader program provides support to NYSERDA'S Building Performance and Low-Income programs by working to increase the availability and demand for energy-efficient products and services through the provision of outreach and marketing services, recruitment of midstream participants and development of residential customer demand. Additional initiatives delivered through the Market Support Program include: a Program Marketing Initiative, the GetEnergySmart.org Website, and Workforce Development.

On the supply and mid-market side, the NYESP Program works directly with manufacturers to increase the supply of ENERGY STAR products and supports retailers to help them market the benefits of these products effectively. The NYESP Program provides financial assistance to both retailers and manufacturers to help reduce barriers. The primary tool for this is to establish partnerships with retailers (located within Systems Benefit Charge territory), distributors, and manufacturers (worldwide) through a formal contract with NYSERDA. Those that enter into these "Partnership Agreements" receive training, sales, tools, promotional opportunities, and co-op advertising incentives. Participants also receive some benefit from the cross marketing that occurs with other NYSERDA ENERGY STAR Programs. In exchange for this support, participants are required to provide ENERGY STAR product sales information to the program. Specifically, qualified products include both the ENERGY STAR qualified products and energy-efficient products (due to their energy efficiency benefits) and are listed below<sup>3</sup>:

**ENERGY STAR-Qualified Products:** Compact Fluorescent Lamps (CFLs), Fluorescent Fixtures, Ceiling Fans (Fans, Fans w/lighting), LED Decorative Light Strings, Clothes Washers, Dehumidifiers, Dishwashers, Freezers, Refrigerators, Room Air Conditioners, Thru-the-Wall Air Conditioners

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<sup>2</sup> Program description taken from the Market Support Program Logic Model Report. May 4, 2007 and the NYSERDA New York Energy \$mart Products Program. DRAFT Evaluation, Measurement and Verification Plan. August 18, 2009.

<sup>3</sup> New York Energy \$mart<sup>SM</sup> Products Program, Manufacturer Partnership – Incentives, Guidelines & Agreement, Wave 19, Effective January 1, 2010

**Other Energy-Efficient Products (Energy Smart Products)\*:** Solid State Lighting (SSL) Fixtures, Advanced Power Strips, Home Automation Systems, Whole House Switches, Energy Monitors, Pool Pumps

Through the Program, partners are also presented with opportunities to align with National ENERGY STAR campaigns and with other New York Energy \$mart<sup>SM</sup> promotions such as the “Change a Light, Change the World” campaign. NYESP Program Account Representatives provide training, deliver promotional materials and program information to retail partners, and facilitate relationships between manufacturers, distributors, and retail partners. As of December 2009, NYESP Program participants include more than 1,000 retailer partners and 39 major manufacturing partners, with more than \$25 million spent for co-operative advertising and performance incentives since the Program’s inception in 1999<sup>4</sup>.

With the addition of the American Recovery and Reinvestment Act (ARRA) funded State Energy-Efficient Appliance Rebate Program for all of New York State, NYESP Appliance Program Partners will be provided the opportunity to leverage Program benefits to increase the promotion and sales of their ENERGY STAR eligible appliances for the duration of the Rebate Program.

On the demand side, the NYESP Program is available to residents who pay an SBC surcharge on their utility bill. These residents are New York electric distribution customers of Central Hudson Gas & Electric Corporation, Consolidated Edison Company of New York, Inc., New York Electric & Gas Corporation, National Grid, Orange and Rockland Utilities, Inc., and Rochester Gas & Electric Corporation. The NYESP Program uses customized delivery mechanisms for specific energy-efficient technologies that warrant different approaches. For example, there are significant differences between some of the targeted ENERGY STAR technologies and their product flow and distribution channels. Specifically, for refrigerators, customers can be educated at retail stores through point of purchase (POP) displays, while for HVAC systems consumer education at the time of purchase is completely in the hands of the HVAC contractor. In these examples, development and strategic placement of POP materials for ENERGY STAR refrigerators, clothes washers, etc. has proven to be a valuable NYESP Program delivery mechanism, while use of POP materials will not be effective for the HVAC market. During the last few years, a key focus for the NYESP Program has been on promoting ENERGY STAR lighting technologies due to previous NYSERDA market characterization, assessment and causality (MCAC) research that revealed a lagging market share for energy-efficient lighting compared with many of the ENERGY STAR appliances (i.e., a 2005 MCAC NYESP Program evaluation estimated that the market share for ENERGY STAR CFLs and fixtures was only 11% and 13%, respectively, far behind appliance, which had market shares ranging from 37% to 86%.<sup>5</sup>) To address this market condition, increased program implementation efforts have been focused in the lighting area.

## 2.2- MARKET ASSESSMENT

The most recent full MCAC report for the NYESP Program was completed in 2007 for the period ended December 31, 2006 (then referred to as the NYESP Program), with a focus on the lighting component of the NYESP Program. However, additional ENERGY STAR products were examined in the appendices of that 2007 MCAC report, and examined ENERGY STAR awareness and perceptions, pricing and incremental cost, and market share analysis. All data in this section, unless otherwise noted, are from the 2007 MCAC report, and describe the state of energy efficiency in New York at that time.

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<sup>4</sup> Program Staff

<sup>5</sup> New York Energy \$mart<sup>SM</sup> Products Program Market Characterization, Market Assessment and Causality Evaluation. Final Report. June 2007.

## 2.2.1 Description of Baseline Conditions

### *Savings Already Achieved<sup>6</sup>*

According to the New York System Benefits Charge Programs Evaluation and Status August 2009 Report, the NYESP's cumulative annual energy and peak demand saving through 2007 include, 615,469 MWh/year, 121.9 MW on-peak, and 280,298 MMBtu<sup>7</sup>.

### *2.2.2 Awareness*

In 2006, 64% of customers within the NYSERDA area reported recognizing the ENERGY STAR label without being prompted by a description or visual image of the label, and 81% reported recognizing the ENERGY STAR label with prompting (*i.e.*, after being shown a visual image of the label). Additionally, in the NYSERDA area, the appliances most associated with the ENERGY STAR label were refrigerators, heating and cooling products, room air conditioners, and washing machines. Respondents in the NYSERDA area were more likely (69% in the NYSERDA area versus 41% in the rest of the nation) to associate room air conditioners with the label. Consumers in the NYSERDA area were also more likely to associate the ENERGY STAR label with new homes, heating and cooling products, doors, and insulation.

### *2.2.3 Attitudes, Behaviors and Perception*

In NYSERDA's area, 37% of the respondents who reported purchasing an ENERGY STAR labeled product said that they were "very much" influenced by the presence of the ENERGY STAR label. A total of 88% of NYSERDA respondents reported that they were influenced "very much, somewhat, or slightly influenced" by the ENERGY STAR label. Of the NYSERDA respondents who recognized the label, 77% purchased at least one labeled product in the past 12 months and the products purchased (either ENERGY STAR or non-ENERGY STAR) by the most respondents in the past 12 months were room air conditioners (18%), computers/monitors (14%), televisions (14%), and computer monitors (13%).

Respondents generally felt that ENERGY STAR products have more features, are higher quality, and save more energy than products without the label. For example, only 10% of NYSERDA respondents said that buying ENERGY STAR products resulted in them feeling like they had spent extra money for nothing, while 35% of NYSERDA respondents believed that ENERGY STAR products were of higher quality than products without the label. Additionally, 38% of NYSERDA respondents stated that ENERGY STAR products offer better value than products without the ENERGY STAR label. Furthermore, 41% of NYSERDA respondents believed that ENERGY STAR products provided them with more benefits than products without the ENERGY STAR label, and in 2006, 78% of NYSERDA respondents reported that they were at least "somewhat likely" to recommend ENERGY STAR products to a friend.

### *2.2.4 Cost and Pricing*

Examining results over time, the incremental cost attributable to the ENERGY STAR label appears to be dropping for refrigerators (from 33% in 2004 to 19% in 2006) and for clothes washers (from 93% in 2004 to 69% in 2006), although not for the other products examined. In addition, although the incremental cost attributable to the ENERGY STAR label may be decreasing for these products, the ENERGY STAR labeled units remain substantially more expensive due to the additional features they often include.

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<sup>6</sup> New York's System Benefits Charge Programs Evaluation and Status Report, Quarter Ending June 30, 2009, Final Report August 2009.

<sup>7</sup> Savings for the New York Energy \$mart Products Program are estimated based on market data, survey research, and deemed savings values. Savings for this program were last fully captured in 2006. An updated, completed and applied in Quarter 1 2009, added electricity, demand, and fuel savings for 2007 appliances only. Once necessary market-level data are available, appliance savings for 2008, as well as lighting savings for 2007 and 2008 will be analyzed and applied.

In terms of rebates, although only 11 NYSERDA households surveyed reported having purchased an ENERGY STAR product with an incentive, nearly all of the NYSERDA respondents (10 of 11) reported being “very, somewhat, or slightly likely” to have bought the product without an incentive. Similar to the 2004 findings, these results continue to indicate that more people report being willing to purchase ENERGY STAR products on their own, without a rebate or incentive.

### 2.2.5 Market Size and Distribution Channels

ENERGY STAR market share rose for all appliances from 2001 to 2006, although the market share generally showed a more moderate increase from 2004 to 2006. For refrigerators, clothes washers, and dishwashers, approximately two-thirds of all units sold (64%-66%) were sold through the National Partner Stores, one-quarter (22-25%) through the NYSERDA Partners, and the remaining units through non-Partner stores. For Room ACs, however, National Partner stores represented 78% of all sales, followed by non-partner (15%) and NYSERDA Partner (7%) retailers.

According to the New York Energy \$mart<sup>SM</sup> Products Program 2008 Annual Report, the CFL market share increased from 80% in 2007 to 88% in 2008. This may be attributed in part to ramp up activities in the fourth quarter for the upcoming CFL Fast Track Expansion Program. Lighting fixture market share also increase from 12% in 2007 to 20% in 2008. These market share increases may be credited to the continuing efforts to encourage partners to increase their stocking and selling of ENERGY STAR models. Retail partners also reported sales of over 745,000 ENERGY STAR lighting products, primarily CFLs, and over 438,000 ENERGY STAR appliances in 2008.

Nearly all ENERGY STAR appliance sales transactions occurred through partner storefronts. The percentages ranged from 95% for through-the-wall (TTW) ACs up to 99% for room ACs and clothes washers. Contractor sales constituted a larger percentage of ENERGY STAR sales for lighting products, but storefront sales still accounted for 92% of ENERGY STAR CFL sales and 78% of ENERGY STAR lighting fixture sales.

In addition, due to success of the 2007 pilot program for HVAC equipment, full-scale collection of sales data was implemented involving five HVAC retail partners that have multiple locations in 2008. Sales data was collected for HVAC equipment including furnaces, boilers, water heaters, and programmable thermostats and shows monthly market share ranged between 40% and 51% during 2008<sup>8</sup>.

### 2.2.6 Estimated Technical Potential

Table 2 below, shows the achievable potential energy savings estimated within New York’s residential Retail Products sector (excluding Long Island). These numbers come from Optimal Energy’s assessment of technical potential savings in New York for 2009-2015<sup>9</sup>.

**Table 2 – Statewide Annual Cumulative Energy Savings (GWh and MW)**

Achievable Potential Savings, 2009-2015							
Sector	2009	2010	2011	2012	2013	2014	2015
<b>Residential Retail Products (GWh)</b>	459	1,065	1,827	2,312	2,795	3,315	3,675
<b>Retail Products (MW)</b>	63	145	246	314	380	450	500

<sup>8</sup> New York Energy \$mart<sup>SM</sup> Products Program 2008 Annual Report. April 29, 2009

<sup>9</sup> Optimal Energy, Achievable Electric Energy Efficiency in New York State DRAFT November 2008.

## 2.3 - RELEVANT NEW YORK UTILITY AND NYSERDA-SPONSORED PROGRAMS

In addition to NYSERDA's Products Program there are a number of other potentially relevant programs being implemented in New York that are summarized briefly below. These programs are included as External Influences in Section 4.5 of this report and are identified in the program logic diagram as factors with the potential to impact (i.e., either help or hinder) achievement of NYSERDA's program goals. Specifically, many of the New York utility programs offer rebates directly to the customer and influence the demand side of the market while NYSERDA's Programs operate in both the Supply/Mid market (infrastructure) and demand side of the market.

### 2.3.1 – New York Utility Rebate Programs (Residential Electric and Gas Energy Efficiency Rebate Programs)<sup>10</sup>

#### *Central Hudson Gas and Electric*<sup>11</sup>

The Home Energy Savings Central Program offers customers rebates of between \$25 and \$1,000 on energy efficient equipment and measures. This is for residential electric customers who upgrade their heating, cooling or ventilation systems with specific types of energy efficient equipment. The electric Home Energy Savings Central rebates began on May 18, 2009. These rebates include eligible efficient central air conditioners, central air-source heat pumps, electric heat pump water heaters, furnace blower fans, ENERGY STAR programmable thermostats and duct and air sealing (with blower door and duct blaster testing). Rebates for the following types of [natural gas equipment](#) are available as well: natural gas furnaces, natural gas boilers, boiler reset controls, steam boilers, indirect water heaters, programmable thermostats, and duct and air sealing.

#### *National Fuel*<sup>12</sup>

National Fuel offers pre-qualified equipment rebates for the installation of certain energy efficiency measures to its residential customers in Western New York. Incentives from \$25 to \$400 are available for furnaces; steam and hot water boilers; storage and tankless water heaters; and programmable thermostats that meet the program's minimum efficiency requirements. In order to be eligible for a rebate, equipment must be installed on or after November 1, 2007 and be fueled by natural gas.

#### *National Grid*<sup>13</sup>

National Grid offers a number of programs to encourage energy efficiency amongst its residential customers. National Grid's High Efficiency Heating Rebates are offered to any residential heating customer in Massachusetts, New Hampshire, Rhode Island and Metro New York. Eligible technologies include furnaces, boilers, and boiler reset controls. Rebates of up to \$1,000 are available, depending on equipment type. National Grid residential electric customers in Upstate New York are eligible for a variety of electric equipment rebates to help them save energy in their homes. Rebates are available for ENERGY STAR programmable thermostats, central air conditioning systems, air-source heat pumps, ECM furnace fans, electric heat pump water heaters, and duct and air sealing.

#### *New York State Electric & Gas*<sup>14</sup>

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<sup>10</sup> DSIRE website, New York Incentives/Policies for Energy Efficiency  
<http://www.dsireusa.org/incentives/index.cfm?re=0&ee=1&spv=0&st=0&srp=1&state=NY>

<sup>11</sup> Central Hudson gas and Electric Website: <http://www.savingscentral.com/residential.html>

<sup>12</sup> National Fuel Website: <http://www.nationalfuelforthought.com/rebate-conditions3.html>

<sup>13</sup> National Grid Website: <https://www.powerofaction.com/efficiency/>

<sup>14</sup> New York State Electric and Gas and Rochester Gas and Electric Website:  
<http://www.nyseg.com/UsageAndSafety/usingenergywisely/eeps/default.html>

NYSEG is offering residential natural gas customers rebates for installing energy efficient natural gas equipment and related control equipment. Customers can complete one rebate application for multiple pieces of equipment as long as they are not the same type of equipment with the exclusion of programmable thermostats. NYSEG will mail customers a rebate check to the address provided within 4-6 weeks.

### ***Rochester Gas and Electric***<sup>13</sup>

RG&E is offering residential natural gas customers rebates for installing energy efficient natural gas equipment and related control equipment. Customers can complete one rebate application for multiple pieces of equipment as long as they are not the same type of equipment with the exclusion of programmable thermostats. RG&E will mail customers a rebate check to the address provided within 4-6 weeks.

### ***Con Ed***<sup>15</sup>

Con Edison is offering the Residential HVAC Electric Rebate Program. Through this program, incentives are offered on energy efficient heating and cooling equipment for residences in the eligible service area. Service addresses that have one to four residential dwelling units may participate in the program. Eligible measures and equipment include central air conditioning units, heat pumps, water heaters, furnace fans, weatherization measures, and thermostats. All equipment must be installed by a participating contractor and installations may be inspected before incentive payments.

### **2.3.2 - American Recovery and Reinvestment Act (ARRA) State Energy Efficient Appliance Rebate Program**

The U.S Department of Energy approved New York's plan to provide consumers with rebates for purchasing certain energy-efficient refrigerators, clothes washers, freezers and dishwashers through a program funded by ARRA. New York's Great Appliance Swap Out (NYApplianceSwapOut.com) will allow the State (beyond NYESP SBC territories) to issue more than 170,000 rebates totaling \$16.8 million during President's Week in February, 2010. In addition, the program, administered by the New York Research and Development Authority (NYSERDA) encourages recycling by offering a larger rebate to consumers who recycle their discarded appliances.

### **2.3.3 – Other NYSERDA Programs**

In addition to the programs summarized above, NYSERDA's NYESP Program has the potential for important interactions with the following NYSERDA-specific programs: Home Performance with ENERGY STAR, NY ENERGY STAR Homes, and Empower NY. Since these interactions are directly under the control of NYSERDA, they are listed as Inputs in Section 4.5 of this report.

## **3 - PROGRAM ENHANCEMENTS THROUGH ENERGY EFFICIENCY PORTFOLIO STANDARD (EEPS) FAST TRACK FUNDING**

Increasing the availability of ENERGY STAR lighting products has been a focus of the NYESP Program for the past few years. As a result, retail partners who sell lighting products increased from 68 (in 2006) to 750 (in 2009) and the program added 12 new lighting manufacturer partners since 2006. The CFL Expansion Program is a separate component within the NYESP Program. Since many retailers carry multiple products covered by the NYESP Program, it makes sense to keep the various components

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<sup>15</sup> Con Edison Website: [http://www.coned.com/energyefficiency/residential\\_gas\\_HVAC\\_program.asp](http://www.coned.com/energyefficiency/residential_gas_HVAC_program.asp)

closely synchronized. CFL expansion will not be made into a stand-alone program so long as the CFL program information is maintained separately.<sup>16</sup>

The CFL Expansion Program is one of the five “fast track” programs receiving funding through the Energy Efficiency Portfolio Standard (EEPS). As described in NYSERDA’s SBC Plan, the following efforts are planned as program activities for the EEPS Fast Track effort:<sup>17</sup>

- Increase marketing and co-op advertising promotions with retail stores and lighting manufacturers
- Continue to increase the network of retail partners and manufacturers
- Increase consumer accessibility to a wider variety of CFLs
- Increase in-store promotions and point-of-purchase information to educate consumers
- Increase participation in the CFL Collection Center Program
- Promote the manufacture, sale, and usage of high power factor CFLs

#### 4 KEY ELEMENTS SUMMARY

Based on a review of relevant NYSERDA documents, below is a summary of some key elements of the **New York Energy \$mart<sup>SM</sup> Products Program**.

##### 4.1 Ultimate Goals:

Overall, NYSERDA’s NYESP Program has two primary goals:

1. Increase the supply of products through partnership with retailers, manufacturers, and distributors and create demand for high-efficiency and ENERGY STAR products through increased consumer awareness and understanding of the ENERGY STAR label.
2. Support other NYSERDA residential sector programs through increased coordination and leveraging opportunities (i.e. Empower, NYESH Programs, etc.)

Specifically, the NYESP Program seeks to continue building on these goals and make them sustainable in the long run.

The **New York Energy \$mart<sup>SM</sup> Products Program** budget for January 1, 2009 through June 30, 2011 consists of approximately \$10.0 million in SBC funding. The overarching **New York Energy \$mart<sup>SM</sup> Market Support Program** (of which NYESP is a component) budget for January 1, 2009 through December 31, 2011 is approximately \$28.6 million.<sup>18</sup> Table 3 shows NYSERDA’s broader Market Support Program’s four long-term non-energy related goals and progress. This broader Program has made excellent progress, exceeding all four of its goals.

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<sup>16</sup> System Benefits Charge Supplemental Revision for **New York Energy \$mart<sup>SM</sup> Programs 2008-2011** (As amended August 22, 2008 and revised March 12, 2009)

<sup>17</sup> System Benefits Charge Supplemental Revision for **New York Energy \$mart<sup>SM</sup> Programs 2008-2011** (As amended August 22, 2008 and revised March 12, 2009)

<sup>18</sup> NYSERDA New York Energy \$mart Products Program. DRAFT Evaluation, Measurement and Verification Plan. August 18, 2009.

**Table 3 – Market Support Program – Goals and Achievements**<sup>19</sup>

Activity	Program Goals (July 1, 2006 through June 30, 2011)	Achieved July 1, 2006 through December 31, 2009	% of Goal Achieved
New manufacturing partners signed up	20	27	>100%
New retail partners (independent) signed up	100	241	>100%
New retail partners (big box, mass merchandisers) signed up	6	7	>100%
ENERGY STAR market share increase on targeted products (on average, across products)	25%	28%	>100%

Specific to the NYESP Program additional non-energy goals were also achieved in 2008 including, 281 full training sessions held (reflecting 140% of the year-end goal of 200 training sessions), and 316 solicitations conducted (reflecting 105% of the internal goal set at 300 solicitations). These substantially intensified recruiting efforts reflect a strong emphasis on signing new lighting partners, resulting in an increase of 299 new storefronts with ENERGY STAR lighting products in the New York market in 2008. The year 2008 also saw more than \$2.6 million awarded in incentives to support both standard and special promotions (for all partner types) to help further the Products Program's goals<sup>20</sup>.

In addition, NYSERDA conducted a topical focus group on September 15, 2009 for the first time with thirty experts and industry stakeholders to discuss current market conditions, growth opportunities, sales barriers and suggestions for initiatives to accomplish the goal of augmenting the highly efficient heating, ventilation, and air conditioning equipment (HVAC) product market<sup>21</sup>.

In addition to the non-energy related goals in Table 3, according to the SBC III Operating Plan<sup>22</sup>, the Program is expected to produce annual energy savings of 200 GWh (between 10.5% - 12.5% of the total portfolio annual electricity savings) by the end of the five year funding period<sup>23</sup>. The ultimate energy and demand savings goals are expected to be primarily met from increasing the proportion of lighting, appliances, home electronics, and HVAC sales that are ENERGY STAR (high efficiency), and through increasing the demand for and opportunities to purchase this equipment.

The NYESP Program is an important component of the Market Support Program and is part of NYSERDA's residential sector program portfolio. The residential sector portfolio is designed to address important overarching goals for SBC funding by expanding delivery channels, facilitating implementation of projects that result in energy savings and peak demand reduction, overcoming information barriers that prevent vendors, installers and end-users from installing the highest efficiency products, and by developing sustainable single-family and multifamily existing home and new construction markets and

<sup>19</sup> New York's System Benefits Charge Programs Evaluation and Status Report, Quarter Ending June 30, 2009, Final Report August 2009. Section 4.5 - Market Support Program P.4-21

<sup>20</sup> New York Energy \$mart<sup>SM</sup> Products Program 2008 Annual Report. April 29, 2009

<sup>21</sup> New York Energy \$mart<sup>SM</sup> Upstream HVAC Program, Focus Group Final Report, October 7, 2009

<sup>22</sup> SBC, Proposed Plan for New York Energy \$mart Programs (2006-2011), As amended March 2, 2006.

<sup>23</sup> SBC, Proposed Plan for New York Energy \$mart Programs (2006-2011), As amended March 2, 2006.

product markets for energy efficiency and demand management. The market infrastructure and demand side goals for the broader residential portfolio are listed in Table 4.<sup>24</sup>

**Table 4 – Goals for NYSERDA’s Residential Programs**

Supply-Side and Market Infrastructure/Policy	Demand-Side
<p>Increased awareness, knowledge and willingness or ability to make available technically proven and economically viable residential energy efficiency, renewable energy and demand response products and services (including real time pricing/load management options)</p> <p>Increased number of firms (contractors, home builders, equipment suppliers, etc.) with experience and confidence in delivering residential energy efficiency, renewable energy and demand response products and services that produce reliable benefits</p> <p>Improved energy and environmental performance of existing and new homes that incorporate green design practices, energy efficiency and alternative energy technologies and operations</p> <p>Larger robust and sustainable market for residential energy efficiency, renewable energy and demand response products and services</p> <p>More efficient residential building stock and greater availability of efficient new homes and multifamily buildings</p>	<p>Projects demonstrate persistent energy savings, reduced energy costs and provide other benefits to end-users</p> <p>Customers have reliable information on which to understand and base their energy-related decisions</p> <p>Increased consumer awareness about the benefits of energy efficiency and alternative energy options and associated understanding/awareness of the environmental impacts of energy choices and emerging energy options</p> <p>Customers have confidence in energy saving estimates and value the energy efficiency and green building features of their homes and associated purchases</p> <p>Access to residential energy efficiency, renewable energy and demand response (including real time pricing/load management) products and service options is improved for all types of customers, including underserved customers</p>

**4.2 Market Barriers/Issues the Program Attempts to Address (“the Problem”):**

The NYESP Program aims to address barriers that exist throughout many of the residential energy-using equipment markets and operates within the larger NYSERDA residential programs portfolio designed to create market opportunities and maximize benefits for participants and society. To facilitate participation, the NYESP Program works to overcome a variety of market barriers and issues including:

- High incremental or first costs
- Lack of awareness, knowledge and understanding of energy efficiency features
- Uncertainty about savings
- Volatility and risk related to energy prices and business environment
- Lack of time and competing priorities

Barriers to adopting residential energy-efficient equipment can be broken down into three general categories: (1) barriers affecting the supply side (and related infrastructure), (2) barriers affecting the mid-market/infrastructure, and (3) barriers affecting the demand side (and associated end-use) market sectors. Supply-side barriers are defined as obstacles that delay or impede the delivery and availability of energy efficient products or services into the marketplace. Mid-market/infrastructure barriers are defined as obstacles that impede the willingness or ability to provide or deliver the products or services. Demand-side barriers are defined as barriers that deter customer demand for a product or service, such as lack of

<sup>24</sup> GDS Associates. **New York Energy \$mart<sup>SM</sup>** Residential Energy Affordability Programs Sector-Level Logic Program Logic- 2007 Update. September 28,2007.

awareness and education regarding energy efficiency options and benefits and its priority given competing uses of funds.

Table 5 lists the specific barriers and market actors related to the NYESP Program and the overarching residential sector (the order of these barriers does not reflect significance or priority; the numbers are for reference purposes only). Specific barriers being targeted by NYSERDA's NYESP Program are noted with an asterisk.

**Table 5 – Residential Sector (and NYESP specific) Market Barriers for Residential Energy Using Equipment and Associated Market Actors**

Market Area	Barriers	Market Actors
Supply side / Policy	<p>*S1 – Lack of availability of some products (especially bulbs, i.e. par lamps, dimmables, three-ways,) and lack of availability of highefficiency products at reasonable prices</p> <p>*S2 – Lack of information and awareness among upstream market actors regarding the benefits and business opportunities for energy-efficient homes, efficient equipment, renewable energy and load management products, and related services</p> <p>*S3 – Perceptions of lack of demand for energy efficiency and renewable options</p> <p>*S4 – Concern regarding inferior or inconsistent product quality</p> <p>*S5 – Lack of replacement equipment and new energy technologies</p> <p>*S6 – Potential confusion/conflicts of roles and responsibilities due to increased variety of efficiency and demand response assistance and resources from efforts to address global warming/carbon footprint.</p>	<p>Manufacturers, distributors and suppliers of energy using equipment – lighting, appliance, and HVAC</p> <p>Codes/standards and policy makers</p> <p>Utilities and load serving entities, NYISO</p>
Market Infrastructure / Midstream	<p>*M1 – Preception of risk with stocking or installing efficient appliances when customer demand or product quilty has yet to be proven (uncertainty about product performance and profit potential)</p> <p>*M2 – Limited experience with energy-efficient homes and equipment (including lighting), renewable energy products, load management equipment, and energy monitoring equipment</p> <p>*M3 – Uncertainty about product performance and profit potential for providing energy efficiency services</p> <p>M4 – Limited availability of subcontractors with training and experience necessary for efficient equipment/building techniques and optimum energy performance of efficient equipment/building techniques</p> <p>*M5 – Inadequate marketing and promotional materials for efficient products (including lighting)</p> <p>*M6 – Undervaluing energy efficiency, sustainability and their impact for economic development, denial of global warming and low sense of urgency to change</p> <p>M7 – Contractors unwilling to learn and conduct services outside of their specific trade</p> <p>M8 – Lack of available real-time pricing and other load management options</p> <p>*M9 – Lack of energy efficiency training opportunities available in local community</p> <p>M10 – Lack of time and income for attending training and certification exams, lack of school time and teacher time to incorporate into lesson plans, curriculum and classroom activities</p> <p>*M11 – Lack of good (effective) or inadequate informational, educational, promotional, coordination information, and age-appropriate skill developing (i.e. , math and science) energy efficiency and renewable energy material, tools and curriculum</p> <p>*M12 – Split incentives for rental units (building owners often do not pay the energy bills; the tenant does but has little incentive or ability to improve the property)</p> <p>M13 – Concern from lenders and owners regarding ability to obtain a return on their investment (ROI) due to split incentive issues</p> <p>M14 – Rules and procedures by housing regulators (e.g. , HUD, DCHR) that</p>	<p>Conctractors</p> <p>Builders</p> <p>Retailers</p> <p>Distributors</p> <p>HERS providers</p> <p>HERS raters</p> <p>Sub-contractors and building trades</p> <p>Teachers and teacher unions</p> <p>School districts</p> <p>Community leadership</p> <p>Multifamily property managers and building owners</p> <p>Lenders and</p>

Market Area	Barriers	Market Actors
	hinder prompt design and installation of improvements *M15 – Policies of other low-income programs *M16 – Greater competition for partnering with market actors to accomplish goals of a diverse variety of efficiency programs and organizations. *M17 – Market lacks experience in determining the best way to create a profitable business model for long-term.	financial institutions
Demand side (downstream actors)	*D1 – Lack of awareness, knowledge and understanding of: energy efficiency, renewable energy and load management features, products and services (including lighting); how to obtain healthy air quality in a new home; billing service, energy competition/choice, energy conservation, demand response, energy supply, siting of new power generation facilities and transmission lines; and life-cycle costing *D2 – Information costs associated with understanding these features and associated benefits *D3 – Competing needs for capital (given higher first cost) *D4 – Lack of reliable information on energy-efficient practices (including lighting) in existing homes *D5 – Resistance to new and/or innovative technologies *D6 – Performance uncertainties *D7 – Split incentives for rental units (building owners often do not pay the energy bills, the tenant does but has little incentive or ability to improve the property) D8 – Lack of available real-time pricing and other load management options D9 – Language barriers (English not primary language) *D10 – Lack of knowledge and experience in managing varying prices *D11 – Lack of policies amenable to energy efficiency and renewables D12 – Resistance to changing contractors or making demands upon their contractors *D13 – Confusion regarding how to qualify or take advantage of opportunities associated with state and federal tax incentives D14 – Lack of trust in residential contractors or salespersons *D15 – Confusion, information costs and lack of trust due to increased efficiency promotional efforts from multiple sources.	Residential customers, including existing and potential new home owners  Multifamily building owners  Students  Communities  Building owners  Tenants

\* indicates barrier directly addressed by the NYESP program

It should be noted that differences between specific technologies can create different emphasis on which barriers are most critical for the associated market. For example, ENERGY STAR clothes washers clean as well as or better than standard clothes washers while being less harsh on the fabric. In such situations, the consumer’s needs for the product are completely met. In contrast, a primary need for lighting fixtures is often its appearance as it relates to a consumer’s particular application. There is a vast array of lighting fixture types and obtaining an ENERGY STAR product to meet all consumers’ appearance needs is much more difficult for this product type.

### 4.3 Targeted Market Actors

The NYESP Program specifically targets retailers, distributors, and manufacturers as program partners, and develops marketing materials to target the residential end-users who will purchase the high-efficiency equipment from participating retailers. As a result, the program targets supply side, market infrastructure,

and demand side market actors. It should be noted that there are actors in the market that are not directly targeted by the program, notably the electric utilities. In addition, as noted in Section 3, the CFL Expansion program enhancements through EEPS Fast Track funding (which is a part of NYESP) will target specific retail segments to boost the sales of CFLs. As part of this segmentation effort, high traffic stores, such as grocery stores and convenient/drug stores, and new venues, such as mass merchandisers and single location appliance stores are all being targeted to increase sales.

#### **4.4 NYESP Implementation Approach (“Activities”)**

NYSERDA’s NYESP Program includes a number of activities that produce outputs that lead to short-and longer-term outcomes supporting key goals of the Program. These activities can be grouped into seven main areas as follows:

- 1) Developing and implementing promotional campaigns, including website and on-line promotion,
- 2) Conducting quality assurance reviews ,
- 3) Providing financial incentives and assistance,
- 4) Providing training, technical assistance and marketing materials (*e.g.*, point-of-purchase materials),
- 5) Recruiting and partnering with manufacturers, distributors and retailers (outreach), and
- 6) Coordinating with other National/Regional (ENERGY STAR) Programs, other NYSERDA Programs, and other NY utility-specific programs,
- 7) Developing and implementing new market strategies.

An overview of the activities in each of these areas is provided below in Table 6.

**Table 6 –NYESP Activities**

<b>Developing and Implementing Promotional Campaigns, Website and On-line Promotions (Demand-Side)</b>
<p>Developing and implementing promotional campaigns for ENERGY STAR household appliances and lighting products, including use of television, print, and internet ads along with establishing an appropriate public relations campaign.</p> <p>Developing brochures and advertising</p> <p>Conducting periodic special on-line promotional efforts for specific product types and sales channels, or to initiate activity and interest in a product</p> <p>Developing/implementing campaigns that may leverage national and regional campaigns</p> <p>Maintaining and Redesigning the GetEnergySmart.org website to be all-inclusive (including CFL education)</p> <p>Providing consumers with an on-line inventory of their home products and recommendations on how to improve the home's energy efficiency</p> <p>Providing program and partner information to consumers</p> <p>Providing participation information to potential partners</p> <p>Developing and implementing on-line marketing campaigns that will drive consumers to the GetEnergySmart.org website</p>
<b>Developing and Implementing New Market Strategies (Supply-side and Market Infrastructure/Midstream)</b>
<p>Developing reasonable retail segments</p> <p>Analyzing available sales data for retail segments</p> <p>Shifting resources as needed to support lagging retail segments</p> <p>Identify new technologies and emerging trends</p> <p>Develop strategy to transition to new technologies and emerging trends without adversely impacting the marketplace</p> <p>Developing and implementing marketing strategies to impact retail and manufacturing markets (includes the development of a Statewide Partner Recognition Program that will recognize partners for their successful participation and achievements)</p> <p>Coordinating marketing strategies on a regional and national level (including coordination with ConEd's marketing campaigns)</p>
<b>Conducting Quality Assurance Reviews of the Program (Market Infrastructure)</b>
<p>Reviewing partner-provided monthly sales data and documentation regarding regular sales staff training sessions held, POP materials displayed, and ENERGY STAR products labeled</p> <p>Working with field representatives to assess training, proper use of POP materials and product labeling</p> <p>Maintaining program data collected for use in program monitoring, evaluation and reporting</p> <p>Performing market research, including conducting Focus groups, to meet evolving program needs and better understand the market for high-efficiency products</p>
<b>Providing Financial Incentives and Assistance (Market Infrastructure)</b>
<p>Providing incentives for co-operative (co-op) advertising and promotional incentives</p> <p>Providing market share incentives based upon proportion of sales that are ENERGY STAR and high efficiency</p> <p>Developing educational buy-down and markdown promotions for manufacturers and retail partners</p> <p>Providing retailers with assistance in marketing high-efficiency/ENERGYSTAR products and with finding new product when needed</p>
<b>Training and Technical Assistance (Market Infrastructure)</b>
<p>Working with field representatives to provide training, program updates, replenishment of Point of Purchase (POP) materials and to label products in partner retailers' stores</p> <p>Developing training incentives to encourage training sessions and entice contractors to attend (including Additional Program Training specifically focused on the HVAC market sector)</p> <p>Developing sales training for distributors to include high efficiency upsell opportunities and upstream partners to strongly encourage their installers and customers to complete comprehensive heating and cooling load calculations at each site to establish the proper sizing for new equipment</p>

<b>Recruiting and Partnering with Manufacturers, Distributors, Retailers and Contractors (Supply-side and Market Infrastructure/Midstream)</b>
<p>Recruiting retailers, manufacturers and distributors into the program through signing the New York Energy \$mart Product Program Partnership Agreements</p> <p>Partnering with retailers to promote ENERGY STAR and other high efficiency products</p> <p>Working with manufacturers and distributors to increase availability of energy-efficient products throughout New York</p>
<b>Collaborating and Coordination with Other NYSERDA, State and National/Regional Programs (Market Infrastructure)</b>
<p>Collaborating with other NYSERDA programs such as the New York ENERGY STAR Homes and Home Performance with ENERGY STAR programs, and the CFL Expansion Program to have ENERGY STAR and high efficiency products promoted and incorporated by these programs' builders and contractors</p> <p>Coordination with the National ENERGY STAR Programs, leveraging materials and promotional events</p> <p>Conducting periodic special promotional efforts in collaboration with other programs for specific product types and sales channels, or to initiate activity and interest in a product</p> <p>Performing market research and leveraging regional and national initiatives that meet program needs</p> <p>Coordination with New York area Utilities</p> <p>Coordination with other state energy programs including those representing Vermont, New Jersey and portions of Massachusetts (NEEPS, Efficiency Vermont, Cape Light Compact, New Jersey Clean Energy Program)</p>

#### 4.5 Program Inputs and Potential External Influences

The ability of NYSERDA's Product Program to accomplish the outputs and outcomes likely to result in the program reaching its ultimate goals is dependent on the level and quality/effectiveness of inputs that go into these efforts. There are also external influences that can help or hinder the development of anticipated outcomes. Key Product Program inputs and potential external influences are presented in Table 7.

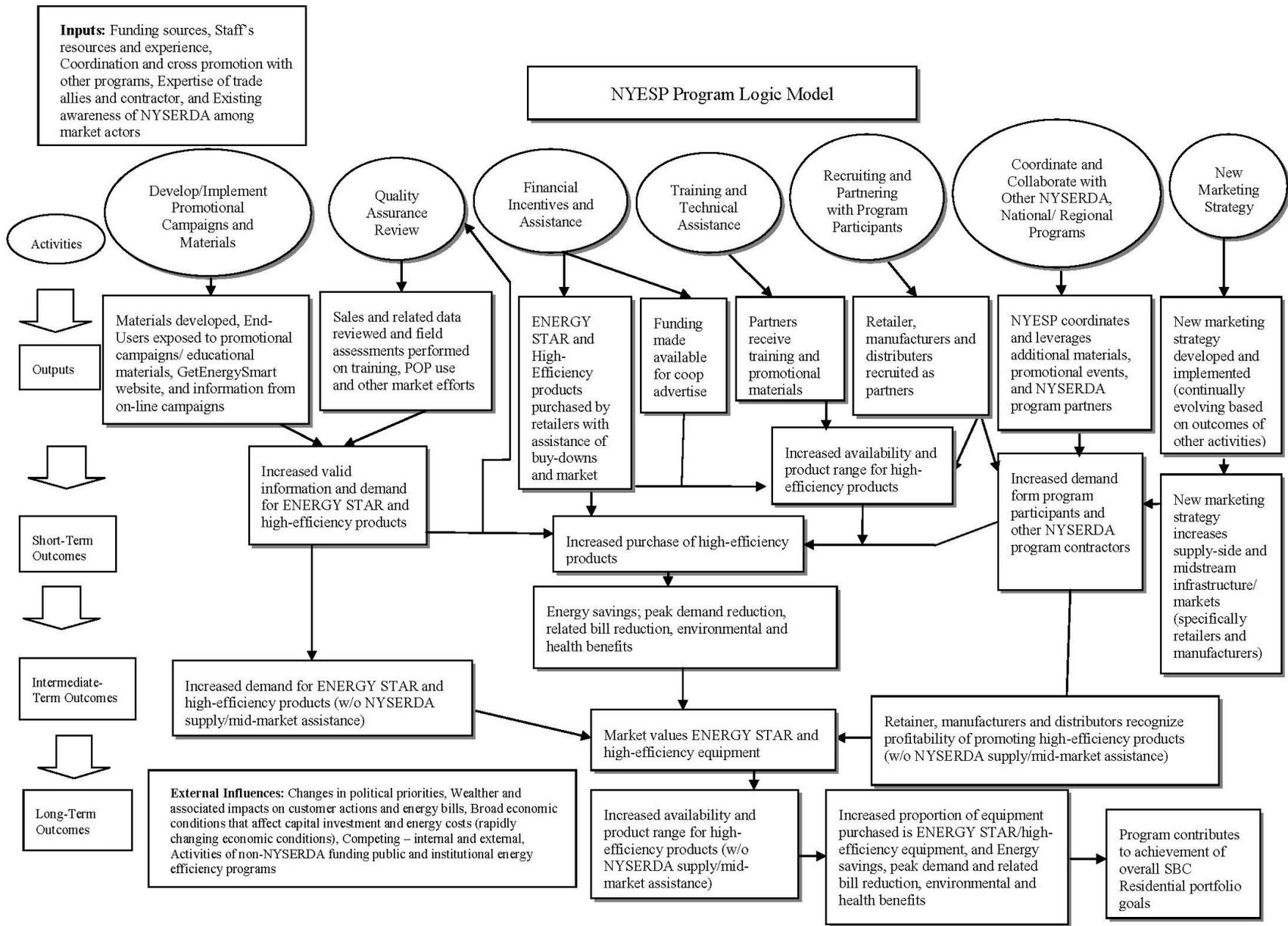
Specific outputs and outcomes anticipated for the Products Program activities are shown in the logic diagram in Section 5 below. More information on these outputs, outcomes and associated measurement indicators can be found in Tables 8 and 9 immediately following the diagram (Section 6).

**Table 7 –NYESP Inputs and Potential External Influences**

<b>Program Inputs</b>
<p>SBC and other funding sources (EEPS, ARRA)</p> <p>NYSERDA’s program staff resources and experience implementing SBC programs and funding</p> <ul style="list-style-type: none"> <li>• NYSERDA’s credibility and relationships with key stakeholders, partners, policy makers, and key market actors</li> <li>• Staff experience implementing the <b>New York Energy \$mart<sup>SM</sup></b> programs</li> <li>• NYSERDA’s and program staff’s market knowledge</li> </ul> <p>Coordination and cross promotion with other NYSERDA programs</p> <ul style="list-style-type: none"> <li>• New York Energy \$mart Market Support Program, HPwES, NYESH, Empower NY</li> <li>• Program Marketing initiative</li> <li>• GetEnergySmart.org website</li> <li>• CFL Expansion Program</li> <li>• State Energy Efficient Appliance Rebate Program</li> </ul> <p>Expertise of trade allies and contractor</p> <ul style="list-style-type: none"> <li>• National ENERGY STAR program staff and contractors</li> <li>• Program Partners including retailers and manufacturers</li> <li>• Implementation contractors (such as quality assurance contracting currently supplied by Lockheed Martin for the Market Support Program)</li> <li>• NEEP, CEE, other programs (EVT, NJ, CLC)</li> </ul> <p>Existing awareness of NYSERDA among market actors</p> <ul style="list-style-type: none"> <li>• See section 2.2.2 for specific awareness levels</li> </ul>
<b>External Influences and Other Factors</b>
<p>Changes in political priorities</p> <ul style="list-style-type: none"> <li>• Perceptions of energy and global climate change issues</li> <li>• Codes and standards</li> <li>• Federal energy policies including energy related tax credits and the Federal Energy Policy Act of 2005</li> <li>• State and local action &amp; requirements</li> </ul> <p>Weather and associated impacts on customer actions and energy bills</p> <p>Broad economic conditions that affect capital investment and energy costs (rapidly changing economic conditions)</p> <ul style="list-style-type: none"> <li>• Energy prices and regulation (changes in fuel and energy prices)</li> <li>• Changes in utility rate structures</li> <li>• Perceptions of the value of “green” buildings and LEED</li> <li>• Activities of public and institutional purchasers and projects</li> </ul> <p>Competing – internal and external</p> <ul style="list-style-type: none"> <li>• Internal – demand-side customers competing priorities</li> <li>• External – broad market and demand for provision and supply of EE services</li> <li>• Cost and performance of more efficient technologies</li> </ul> <p>Activities of non-NYSERDA funding public and institutional energy efficiency programs</p> <ul style="list-style-type: none"> <li>• National and State ENERGY STAR and Appliance Rebate Programs</li> <li>• New York area Utilities</li> </ul>

## **5 - PROGRAM LOGIC MODEL DIAGRAM**

The following page contains NYSERDA's **New York Energy \$mart<sup>SM</sup>** Products Program logic model diagram showing the linkages between activities, outputs and outcomes, and identifying potential external influences. The diagram presents the key features of the program. The logic diagram presented here is at a slightly higher level than the tables in this report, aggregating some of the outcomes, in order to provide a logic model that is easier to read. (Evaluation research should use the more detailed tables, in addition to the diagram, in examining the anticipated linkages and performance through the various outcomes.)



## 6- OUTPUTS, OUTCOMES AND ASSOCIATED MEASUREMENT INDICATORS

It is important to distinguish between outputs and outcomes. For the purposes of this logic document, outputs are defined as the immediate results from specific program activities. These results are typically easily identified and can often be counted by reviewing program records.

Outcomes are distinguished from outputs by their less direct (and often harder to quantify) results from specific program activities. Outcomes represent anticipated impacts associated with NYSERDA's program activities and will vary depending on the time period being assessed. On a continuum, program activities will lead to immediate outputs that, if successful, will collectively work toward achievement of anticipated short-, intermediate-, and long-term program outcomes.

The following tables list outputs (Table 8) and outcomes (Table 9), taken directly from the logic model and associated measurement indicators. For each indicator, a proposed data source or collection approach is presented. When required, the need for baseline data is also noted. Items in this table should be prioritized and subsequently considered as potential areas for investigation as part of a formal program evaluation plan.

**Table 8 – NYESP Outputs, Associated Indicators and Potential Data Sources**

<b>Outputs (&lt;1 year)</b>	<b>Indicators</b>	<b>Data Sources and Potential Collection Approaches</b>
<b>Outputs from Development and Implementation of Promotional Campaigns, Website and On-line Promotion Activities</b>		
Materials developed and end-users exposed to promotional campaigns/educational materials, GetEnergySmart website, and information from on-line campaigns	Number and dollar value of campaigns/educational materials developed by type and geographic region Gross rating points (GRP) Number of end users receiving/exposed to advertising materials by type and geography Number and dollar value of special promotions by type of campaign and product Reach of campaigns (number of consumers exposed) Number of hits, click-thrus on website, downloads, time spent on site, video views Number, dollar value, type and reach of on-line campaigns	Program records Marketing analysis Media buy reports and analysis Effects/impact evaluation Interviews, focus groups Focus groups Website monitoring information Website survey E-mail surveys

Outputs (<1 year)	Indicators	Data Sources and Potential Collection Approaches
<b>Developing and Implementing New Marketing Strategies</b>		
<p>New marketing materials developed and implemented in the retail and manufacturing markets (including the development of a statewide partner recognition program)</p> <p>New market strategy continually evolving based on outcomes of other activities</p> <p>Retail segmentation matrix for all applicable potential and current program partners.</p>	<p>Number and type of New marketing material developed by type and geographic region</p> <p>Number of recipients exposed to New advertising materials by type and geography</p> <p>Number and dollar value of New special promotions by type of campaign and product</p> <p>Number and type of resources shifted to support lagging retail markets</p> <p>Number and type of new technologies and emerging trends</p> <p>Measured market impact due to strategy of transitioning new technologies and emerging trends</p>	<p>Program records</p> <p>Marketing analysis</p> <p>Media buy reports and analysis</p> <p>Effects/impact evaluation</p> <p>Interviews, focus groups</p> <p>Focus groups</p> <p>Website monitoring information</p> <p>Website survey</p> <p>E-mail surveys</p>
<b>Outputs from Quality Assurance Review Activities</b>		
Sales and related data reviewed	Number of, portion available and completeness and usefulness of program and field data	<p>Program records</p> <p>Data assessment</p> <p>Monitoring and evaluation efforts from program data</p>
Field assessments performed on training, POP use and other marketing efforts	Assessment rating of store training, POP use and other marketing efforts	<p>Program records</p> <p>On-site evaluations at retailers, contractor installations</p> <p>Mystery shopping - QA</p>
<b>Outputs from Providing Financial Incentives and Assistance Activities</b>		
Funding made available for cooperative advertising	<p>Dollar value of Co-op advertising and amount leveraged</p> <p>Number of end users receiving/exposed to advertising materials</p> <p>Number of ads supported by geographic area of state</p>	Program records
ENERGY STAR and high-efficiency products purchased by retailers with assistance of buy-downs and market share incentives	<p>Dollar value and number of buy-down and markdown incentives provided by geographic area of state</p> <p>Number and types of ENERGY STAR and/or high-efficiency technology purchased (by retail store type and location)</p>	Program records
<b>Outputs from Training and Technical Assistance Activities</b>		
Partners receive training and promotional materials	Number and types of trainings per store/partner and type of high-	<p>Program records</p> <p>Mystery shopping</p>

Outputs (<1 year)	Indicators	Data Sources and Potential Collection Approaches
	efficiency technology Number of employees/stores successfully trained Number of materials by type provided and geographic region (in stores and at events) Number of materials read/used by end-users (actually obtained and read by end-user as opposed to sitting in a store display) Reach of materials (e.g., how many end-users receive materials) Number of partners assisted and types of assistance provided by geographic region and type of technology Degree of help provided as perceived by partners	Store interviews Surveys
<b>Outputs from Recruiting and Partnering with Manufacturers, Distributors, Retailers and Contractor Activities</b>		
Retailers, manufacturers and distributors recruited as partners	Number of partners by segment, type and geographic region Number of new partners by segment, type and geographic region	Program records
<b>Outputs from Collaborating and Coordination with Other NYSERDA and State//Regional/National Programs Activities</b>		
NYESP coordinates and leverages additional materials, promotional events, and NYSERDA program partners	Number of collaborative marketing and outreach efforts with other NYSERDA programs Number of collaborative marketing and outreach efforts with other National/Regional programs	Memos, program records and notes recording meetings and builders Joint outreach and advertising efforts Memos, program records and notes recording meetings with contractors

**Table 9 – NYESP Outcomes, Associated Indicators and Potential Data Sources**

Outcomes	Indicators	Data Sources and Potential Collection Approaches
<b>Short-Term (1-5 years) Outcomes</b>		
Increased valid information for ENERGY STAR and high-efficiency products	Change in level of awareness, understanding, attitudes and intentions regarding ENERGY STAR and high-efficiency technologies (by market actor group and geography)	Market Actor surveys Store intercepts
Increased demand for ENERGY STAR and high-efficiency products by end use customers	Change in consumer perceived value of ENERGY STAR and high-efficiency technologies  Change in consumer intent to purchase ENERGY STAR and high-efficiency technologies  Efficiency is an important search criteria for consumers seeking new equipment	Consumer surveys Purchaser intercept surveys
Increased demand for ENERGY STAR and high-efficiency products by program participants and other NYSERDA program contractors	Increased number and variety of ENERGY STAR and high-efficiency technologies placed into retailer locations (by retailer type and geography)  Increased number and variety of ENERGY STAR and high-efficiency technologies being procured for installation in homes by NYESLH and HPwES contractors	Market Actor surveys NYESLH program records Home Performance with ENERGY STAR program records
Increased availability and product range for high-efficiency products	Increased proportion of products are ENERGY STAR and high-efficiency and there are a greater variety of these in retail stores, in promotions and promoted by contractors and builders	Store surveys Contractor and builder surveys Consumer surveys
Increased purchase of high-efficiency products	Change in the number and proportion of product sales that are ENERGY STAR and high-efficiency among home products  Change in number of ENERGY STAR and high-efficiency products being purchased (by type, retail outlet type and geography)	Market transformation evaluation for market penetration and program-induced changes
Energy savings, peak demand reduction and related bill reduction, environmental and health benefits	Amount and dollar value of kW, kWh, fossil fuel savings, and subsequent emission reductions	Impact evaluation for reliable estimates of kW, kWh savings Non-energy impact evaluation for health effects (customer surveys)
New marketing strategy increases supply-side and mid/ infrastructure markets (specifically retailers and manufacturers)	Increased number of supply-side and mid-market program participants  Number and type of resources shifted to support lagging retail markets  Number and type of new technologies and emerging trends	Market transformation evaluation for market penetration and program-induced changes Program participation rates Market Actor surveys

Outcomes	Indicators	Data Sources and Potential Collection Approaches
	Measured market impact due to strategy of transitioning new technologies and emerging trends	
<b>Intermediate-Term (5-10 years) Outcomes</b>		
Retailers, manufacturers and distributors recognize profitability of promoting ENERGY STAR and high-efficiency products (without NYSERDA supply/mid market assistance)	Change in the number of retailers, manufacturers and distributors incorporating supply, promotion of ENERGY STAR and high-efficiency products (without NYSERDA support)	Surveys/interviews with retailers, manufacturers and distributors Mystery shopping – QA
Increased demand for ENERGY STAR and high-efficiency products (without NYSERDA supply/mid market assistance)	Consumers perceived value of ENERGY STAR and high-efficiency products Consumers intent to purchase ENERGY STAR labeled and high-efficiency products	Consumer surveys Purchaser intercept surveys Surveys/interviews with retailers, manufacturers, distributors and contractors
Market values ENERGY STAR and high-efficiency equipment	ENERGY STAR/high-efficiency is an important search criteria for consumers seeking home products Retailers, manufacturers, distributors and contractors incorporate supply, promotion and service of high-efficiency products (without NYSERDA support)	Mystery shopping - QA Store intercepts
<b>Long-Term Outcomes (10+ years)</b>		
Increased availability and product range of high-efficiency products (without NYSERDA supply/mid market assistance)	Change in the number and proportion of stores offering ENERGY STAR and high-efficiency equipment by geographic region, by store type Variation and ability of different needs to be met through a range of ENERGY STAR and high-efficiency equipment by geographic region, by store type	Store visits Program records Mystery shopping Market analysis, product sales for specialty products
Increased proportion of equipment purchased is ENERGY STAR/high-efficiency equipment	Change in the number and proportion of bulb sales that are ENERGY STAR/high-efficiency	Market transformation evaluation for market penetration and program-induced changes
Energy savings, peak demand and related bill reduction, environmental and health benefits	Amount and dollar value of kW, kWh, fossil fuel savings, and subsequent emission reductions	Impact evaluation for reliable estimates of kW, kWh savings Non-energy impact evaluation for health effects (customer surveys)
Program contributes to achievement of overall SBC Residential portfolio goals		

## 7 – TESTABLE HYPOTHESES (RESEARCHABLE ISSUES) FOR EVALUATION EFFORTS

Based on an assessment of these preliminary initiative logic models, a number of evaluation researchable issues have been identified and are noted below. Some of these have been investigated and continue to be investigated through NYSERDA evaluation activities.

- Are the advertising campaigns, outreach efforts and promotional materials effective? How effective/cost-efficient? What is the effectiveness for each of their target audiences, targeted messages? How well do they work together to increase consumer awareness, knowledge, intent

and ability to act on those intentions? What is their impact on sales of ENERGY STAR and high-efficiency products?

- Is the supply-side market development moving forward as anticipated? Is the program contributing to increased availability and product ranges of ENERGY STAR and high-efficiency products? Is quality supply available to meet demand? Is the program resulting in increased ENERGY STAR and high-efficiency product sales?
- Are participating retailers, manufacturers, distributors and contractors pleased with the functioning and growth in the market for ENERGY STAR and high-efficiency product?
- Are NYSERDA-sponsored buy-downs and other supplier incentive programs contributing to increased ENERGY STAR and high-efficiency product sales? Are mechanisms in place to determine when market share/sales goals for these products have been met are should no longer be covered under the program?
- Are promotional activities leading to increase in demand for ENERGY STAR and high-efficiency products by end-use customers?
- Does ENERGY STAR product advertising raises awareness for all residential ENERGY STAR products and services?
- Do these advertising efforts increase knowledge and induce greater purchases of ENERGY STAR products than otherwise would have occurred, both within and outside of the program?
- Are the ENERGY STAR and high-efficiency products meeting consumer expectations? Is there confirmation of their purchasing decisions? Does this support their continued and growing interest in having ENERGY STAR and high-efficiency product as product criteria?
- Are the feedback mechanisms in the market positive and supportive of growth in demand? Of growth in supply?
- Are quality assurance activities producing useful and valid information and demand for ENERGY STAR and high-efficiency products?
- What level of supply/market infrastructure support is needed to maintain a sustainable market for ENERGY STAR and high-efficiency products?
- Are retailers and manufacturers recognizing profitability of promoting ENERGY STAR and high-efficiency products without NYSERDA supply/midmarket assistance?
- Are end-users recognizing savings from using ENERGY STAR and high-efficiency products and would demand be strong without NYSERDA supply/midmarket assistance?
- What are the future implications for ENERGY STAR and high-efficiency products? What future technologies will compliment or supplement their consumption?

How much continued consumer advertising is needed to maintain a sustainable market for ENERGY STAR and high-efficiency products?

Evaluation research addressing these questions will help to validate the reasonableness of the program theory and will inform NYSERDA program staff of program progress and also potential areas for program refinement.