

**Business Partners – Motor Systems Program  
Program Logic Model Report**

Final Report

Prepared for

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

Prepared by

**GDS Associates, Inc.**

**NYSERDA  
April 2010**

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**NEW YORK STATE ENERGY RESEARCH AND DEVELOPMENT AUTHORITY  
NEW YORK ENERGY \$MART<sup>SM</sup> BUSINESS PARTNERS MOTOR SYSTEMS PROGRAM  
PROGRAM LOGIC MODEL REPORT  
(FINAL – APRIL 12, 2010)**

**INTRODUCTION**

This document provides:

1. A table showing a list of documents relating to NYSERDA's **New York Energy \$mart<sup>SM</sup> Business Partners: Motor Systems Program** that were 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 potentially complementary and/or competing programs, and a brief program description. Available market characterization information is also presented in this section;
3. 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;
4. A program logic model diagram showing the linkages between inputs, program activities, outputs and outcomes, and identifying potential external influences;
5. 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
6. 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:

**Table 1 – Relevant Documents Reviewed**

<b>NYSERDA Document Description</b>
RFP 1055 Business Partners Program: Motor Systems
GDS Associates, Inc. <b>New York Energy \$mart<sup>SM</sup></b> Business Partners Program Logic Model Report. Final July 2007.
NYSERDA Business Partners Program Final Evaluation, Measurement and Verification Plan. August 2009
RFP 1053 Business Partners Program: Core Services
New York Systems Benefits Charge Programs Evaluation and Status Report. Quarter Ending December 31, 2009
<b>New York \$mart Program<sup>SM</sup></b> Evaluation and Status Report Year Ending Decemeber 31, 2008. Final Report March 2009
Business Partners Program for Motor Systems – Statement of Work (through Septmber 2010)
Websites: <a href="#">Business Partners Program for Motors Systems</a>
Summit Blue Consulting, <b>New York Energy \$mart<sup>SM</sup></b> Premium-Efficiency Motors (PEM) Program Market Characterization, Market Assessment, and Causality Evaluation Final Report, May 2005
Summit Blue Consulting, <b>New York Energy \$mart<sup>SM</sup></b> Premium-Efficiency Motors (PEM) Program Market Characterization, Market Assessment, and Causality Evaluation Final Report, May 2006
Optimal Energy, Achievable Electric Energy Efficiency in New York State, DRAFT November 2008.
DSIRE Website: <a href="#">New York Incentives/Policies for Energy Efficiency Database of State Incentives for Renewables &amp; Efficiency</a>
State of New York Public Service Commission, Orders Approving Certain Commercial and Industrial Customer Energy Efficiency Programs with Modifications, October 15, 2009 and November 12, 2009
Central Hudson Gas & Electric website: <a href="#">Savings Central</a>
NYSEG and RG&E websites: <a href="#">Look Upstate New York Assistance &amp; Incentives</a>

**2 CONTEXT AND PROGRAM DESCRIPTION<sup>1</sup>**

The Business Partners Program, of which the Motor Systems Program is a component, is designed to promote the purchase and installation of energy efficient products and services through working with trade allies. The Program is also aimed at promoting the availability of the most energy efficient products on the market. Part of the goal is to train allies on the most efficient equipment (a strong market transformation effort is tied to the program). NYSERDA’s Business Partners Program allies include building and systems contractors, distributors, vendors, designers and energy service providers. Through the program, business partners gain access to special training, tools, guidelines, participation in customer ride-alongs, and assistance for vendors in performing motor inventories. NYSERDA works with its business partners to help them differentiate their businesses in a highly competitive marketplace, while assuring appropriate quality. This is done by creating a brand identity that conveys the theme that mid-market businesses are vital to the growth of the energy efficiency industry as well as to the State’s

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<sup>1</sup> The description in this section comes from NYSERDA’s Business Partners Program Final Evaluation, Measurement and Verification Plan. August 2009 and RFP 1055.

economy. Through the Business Partners Program, NYSERDA aims to accomplish the following objectives:

1. Improve and make market development efforts more friendly
2. Offer potential participants one-stop shopping (*i.e.*, a turnkey approach to program participation)
3. Provide better integration among programs serving different products and markets

By achieving these objectives, NYSERDA hopes to strengthen the overall impact of market development efforts and increase the visibility and focus of energy efficient products and services for commercial and industrial businesses. The Business Partners Program consists of two key activities: 1) providing core services and strategies for use across market development efforts, and 2) providing customized tools and strategies that strengthen the availability, delivery, and demand for targeted energy efficient products and services. Participating business partners will also work closely with contractors from NYSERDA’s Energy Smart Focus program to integrate relevant core themes and resources into sector-based plans and activities and will work with other NYSERDA project managers and implementation contractors.

With a thirteen year budget of \$43.9 million<sup>2</sup>, through December 2009, the Business Partners cumulative annual energy and peak demand savings total 97,221 MWh/year and 23.4 MW on-peak, respectively. Overall, the Business Partners Program goal is to sign up 1,500 partners over five years. A total of 52 Motors partners have signed up since July 1, 2006.<sup>3</sup> Table 2, below, shows the Business Partners Program’s five year (through 2011) goals and its achievements through December 2009.

**Table 2 – New York Energy Smart<sup>SM</sup> Business Partners Program – Goal and Achievement**

	<b>Program Goals (July 1, 2006 through June 30, 2011)</b>	<b>Program Achievements July 1, 2006 through December 31, 2009</b>	<b>Program % of Goal Achieved</b>
Business Partners (signed up)	1,500	204 including 52 Motors partners	14%
Demand Savings (MW)	9	23	>100%
Energy Savings (GWh)	45	97	>100%

The Business Partners Program is an integration of three prior programs: Motors Systems, Commercial Lighting, and Building Performance and HVAC. Activities associated with each of these program components, it is believed, will help to increase the awareness and familiarity of the Program’s targeted technologies and services. By partnering with businesses, market infrastructure will be strengthened leading to increased product and service availability and increased demand. All three of these Business Partners Program components are designed to work together to promote high-efficiency equipment. However; separate Program Logic Model reports are being developed for each component to properly identify and document important differences in implementation strategies and anticipated market outcomes. The remainder of this document focuses exclusively on the *Motor Systems* component as discussed in more detail below.

The *Motors Systems* component of NYSERDA’s Business Partners Program, formerly known as the Premium-Efficiency Motors Program, works with suppliers and providers of motors and motor repair services to promote the sale of NEMA Premium<sup>®</sup> motors, quality motor repairs, and motor management services. Motor management activities include motor assessments, planning for future repairs and

<sup>2</sup> New York Energy Smart<sup>SM</sup> Program Evaluation and Status Report Year Ending December 31, 2009. Final Report March 2010.

<sup>3</sup> New York System Benefits Charge Programs Evaluation and Status Report. Quarter Ending December 31, 2009.

replacements, and consideration of drives. The implementation contractor for this component is Applied Proactive Technologies who, among other responsibilities, works with participating vendors to present the case for a motor management program to their customers, to conduct motor assessments, and to facilitate implementation of motor management plans and policies whenever possible. The Motor Systems component works with the overall Business Partners Program towards strengthening the market for highly efficient and newly available or underused products or services related to motors. An important aspect of this component is to conduct inventories and promote early replacement of motors. In addition, this component seeks to both broadly increase the number of suppliers offering targeted products and services, and also to work with a smaller, select group of suppliers to extensively influence their practices. Examples of the targeted products and services that are of interest to NYSERDA with respect to Motor Systems includes, but are not limited to, the following:

- Motor management
  - The Program is interested in building upon existing services, such as ride-alongs and motor inventories, and includes: 1) increasing vendor capabilities of delivering motor management services through customized approaches or assistance that reflect individual needs, 2) increasing customer implementation of immediate replacement recommendations, and 3) encouraging customers to pursue additional energy savings opportunities on an ongoing basis.
- Pump efficiency improvements
  - The Program identifies cost-shared technical and financial incentives (offered through NYSERDA's Existing Facilities Program) to customers to help with identifying and analyzing these opportunities and offsetting capital project costs. The Program also provides additional market capacity and support resulting in an increased number of customers pursuing these opportunities.
- Variable frequency/speed drives
  - Similar to pumps, the Program identifies cost-shared technical and financial incentives (offered through NYSERDA's Existing Facilities Program) to customers to help with identifying and analyzing these opportunities, and offsetting capital project costs, while seeking to strengthen partnership approaches to help develop this market.

Through December 2009, Business Partners: Motor Systems Program cumulative annual energy and peak demand savings total 9,178 MWh/year and 1.3 MW On-Peak, respectively.<sup>4</sup> Through the Program, NYSERDA also intends to enhance efforts including:

- Enrolling Business Partners who agree to strengthen the availability, delivery, and demand for targeted products and services
- Focusing on highly efficient technologies and newly available and underused technologies and services, particularly those that promise significant reductions in energy use and costs
- Offering a number of strategies to help Partners differentiate their business in a highly competitive marketplace, while maintaining high standards of quality. Strategies are likely to include special training, tools, guidelines, recognition, and field support.

As part of the overall Business Partners Program effort, NYSERDA has broadly categorized its commercial and industrial market development efforts into two groups, as shown in Table 3. Group A programs have a stronger market development focus but only modest to no incentives, providing

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<sup>4</sup> New York System Benefits Charge Programs Evaluation and Status Report. Quarter Ending December 31, 2009.

significant informational or educational components. Group B programs are incentive-based and have a stronger emphasis on resource acquisition, providing financial assistance for targeted energy-efficiency and demand reduction measures in specific end-use customer projects. Business Partners will focus initially on developing services for the Group A programs, anticipating expanding to Group B programs in the second phase of the Program. Unless otherwise noted, NYSERDA has offered these programs throughout the SBC territory, which includes the electric utility service areas of: Central Hudson Gas & Electric Corporation, Consolidated Edison Company of New York, Inc., New York State Electric & Gas Corporation, National Grid, Orange and Rockland Utilities, Inc., and Rochester Gas and Electric Corporation.

**Table 3 – NYSERDA’s Commercial and Industrial Programs**

Group “A”	Group “B”
Small Commercial Lighting Program HVAC and Building Performance Program Premium Efficiency Motors (no incentives) Innovative Opportunities	New York Energy \$mart <sup>SM</sup> Energy Audit Program Flex Tech Technical Assistance Program Combined Heat and Power and Renewable Generation Technical Assistance Enhanced CIPP (now Existing Facilities) New York Energy \$mart <sup>SM</sup> New Construction Program Green Buildings Program Peak Load Reduction Program (now part of Existing Facilities) New York Energy \$mart <sup>SM</sup> Loan Fund

**2.2- MARKET ASSESSMENT**

The most recent full Market Characterization, Assessment, and Causality (MCAC) evaluation for the New York Energy \$mart<sup>SM</sup> Premium-Efficiency Motors (PEM) Program was completed in 2005. The comprehensive evaluation covered the period from program inception through year-end 2004. In late 2005, the MCAC Team began updating certain aspects of the earlier comprehensive evaluation effort and presented results in a report dated May 2006. All data in this section, unless noted otherwise, are from the 2006 Premium-Efficiency Motors (PEM) Program updated MCAC report, and describe the state of energy efficiency in New York as of that time.

**2.2.1 Description of Baseline Conditions**

*Savings Already Achieved*<sup>5</sup>

Through December 2009, Business Partners: Motor Systems Program cumulative annual energy and peak demand savings total 9,178 MWh/year and 1.3 MW On-Peak, respectively, with 91 Business Partners currently participating in the program (204 since program inception).

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<sup>5</sup> Program Staff

### ***Market Share***

Five scenarios were probed in the 2006 MCAC survey to identify whether customers will replace EPAct motors with NEMA Premium<sup>®</sup> efficiency motors. Survey responses indicated that more than 80% of EPAct motors identified in the PEM Program inventories are likely to be replaced by NEMA Premium<sup>®</sup> motors. Nearly 74% of customers indicated that the inventory will likely increase their use of NEMA Premium<sup>®</sup> efficiency motors.

### ***Awareness***

More than 60% of respondents to the 2006 MCAC survey were either familiar with or extremely familiar with the NEMA Premium<sup>®</sup> standard, compared to approximately 42% indicating this level of familiarity in the 2005 MCAC survey. Also of note is that no respondents to the current survey reported being not at all familiar with NEMA Premium<sup>®</sup> standards, compared to 27% indicating no familiarity in the 2005 MCAC survey.

All customers surveyed indicated that the PEM Program inventories will be either important or very important in selecting the efficiency of replacement motors. According to 60% of respondents, the inventories will be used in capital planning for retrofitting operating motors with more efficient motors.

### ***Availability of Energy Efficient Products and Services***

The 2005 report noted that a NEMA report indicated 14,825 premium-efficiency motors had been shipped to New York in 2003. Using an estimate developed by the MCAC Team of approximately 67,700 motors sold statewide in 2004 and assuming that the motor market remained relatively constant between 2003 and 2004, it was estimated that NEMA Premium<sup>®</sup> motors accounted for approximately 21.9% of motors sold in New York in 2004.

### ***Market Barriers***

In the 2006 survey, higher initial cost to purchase NEMA Premium<sup>®</sup> motors was identified most frequently as a market barrier, followed by policies to purchase motors based on lowest first cost and uncertainty about payback period. In general, customers rated these barriers a three on a five point scale, implying that these barriers had neither increased nor decreased in importance during the previous 12 months.

### ***Cost and Pricing***

The average retail price per HP for EPAct motors changed from \$73.00 to \$73.20 from 2004 to 2005, while the average retail price / hp for NEMA Premium<sup>®</sup> motors changed from \$85.91 to \$91.25 during this same period. It is not clear why the unit price increase for NEMA Premium<sup>®</sup> motors was greater than the increase for EPAct motors, though a greater content of copper in NEMA Premium<sup>®</sup> motors may be an influence.

### ***Attitudes, Behaviors and Perception***

More than 90% of customers indicated that the motor inventory has caused them to view the vendor who provided the inventory more favorably than competing vendors who do not provide this service. When asked to rate their interest in accepting vendor assistance in using the completed motor inventory to develop a new motor management plan or enhancing an existing plan, over 77% of customers surveyed in 2006 responded that they would be extremely interested, while also, in the 2006 survey less than 5% expressed that they would *not* be interested.

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

In addition to NYSERDA's Motor Systems component of the Business Partners 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 3.5 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.

### 2.3.1 New York Utility Commercial and Industrial Motor Efficiency Programs

While New York area utility programs focus on the customer side of the market, incentivizing the installation of high-efficiency motors, it is important to note that NYSERDA's Business Partners: Motor Systems Program works in both the demand side and mid-market areas with focus on working with its business partners to help them differentiate their businesses in a highly competitive marketplace. While NYSERDA's Program is comprehensive, aimed at transforming the larger market for high-efficiency motors, the following utility-sponsored motor programs have the potential to impact NYSERDA's efforts.

#### **Central Hudson Gas & Electric – *Small Business Energy Efficiency Program*<sup>6</sup>**

The Business Energy Savings Central program is for non-residential customers of Central Hudson with electric demand of less than 100 kilowatts average per month. This includes businesses, local governments, not-for-profits, private institutions, public and private schools, colleges and healthcare facilities. The program offers a free energy audit by one of Central Hudson's participating Trade Allies or a representative of Central Hudson. The program's audits include a report detailing where efficiency measures (including Motors and Motor-ASDs/VSDs) can produce the most savings, the cost of installing each measure, and the expected payback period for each installation. The program also offers rebates up to 70 percent of the equipment cost for qualified efficiency upgrades. After installation, a Central Hudson representative will inspect the project, based on a quality assurance plan, to verify that the upgrade matches the performance specified in the auditor's proposal.

#### **Central Hudson – *Mid-size Commercial Business Program*<sup>7</sup>**

This program would address energy efficiency for the non-residential customer segment with electric loads of 100 kW to 350 kW. It would provide services including: energy audits, implementation assistance, and prescriptive and custom measures and incentives for implementing energy efficiency improvements at facilities within this electric demand range, such as hotels, motels, restaurants, grocery stores, and colleges. The proposed prescriptive measures and corresponding incentives are comparable to those offered by the Small Commercial Business Direct Installation electric energy efficiency program that Central Hudson currently operates for commercial customers with loads of up to 100 kW. Prescriptive rebates would include: (a) lighting; (b) heating, ventilation, and air conditioning (HVAC) equipment, including ground source heat pumps and heat pump water heaters; and (c) motors and variable speed drives for single speed motors. Eligible custom measures would receive a one-time incentive payment of \$0.14 per kWh saved annually.

#### **Consolidated Edison- *Commercial and Industrial Equipment Rebate Program*<sup>8</sup>**

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<sup>6</sup> DSIRE website, [New York Incentives/Policies for Energy Efficiency, Central Hudson Gas & Electric - Small Business Energy Efficiency Program](#). Central Hudson Gas & Electric website: [Savings Central](#)

<sup>7</sup> State of New York Public Service Commission, Order Approving Certain Commercial and Industrial Customer Energy Efficiency Programs with Modifications, October 15, 2009

<sup>8</sup> State of New York Public Service Commission, Order Approving Certain Commercial and Industrial Customer Energy Efficiency Programs with Modifications, November 12, 2009

This proposed program is designed to encourage commercial and industrial customers to purchase and install high-efficiency equipment in their facilities. It would offer customers financial incentives at a rate of up to 70% of either the measure cost or the incremental measure cost (depending on the measures installed) for installing high-efficiency heating, cooling, and ventilation equipment, or for upgrading lighting and motors.

#### **Consolidated Edison- Commercial & Industrial Custom Efficiency Program<sup>9</sup>**

This program would provide incentives for energy efficiency measures in existing buildings and for new construction that are not offered through other programs. Incentives would be offered to participants for any measure, process, or operational improvement that provides cost-effective energy savings. C&I customers would be offered financial incentives for upgrading equipment or systems and improving processes (e.g., lean manufacturing, retro-commissioning, or monitoring-based commissioning) not covered specifically by other Con Edison C&I programs. Initially, the program would place special emphasis on data centers and healthcare facilities. Con Edison plans to offer a rebate to cover up to 50% of the cost of a technical survey to identify potential cost-effective measures in a facility. The total survey rebate amount would be capped at \$50,000.

#### **National Grid (Niagara Mohawk) – Energy Initiative Program<sup>10</sup>**

The Energy Initiative program component addressed here would target commercial and industrial customers with a demand of less than 2 MW to promote retrofits of mechanical and electrical systems in commercial, industrial, agriculture, governmental, and institutional buildings. The program would provide technical assistance and incentives to encourage installation of energy efficiency measures and provide recommendations for ways to improve energy efficiency. The program addresses both electric and gas energy efficiency measures using both prescriptive and custom measures and incentives.

Niagara Mohawk proposes that the electric portion of the Energy Initiative program offer three services: financial incentives, technical assistance, and commissioning. Eligible customers could qualify for custom and/or prescriptive incentives. The proposed custom rebates would equate to either 50% of the total installed measure costs, which include labor and equipment, or the cost to buy down the equipment costs to the customer to the equivalent of a one-year payback, whichever cost is less to Niagara Mohawk. The proposed prescriptive measures include lighting systems, lighting controls, energy management systems and economizer controls, efficient motor and drive systems, air compressors, high performance ventilation, and variable frequency drives.

#### **New York State Electric and Gas and Rochester Gas & Electric – Non- Residential Commercial and Industrial Prescriptive Rebate Program<sup>11</sup>**

NYSEG/RG&E propose a prescriptive rebate program for their non-residential electric and gas customers. The program is designed to serve commercial, industrial, institutional, and municipal customers with an electric load of less than 2 MW, although customers with demand of 2 MW or greater would also be eligible to participate. Electric rebates would be available for: air conditioning, chillers, heat pumps, lighting and lighting controls, electric motors, and variable speed drives. Rebates have been proposed on the basis of the measure type and/or efficiency rating. Eligible heating (gas) equipment and controls would receive rebates on the basis of type, size, and efficiency rating.

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<sup>9</sup> State of New York Public Service Commission, Order Approving Certain Commercial and Industrial Customer Energy Efficiency Programs with Modifications, November 12, 2009

<sup>10</sup> State of New York Public Service Commission, Order Approving Certain Commercial and Industrial Customer Energy Efficiency Programs with Modifications, November 12, 2009

<sup>11</sup> NYSEG and RG&E websites: [Look Upstate New York Assistance and Incentives](#)

**New York State Electric and Gas and Rochester Gas & Electric – Non- Residential Commercial and Industrial Custom Rebate Program<sup>12</sup>**

These proposed programs are directed toward commercial, industrial, institutional, and municipal customers with an electric load of less than 2 MW, although customers with load greater than 2 MW would also be eligible to participate. The programs are designed to encourage customers to identify and implement energy efficiency improvements in their facilities. NYSEG/RG&E propose general categories of eligible measures for rebates that may include, but are not limited to: energy management systems, building thermal envelope upgrades, energy recovery systems and economizers, variable-speed air compressors, energy efficient process improvements, geothermal heating and cooling, day-lighting systems, infrared radiant heaters, steam traps, grain dryers, and heat-recovery systems. Rebates would be paid on the basis of either 50% of the incremental difference between the cost of a standard equipment measure and the comparable energy efficient equipment option or the amount necessary to reach a two-year equipment payback period in energy consumption savings, whichever is less.

**New York State Electric and Gas and Rochester Gas & Electric – Business Energy Efficiency Assistance<sup>13</sup>**

NYSEG and RG&E partner with NYSERDA on several programs to encourage energy efficiency. Under these programs, the applicant will be required to make a financial contribution of at least 33.3% to the total investment made. Through NYSERDA's Energy Audit Program, NYSEG and RG&E will provide up to 50% matching funds, (\$10,000 maximum) toward the total investment made as a result of an energy audit. Through either NYSERDA's Flexible Technical Assistance Program (Flex Tech) or New Construction Program, NYSEG and RG&E will pay up to 33.3% of the cost of a feasibility study or analysis, not to exceed \$20,000 per study/analysis. If the applicant decides to make investments as a result of a study or analysis, RG&E will provide up to \$50,000 toward the total investment made.

**Orange & Rockland – Commercial Existing Buildings Program<sup>14</sup>**

This program would target existing commercial and industrial customers with a peak demand of over 100 kW for retrofit projects and incentives to avoid lost opportunities for installing cost-efficient measures at the time of equipment replacement or facility expansion. The program offers incentives for both prescriptive and custom energy efficiency measures that include, but are not limited to: interior and exterior lighting, HVAC equipment, refrigeration, retro-commissioning, high-efficiency customer-site transformers, water heating measures, and high efficiency kitchen equipment. Incentives for custom measures include all cost-effective measures not offered prescriptively.

**2.3.3 NYISO**

It is possible participants in the Business Partners: Motor Systems Program are eligible to participate in several demand-response programs offered by the NYISO. Awareness of and coordination with these programs potentially has many benefits for both end-users and the state. The NYISO has two Demand Response programs: the Emergency Demand Response Program (EDRP) and ICAP Special Case Resources (SCR) program. Both programs can be deployed in energy shortage situations to maintain the reliability of the bulk power grid.<sup>15</sup>

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<sup>12</sup> NYSEG and RG&E websites: [Look Upstate New York Assistance and Incentives](#)

<sup>13</sup> NYSEG and RG&E websites: [Look Upstate New York Assistance and Incentives](#)

<sup>14</sup> State of New York Public Service Commission, Order Approving Certain Commercial and Industrial Customer Energy Efficiency Programs with Modifications, November 12, 2009

<sup>15</sup> NYISO website: Markets and Operations, [Demand Response Programs](#)

- The Emergency Demand Response Program is designed to reduce power usage through the *voluntary* shutting down electrical end-uses (or turning on on-site electric energy generators) within businesses and large power users. Companies, mostly industrial and commercial, sign up to take part in the EDRP. The companies are paid for reducing energy consumption when asked to do so by the NYISO.
- Special Case Resources is a program designed to reduce power usage through the *mandatory* interruption of large electrical end uses within participating businesses and large power users’ facilities. Companies, mostly industrial and commercial, sign up to become SCRs. The companies must, as part of their agreement, curtail power usage, usually by shutting down critical end uses when asked by the NYISO. In exchange, they are paid in advance for agreeing to cut power usage upon request.

The NYISO's Day-Ahead Demand Response Program (DADRP) also allows energy users to bid their load reductions, or "negawatts", into the Day-Ahead energy market as generators do. Offers determined to be economic are paid at the market clearing price. DADRP allows flexible loads to effectively increase the amount of supply in the market and moderate prices.

### 3 KEY ELEMENTS SUMMARY

Based on a review of relevant NYSEDA documents, below is a summary of some key elements of the Business Partners Program: Motor Systems component.

#### 3.1 Ultimate Goals

The Business Partners: Motors Systems Program is part of NYSEDA’s commercial and industrial (C&I) program portfolio. The C&I sector portfolio is designed to address all four SBC goals by developing sustainable business, industrial, and institutional markets for energy efficiency and demand management. The market infrastructure and demand side goals for the broader C&I portfolio are listed in Table 4.

**Table 4 – Goals for NYSEDA’s C&I Programs**

Market Infrastructure/Policy	Demand-Side
Expanded delivery channels for energy efficiency and demand response services Larger, robust and sustainable market for energy efficiency services and products Increased capacity of energy services companies to deliver quality projects that produce reliable benefits Increased number of firms with experience and confidence in delivering energy efficiency and peak load reduction measures	Projects demonstrate persistent energy savings and provide other benefits to end-users Customers have reliable information on which to base energy-related decisions Customers have confidence in energy savings estimates and value the energy efficiency and green building features of their projects Access to energy efficiency services is improved for all types of customers including underserved customers

The Business Partners: Motor Systems Program directly contributes to the above Market Infrastructure/Policy goals by streamlining and improving market relationships that NYSEDA has built among trade allies and by improving the ability of existing market actors to deliver energy efficient products and services through NYSEDA programs. The Business Partners: Motor Systems Program seeks to develop new, and build upon existing partnerships with upstream and midstream market allies in order to bring the most efficient equipment to the market and effectively deploy that equipment through NYSEDA programs. Tools, information, and improved branding and marketing will directly improve the ability of market infrastructure actors to deliver high efficiency projects to end users. Through interaction with the Motor Systems component, NYSEDA intends to demonstrate to targeted market

actors the value of providing efficient equipment and services so they are committed to stocking, promoting, and installing efficient equipment for the long term.

The Business Partners: Motor Systems Program contributes to demand side goals indirectly by working to improve the services of key segments of trade allies most involved in energy efficient equipment selection and installation. Efforts on the part of Motor Systems to improve branding and marketing on behalf of participating firms is expected to result in more visibility for qualified partners, more consumer awareness of key services, and more confidence in partners associated with the Business Partners: Motor Systems brand. The Program’s success will be measured in numbers of Motor Systems Partners and in energy and demand savings achieved as part of the overall Business Partners Program. Specifically, through December 2009, the Motor Systems component of the Business Partners Program has achieved a cumulative annual energy savings total of 9,178 MWh/year (1.3 MW On-Peak). Other key Program outputs through December 2009 are highlighted in Table 5 below (all values reported are cumulative since Program inception):

**Table 5 – Business Partners - Motors Systems Program – Outputs**

Outputs	Value (Cumulative through December 2009)
<b>Motor Systems</b>	
Number of motors incented under the former Premium-Efficiency motor vendor incentive program	11,004
Number of participating vendors (vendors who have participated in at least one customer ride along visit)	35
Number of vendor motor management training sessions held and number of people attending training sessions	22 sessions with 137 attendees
Number of completed customer motor inventories using MotorMaster and number of motors inventoried	109 inventories covering 9,528 motors
Number of written motor management plans developed by customers	1

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

NYSERDA is seeking a stronger and more coordinated approach to its market development efforts focused on expanding the products and services that will deliver energy efficiency to commercial and industrial businesses in New York. It is hoped that better visibility, improved coordination, branding, and targeted services for Partners will increase the participation of and impact from market actors most likely to sell, install, or repair energy using equipment at commercial and industrial facilities. Since these market actors are often in the best position to recommend specific equipment or action to their customers, improving the visibility and skill of Partners who understand energy efficiency and NYSERDA program opportunities should result in increased participation among their customers.

The Motor Systems component operates within the Business Partners Program and the larger NYSERDA New York Energy Smart<sup>SM</sup> portfolio designed to create market opportunities and maximize benefit for participants and society. To encourage participation, the Business Partners: Motor Systems Program works with market actors to overcome a variety of market barriers to higher efficiency including:

- Generally, motors are replaced when they fail and often there is no time to implement and size a more efficient option
- Manufacturers are not pushing high efficiency equipment (cost-driven market)
- Higher initial cost to purchase high efficiency motors and additional technology including, variable frequency drives (VFD), pumping, and compressed air technologies

- Policies to purchase motors based on lowest first cost and uncertainty about payback period
- Information or search costs related to the lack of expertise among market actors in providing the information required to choose higher efficiency options
- Product or service unavailability, high efficiency products are expensive to manufacture and stock
- Difficulty reaching the decision maker at critical decision points
- Performance uncertainties on the part of both the consumer and the contractor

Barriers associated with the commercial, industrial and institutional sectors can be broken down into three general categories: barriers affecting the supply side, mid-market/infrastructure barriers, and barriers affecting the demand side market actors. Supply-side and mid-market/infrastructure barriers include business practices and policies that deter the development and/or delivery of energy efficient products and services, or indicate an insufficient availability of or commitment to such energy efficient products/services. Demand-side barriers in the commercial and industrial sector primarily revolve around competing needs for capital, performance uncertainties, and information or search costs. Table 6 lists specific barriers related to market actors (not ordered by priority) for the commercial, industrial, and institutional sector.

**Table 6 – Commercial, Industrial and Institutional Sector Market Barriers and Actors**

Market Area	Barriers	Market Actors
Supply side	<p>*S1 – Limited availability of energy efficient motors (NEMA Premium<sup>®</sup>)</p> <p>*S2 – Uncertainty regarding future demand for new motor technologies</p> <p>*S3 – Lack of demand for energy efficient motor equipment</p> <p>*S4 – Lack of experience with new motor technologies and high efficiency equipment</p> <p>*S5 – Lack of product labeling for high-efficient motor equipment</p>	<p>Vendors, manufacturers and suppliers of energy efficient motors and services (variable frequency drives (VFD), pumping, and compressed air technologies)</p> <p>Codes/standards and policy markers</p> <p>Utilities and load serving entities, NYISO</p>
Market Infrastructure / policy	<p>*M1 – Information or search costs. Specifically, the lack of expertise among equipment sales staff and installers who are <u>unable to provide the analysis</u> required by commercial and industrial customers when choosing a higher efficiency option and installing equipment</p> <p>*M2 – <u>Performance uncertainty</u>. Limited experience with energy efficient motor <u>equipment</u></p> <p>*M3 - Uncertainty about profit potential for providing energy efficiency services</p> <p>*M4 – Limited <u>service availability</u>. Subcontractors have limited training and experience necessary for energy efficient equipment installation and application of specific building techniques and designing for optimum energy performance</p> <p>*M5 – Limited product availability. Limited availability or long waiting times for energy efficient equipment and products to specifically meet the needs of the C&amp;I customer</p> <p>*M6 - Undervaluing energy efficiency and sustainable practices</p> <p>M7 - Contractors <u>unwilling to learn</u> and conduct services outside of their specific trade</p> <p>M8 - Lack of knowledge and access to information about market prices, trends, and market volatility needed to participate in dynamic pricing, wholesale bidding and other load management options</p> <p>*M9 – Inability to reach the decision maker during during the decision making process</p> <p>*M10- Competing priorities for allocation of resources by firms that could sell, install or support energy efficiency, demand response, or renewable generation technologies and services.</p>	<p>Motor contractors, distributors, ESCOs, engineers, architects, designers, equipment suppliers and others capable of providing accurate information in an energy audit</p> <p>Builders, contractors, retailers, sales staff, and installation contractors</p> <p>Sub-contractors and building trades</p>
Market Area	Barriers	Market Actors
Demand side	<p>*D1 - Lack of awareness, knowledge and understanding of energy efficient motors, renewable energy and load management features, products and services</p> <p>D2 – Lack of awareness, knowledge and understanding of the profit potential, equipment necessary, and business practices required to benefit from dynamic pricing and demand management options</p> <p>*D2 - Competing priorities, especially priorities associated with primary business focus</p> <p>*D3 - Information costs associated with understanding the energy-related features and associated benefits of energy efficient, renewable energy, and demand reduction technologies and other sustainable practices</p>	<p>Commercial and industrial business owners and managers</p> <p>Purchasers</p> <p>General contractors hired to oversee renovations or remodels that include energy efficient motors, equipment, products and services</p>

Market Area	Barriers	Market Actors
	*D4 - Competing needs for capital creating reluctance to pay higher first or incremental cost *D5 - Lack of reliable information on energy efficient choices and how they may apply to a given building or business *D6 - Resistance to new and/or innovative motor technologies and/or contractors *D7 – Performance uncertainties (uncertainty of savings) *D8 - Lack of knowledge of real-time pricing and other load management options D9 – Confusion caused by overlapping NYISO, NYSERDA, and utility programs	

\* indicates barriers that the Motor Systems Program seeks to directly address

### 3.3 Targeted Market Actors

The Business Partners: Motor Systems Program targets suppliers and providers of energy efficient motors, products and services for the commercial and industrial sectors. NYSERDA has established relationships with more than 1,000 businesses, but seeks to make these market development efforts more customer friendly, offer potential participants “one-stop” shopping, provide better integration among programs and markets, improve the overall marketing of the Partner brand and value, and expand demand for products and services. Contractors will coordinate and link services within Business Partners component programs and with Energy \$mart Focus Program to target specific sectors. In addition, contractors will coordinate with other NYSERDA programs including Existing Facilities, Industrial and Process Efficiency, Flex Tech, New Construction, Loan Fund, and Water/Wastewater Programs. NYSERDA’s Energy Smart Coordinators may also be an important market actor through which this program will coordinate.

### 3.4 Business Partners - Motors Systems Program Implementation Approach (“Activities”)

The Business Partners: Motors Systems Program activities work mainly with market actors in targeted market segments by: 1) building relationships, 2) simplifying NYSERDA affiliation, 3) providing valuable tools and services, 4) establishing a more cohesive brand, 5) facilitating program participation among contacts, and 6) coordinating with other regional/national and utility or NYSERDA initiatives to encourage consistency in promoting newly available or underused motor technologies and design templates. As shown in Table 7 below, these activities include: 1) relationships and outreach, 2) tools and training, 3) program coordination and collaboration, and 4) evaluation, monitoring and verification. The Motor Systems Program seeks to result in measurable improvements in the availability, promotion, sales, and delivery of targeted products and services in New York State.

**Table 7 – Business Partners - Motors Systems Program Activities**

<b>Relationships and Outreach</b>
<p>Materials developed (logos, messages, brochures) to promote NEMA Premium<sup>®</sup> motors, quality motor repairs and motor management services</p> <p>Recruitment of targeted market Partners (including suppliers and providers of motors and motor repair services) through meetings, one-on-one, and Association connections</p> <p>Communication and coordination with Program Partners (newsletters, e-mails)</p>
<b>Tools and Training</b>
<p>Technical information to encourage Partners to promote motor management plans for their customers, along with motor assessments and consideration of new/efficient motor products and services,</p> <p>Web-based tools</p> <p>Sales strategies</p> <p>Training</p> <p>Tools</p> <p>Field support</p> <p>Site visits and staff training</p>
<b>Coordination and Collaboration</b>
<p>Coordination with and leverage relevant, regional/national motor programs, NYSERDA customer-focused efforts (Energy Smart Focus), and other NYSERDA Business Partners Program elements (Commercial Lighting &amp; Building Performance and HVAC)</p> <ul style="list-style-type: none"> <li>• Northeast Energy Efficiency Partnerships (NEEP for HVAC and Lighting - Regional), Consortium for Energy Efficiency (CEE - National), US DOE, National Electrical Manufacturers Association (NEMA), Pump Systems Matter (PSM).</li> </ul> <p>Collaboration with New York area Utilities</p>
<b>Evaluation, Monitoring and Verification</b>
<p>Conduct market research, evaluation and reporting activities (monthly and quarterly status reports)</p>

### 3.5 Program Inputs and Potential External Influences

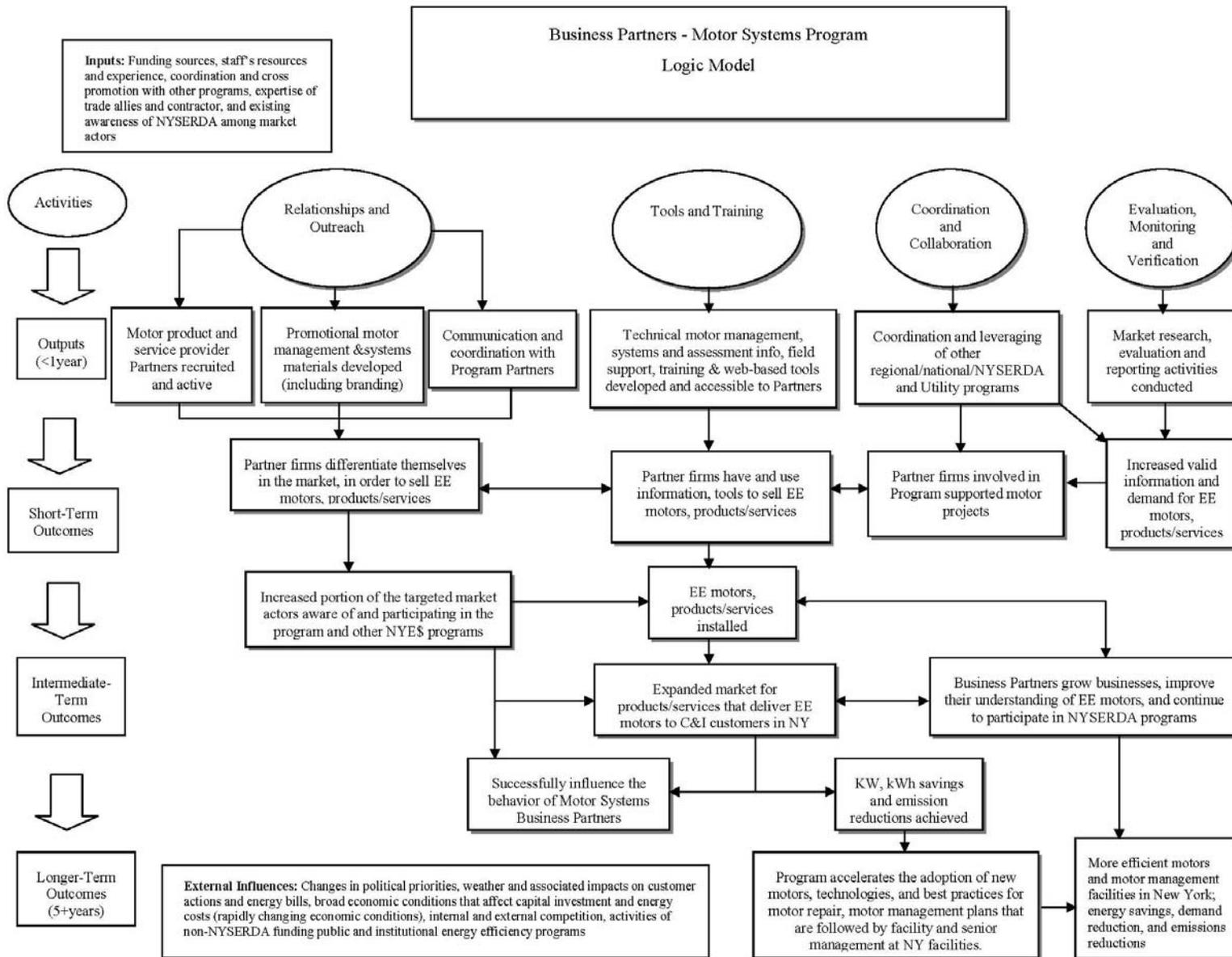
The Business Partners: Motor Systems Program’s ability to accomplish the outputs and outcomes likely to result in the Program reaching its ultimate goals will depend on the level, quality, and effectiveness of the inputs that go into these efforts. Additionally, there are external influences that can help or hinder the achievement of anticipated outcomes. Key program inputs and potential external influences are presented in Table 8.

**Table 8 –Program Inputs and Potential External Influences**

<b>Program Inputs</b>
<p>SBC funding and other funding sources</p> <p>NYSERDA’s program staff resources and prior experience implementing SBC-funded programs</p> <ul style="list-style-type: none"> <li>• NYSERDA’s credibility and relationships with key stakeholders and policy makers</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 and existing relationships with key firms</li> </ul> <p>Coordination and cross promotion with other NYSERDA programs</p> <ul style="list-style-type: none"> <li>• Business Partners Commercial Lighting Program</li> <li>• Business Partners Building Performance and HVAC Program</li> <li>• Energy Smart Focus Program</li> <li>• Other NYSERDA programs including: Existing Facilities, Industrial and Process Efficiency, Flextech, New Construction, and Water/Wastewater programs</li> </ul> <p>Expertise of trade allies and contractor</p> <ul style="list-style-type: none"> <li>• Regional / National program staff and contractors</li> <li>• Program Partners</li> </ul> <p>Existing awareness of NYSERDA among market actors</p> <ul style="list-style-type: none"> <li>• NYSERDA’s ability to recruit effective partners</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 ARRA, energy related tax credits and the Federal Energy Policy Act of 2005</li> <li>• State and local actions and 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 and rate structures)</li> <li>• Changes in utility rate structure</li> <li>• Perceptions of value of non-energy impacts</li> <li>• Activities of public and institutional purchasers and projects</li> </ul> <p>Costs, performance and availability of more efficient technologies</p> <p>Competition</p> <ul style="list-style-type: none"> <li>• Customers competing priorities (internal)</li> <li>• Broad market and demand for provisions of motor technologies and services (external)</li> <li>• Competition among target market firms and contractors that affect willingness to promote energy efficiency</li> <li>• Other service organizations investments and commitments to energy efficiency, demand response, or renewable energy</li> </ul> <p>Activities of non-NYSERDA funding public and institutional energy efficiency programs for motors</p> <ul style="list-style-type: none"> <li>• Regional / National Programs</li> <li>• Utilities (See Section 2.3)</li> </ul>

#### **4 PROGRAM LOGIC MODEL DIAGRAM**

The following page presents a logic model diagram for NYSERDA's Business Partners: Motor Systems Program. This diagram shows the linkages between activities, outputs and outcomes, and identifies inputs and potential external influences. The diagram highlights key features of the program and is at a slightly higher level than the tables in this report, aggregating some 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, to examine the anticipated linkages and performance through the various outcomes.)



## **5 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 9) and outcomes (Table 10), 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 these tables should be prioritized and subsequently considered as potential areas for investigation as part of a formal program evaluation plan.

**Table 9 – 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 Relationships and Promotions</b>		
Unified motor branding developed for Motor Business Partners. (Branding)	Existence of brochures or other collateral pieces	Program records, review of collateral for each market
Promotional materials developed for target market	Marketing materials designed for the market	Program records, review of collateral for each market
Targeted market actors recruited and working with NYSERDA	Number, type and location of market actors/firms from each of the targeted markets partnering with NYSERDA	Program records
Targeted firms active in one or more projects	Number, type and location of active projects	Program records
Communication established to ensure Partner firms are aware of other NYSERDA programs	Types of communications established	Interviews with NYE\$ program staff Review of Program records
Motor market Partner firms connect to other NYSERDA programs	Change in Partner firms’ awareness of other relevant programs (by program)	Interviews with NYE\$ program staff Survey of Partner firms
<b>Outputs from Tools and Program Training</b>		
Analysis tools available to assist Motor Partners in their projects	Number and types of electronic analysis tools available	Program records
Web-based information accessible	Information and types of content available on the Business Partners website	Program records
Motor Business Partners training and technical information developed	Number, types and location of Partner firms attending trainings	Program records
Field Support available to assists Motor Partners in their projects	Number, type and location of field support being offered	Program records
<b>Outputs from Coordination and Collaboration Activities</b>		
Program coordination and leverage from other Regional/National/ NYSERDA and Utility programs	Number, type and location of collaborative marketing and outreach efforts with other NYSERDA programs Number, type and location of firms involved/referred to in other NYSERDA programs Number, type and location of collaborative marketing and outreach efforts with other National/Regional programs Number and location of utility referrals	Program records Review of materials from each collaborative marketing and/or outreach effort
<b>Outputs from Evaluation, Monitoring and Verification Activities</b>		
Market research, evaluation and reporting activities conducted	Number and type of market research Number and type of reports generated and associated results/findings	Program records. Data assessment Monitoring and evaluation efforts from program data On-site evaluations

**Table 10 – Program Logic Model Outcomes**

Outcomes	Indicators	Data Sources and Potential Collection Approaches
<b>Short-Term (1-3 years)</b>		
Motor Partner firms differentiate themselves in the market	Number and types of marketing materials for Partner firms that reference energy efficient products and services more often than prior to their participation and than their non-participating competitors	Survey of Partner firms Survey of market actors in target market sectors
Motor Partner firms sell more energy efficiency products/services	Market for energy efficient services and products increase over time, Partner firms have greater market share of energy efficient services and products	Market study of EE products and services and Partners share
An increasing portion of the targeted market actors are aware of NYSERDA programs	Change in number and types of market actors aware of Partner firms, market actors aware of NYSERDA program from contacts with Partner firms	Survey of market actors in target market sectors or in contact with target market sectors
Motor Partner firms involved in projects supported by other NYSERDA programs	Number and types of other NYSERDA programs whose projects include Motor Partner firms as part of project team, motor products and services from Partner firms are identified in other NYSERDA program projects	NYE\$ project tracking database; verification/inspection results
Motor Partner firms have improved access to information needed to sell energy efficiency products/services	Change in the number of Partner firms aware of Business Partners information and branding materials, change in number of Partner firms reporting that this information is effective in selling products and services, by firm type and location	Survey of Partner firms
Motor Partner firms have improved tools needed to sell energy efficiency products/services	Change in the number of Partner firms that have and use Business Partners tools, change in number of Partner firms reporting that these tools are effective in selling products and services, by firm type and location	Survey of Partner firms
Motor Partner firms are aware of other NYSERDA program incentives and awards needed to sell energy efficiency motor products/services	Change in the number of Partner firms receiving incentives (from other NYSERDA programs), amount and types of incentives and awards given out, by type and location. Change in number of Partner firms that say these incentives are effective in selling products and services, by type and location	Survey of Partner firms
Valid information and demand for EE motor products/services increases	Increased demand for energy efficient motor products and services in the market, Partner firms report increased demand, by firm type, product/service and location	Survey of Partner firms
Energy efficient motor products installed and services sold by Partners	Increase in energy efficient products and services in the market, Partner firms report increased sales, Partner firms' customers report increased interest in EE products and services, by type and location	Survey of market actors in target market sectors Survey of Partner firms Survey of Partner firms' customers

Outcomes	Indicators	Data Sources and Potential Collection Approaches
<b>Intermediate-Term (3-5 years) Outcomes</b>		
Motor Partner firms increase capacity to deliver quality energy efficiency products/services	Change in number of Partner firms reporting increased customer interest and sales for energy efficient products and services, by type and location	Survey of Partner firms
Motor Partners able to grow their businesses	Change in number of Partner firms reporting growth at a higher rate than other target market sector firms or than other commercial firms in NY, by firm type and location	Survey of target market sector firms Survey of business growth in NY
Motor Partners demonstrate improved understanding of energy efficiency	Change in number of Partner firms expressing competence in energy efficiency and having ability to train own staff in energy efficiency, by firm type and location	Survey of Partner firms
Motor Partners continue to participate in other NYSERDA programs	Change in number and frequency of Partner firms products and services participating in other NYSERDA programs, by firm type, location, product/service and other program element	NYSERDA project tracking database; verification/inspection results
Expanded market for products and services that deliver energy efficient motors to C&I customers in New York	Change in the market share of energy efficient motor products and service, by type and location	Market share study of EE products and services for target market sectors
KW, kWh, savings and emissions reductions	Increased savings and emissions reductions from products and services promoted by Partner firms, by firm type, measure type and location	Impact evaluations
Successfully influence the behavior of Motor Business Partners	Change in the number of Motor Business Partners decisions influenced by program, by firm type and location	Surveys of Partner firms Program tracking database and records
<b>Long-Term Outcomes (5+ years)</b>		
Adoption of new motor technologies accelerated	Increase in the adoption rate of new technologies, by technology, firm type and location	Surveys of Partners firms
More efficient facilities and management in New York	Lower energy utilization index (EUI) for NY buildings, by building type and location	Studies of energy usage by NY buildings
Persistent energy savings, peak demand reduction, and emissions reductions	Energy savings, demand reduction, emissions reductions	Studies of energy usage by NY buildings

## 6 POTENTIAL RESEARCHABLE ISSUES FOR EVALUATION

Based on this program logic model assessment for NYSERDA's Business Partners: Motor Systems Program, a number of researchable issues have been identified and are noted below. These can be investigated through NYSERDA evaluation activities.

1. Are the outreach efforts, promotional materials and recruitment methods effective? What methods are most effective for the different target motor firms?
2. How prevalent is motor management in the general non-participating business populations and to what extent are motor assessments conducted in the general business population?
3. What type of communication is most effective in aiding Motor Partner firms? Does this vary by market segment?
4. How effective is the Motor Product branding and what impact has it had in the market?
5. What types of tools and training do Motor Partner firms want or need in order to be more effective in the market place? Does this vary by market segment?
6. What is the most effective field support strategy for Motor Partner firms?
7. What type of web-based tools are the most effective for Motor Partner firms?
8. How have the increase or change in incentive levels and awards affected the market?
9. What type of coordination and leveraging with other Regional/National Programs is most effective for Motor Partner firms?
10. Are Motor Partner firms participating in additional NYE\$ programs? Which ones?
11. What types on motor products and services are installed and in what market sector?
12. What are the most effective ways that Motor Partner firms differentiate themselves in the market?
13. What are the characteristics of Motor Partner firms that are effective in expanding the energy efficiency market?
14. How do non-Partner firms respond to Motor Partner firm success? How does that affect the energy efficiency market?
15. To what extend has Motor Business Partners' businesses grown?
16. To what extent has the Program successfully influenced the behavior of Motor Business Partners?
17. To what extent has the Program accelerated the adoption of new and/or underused motor technologies?
18. Are the feedback (communication) mechanisms in the market positive and supportive for growth in the market?
19. What are the future implications for energy efficient C&I motor technologies? What future technologies will impact the market?
20. How do Motor Partner firms plan to address the new requirement that mandates only NEMA motors to be manufactured after December 19, 2010?

Research addressing these questions will help to validate the reasonableness of the associated theories and will help inform NYSERDA program staff of progress and potential areas for program enhancement and refinement.