

PROCESS EVALUATION
HVAC Business Partners Program

Final Report

Prepared for

The New York State
Energy Research and Development Authority

Patricia Gonzales
Project Manager

Prepared by

Research Into Action, Inc.
P.O. Box 12312
Portland, Oregon 97212
503 / 287-9136

Project Staff:
Jane S. Peters
Michelle Levy Bruchs
Bob Branick
Nathaniel Albers

Project Number 9835

February 2012

NOTICE

This report was prepared by Research Into Action, Inc., in the course of performing work contracted for and sponsored by the New York State Energy Research and Development Authority (hereinafter the “Sponsor”). The opinions expressed in this report do not necessarily reflect those of the Sponsor or the State of New York, and reference to any specific product, service, process, or method does not constitute an implied or expressed recommendation or endorsement of it. Further, the Sponsor and the State of New York make no warranties or representations, expressed or implied, as to the fitness for particular purpose or merchantability of any product, apparatus, or service, or the usefulness, completeness, or accuracy of any processes, methods, or other information contained, described, disclosed, or referred to in this report. The Sponsor, the State of New York, and the contractor make no representation that the use of any product, apparatus, process, method, or other information will not infringe privately owned rights and will assume no liability for any loss, injury, or damage resulting from, or occurring in connection with, the use of information contained, described, disclosed, or referred to in this report.

ABSTRACT AND KEY WORDS

This report presents the results of an evaluation of NYSERDA's Midstream HVAC Business Partners Program. The program seeks to transform the commercial HVAC market to one where contractors routinely offer and conduct "Quality Maintenance" on HVAC equipment in accordance with the voluntary ANSI/ASHRAE/ACCA Standard 180 (Standard 180).¹ NYSERDA supports participating Business Partners by providing: training on Standard 180 and an HVAC advanced diagnostic tool; training on how to describe the benefits of and "sell" Quality Maintenance to their customers; and monetary incentives for both the purchase of a test instrument and for completion of Quality Maintenance projects. Results of the evaluation show that most of the enrolled HVAC Business Partners were enthusiastic about the program and were able to incorporate Quality Maintenance into their business models. The evaluation also showed that some partners faced challenges – related to weather and lack of time and personnel – that limited their ability to become engaged with the program. The evaluation provides details on key success factors of the program's leading partners, as well as the key barriers and challenges that held some partners back from pursuing Quality Maintenance.

¹ ANSI: American National Standards Institute; ASHRAE: American Society of Heating, Refrigeration, and Air-Conditioning Engineers; ACCA: Air Conditioning Contractors of America. The standard went into effect in 2008: [http://www.aiha.org/localsections/html/neaiha/ASHRAE 180 standard \(Ann Eckmann\).pdf](http://www.aiha.org/localsections/html/neaiha/ASHRAE_180_standard_(Ann_Eckmann).pdf)

ACKNOWLEDGEMENTS

The team wishes to acknowledge the contributions of Patricia Gonzales, Alison Neligan, and Peter Savio of NYSERDA, and Edward Smythe of KEMA for their assistance in providing advice and data throughout this evaluation. The team also would like to thank the contacts from NYSERDA, KEMA, and NYSERDA's Business Partners – HVAC contractors and technicians – who spoke with us in-depth about their experience with the program and with working to promote energy efficiency in the HVAC market.

TABLE OF CONTENTS

NOTICE	I
ABSTRACT AND KEY WORDS	III
ACKNOWLEDGEMENTS	IV
TABLE OF CONTENTS	V
LIST OF TABLES	VII
EXECUTIVE SUMMARY	ES-1
SECTION 1: INTRODUCTION	1-1
1.1 Program Description	1-1
1.2 Research Objectives	1-2
1.3 Evaluation Methodology	1-3
1.3.1 Review of Existing Documentation and Websites.....	1-3
1.3.2 In-Depth Interviews with Program and Implementation Staff.....	1-3
1.3.3 In-Depth Interviews with Participating Business Partners.....	1-3
1.4 Report Contents.....	1-4
SECTION 2: THE PROGRAM	2-1
2.1 Program Description	2-1
2.2 First-Year Program Objectives.....	2-2
2.3 Program Logic and Evaluability	2-2
2.4 Program Enrollment and Activity	2-3
SECTION 3: PARTNER EXPERIENCE WITH THE PROGRAM	3-1
3.1 Three Levels of Participants.....	3-1
3.2 Description of Respondents	3-2
3.2.1 Company Size and Location	3-2
3.2.2 Company Types	3-2
3.2.3 Program Awareness	3-2
3.3 Why Participants Became a Business Partner	3-3

3.4 Value of Program Services..... 3-4

 3.4.1 Partner Comments About Program Training 3-4

 3.4.2 Enhanced Service Offerings..... 3-4

 3.4.3 The Value of the Diagnostic Tool..... 3-4

 3.4.4 Quality Maintenance Incentives..... 3-5

3.5 Early Success Factors..... 3-5

3.6 Barriers to Participation 3-5

3.7 Early Challenges to Selling Quality Maintenance..... 3-6

 3.7.1 Customer as Building Owner versus Renter 3-6

 3.7.2 Program Timing 3-7

 3.7.3 Conveying the Benefits of Quality Maintenance (and Overcoming Initial Cost) 3-7

 3.7.4 Other Challenges..... 3-7

3.8 Partner Experience with Building Controls..... 3-7

3.9 Administrative Processes 3-9

3.10 Program Strengths..... 3-9

3.11 Suggestions for Program Improvement..... 3-10

SECTION 4: CONCLUSIONS AND RECOMMENDATIONS 4-1

APPENDIX A: INTERVIEW GUIDES..... A-1

LIST OF TABLES

Table 1-1:	Disposition Summary by Respondent Type	1-4
Table 2-1:	Number of Active Program Participants by Location and Incentives–October 2011 Data	2-4
Table 3-1:	Participant Type Categorizations.....	3-2
Table 3-2:	Reasons Respondents Became a Partner (Multiple Responses Accepted)	3-3
Table 3-3:	Value of Program Attributes to Respondents	3-4
Table 3-4:	Challenges to Selling Quality Maintenance Contracts	3-6
Table 3-5:	Building Controls Summary	3-8
Table 3-6:	Frequency of Communication with Program Staff.....	3-9

EXECUTIVE SUMMARY

The **New York Energy \$martSM** programs are funded by an electric distribution System Benefits Charge (SBC) paid by customers of Central Hudson Gas and Electric Corporation, Consolidated Edison Company of New York, Inc., New York State Electric and Gas Corporation, National Grid, Orange and Rockland Utilities, and Rochester Gas and Electric Corporation. All customers who pay into the SBC are eligible to participate in the programs, which are administered by The New York State Energy Research and Development Authority (NYSERDA), a public benefit corporation established in 1975.

SBC funds support NYSEDA's Midstream² Business Partners Program (BPP), which assists commercial and industrial contractors and technicians – trade allies that the program calls “Business Partners” – in expanding business models to promote energy-efficient products and services. NYSEDA does this by developing a brand identity and message for energy-efficient equipment and services, raising awareness of energy efficiency among end-users and making incentive applications easy to follow. The BPP works with the following types of trade allies:

- HVAC
- Lighting (through “The Right Light” Commercial Lighting Program)
- Motor systems, including motor management

This evaluation examines the HVAC Business Partners only. A previous evaluation examined the Lighting and Motors components of the Business Partners program (Peters, et al., 2010).

The goal of the HVAC component of the BPP (BPP-HVAC) is to transform the commercial HVAC market into one where contractors routinely offer and conduct “Quality Maintenance” on HVAC equipment in accordance with the voluntary ANSI/ASHRAE/ACCA Standard 180 (Standard 180).³ This standard outlines a prescriptive set of diagnostic, maintenance, and repair steps that optimize system performance and energy efficiency. Standard 180 requires that the refrigerant and airflow be tested. In order to meet this requirement, the program adopted the use of advanced diagnostic tools. This approach to HVAC system maintenance is preventive; if implemented widely, it will mark an important improvement in the frequency and thoroughness of maintenance service contracts, which in turn will improve the efficiency and life of rooftop HVAC units.

The goal of this report is to provide insight into which elements of the BPP-HVAC worked well as the program got off the ground in its first year, and which elements might be improved as the program moves into its second year in 2012.

In the first year of the program, NYSEDA's implementation contractor, KEMA, successfully recruited 32 program partners. The evaluation team selected 27 of these as eligible for interviews, and used program

² NYSEDA also implements an Upstream HVAC Program, which targets manufacturers, manufacturer representatives, and distributors. That program was evaluated in 2011 (Peters et al., 2011).

³ ANSI: American National Standards Institute; ASHRAE: American Society of Heating, Refrigeration, and Air-Conditioning Engineers; ACCA: Air Conditioning Contractors of America. The standard went into effect in 2008: [http://www.aiha.org/localsections/html/neaia/ASHRAE_180_standard_\(Ann_Eckmann\).pdf](http://www.aiha.org/localsections/html/neaia/ASHRAE_180_standard_(Ann_Eckmann).pdf)

data to sort the participants into three categories (*Leading*, *Moderate*, and *Limited*) based on their level of activity with the program. The evaluation team completed interviews with 19 participants: five *Leading*, nine *Moderate*, and five *Limited*.

The following conclusions and recommendations focus on key issues that emerged during the process evaluation.

Conclusion 1: Due to an early, hot summer, the timing of the program rollout in spring 2011 was problematic for almost half the program partners.

Recommendation 1: Offer training in locations and times where the tool will function optimally. Time the program training to correspond with cooler weather and contractors' slow time.

Conclusion 2: The program's most active partners attributed their early success in the program to three key factors:

1. A company commitment to excellence in customer service
2. Primarily offering Quality Maintenance to *existing customers* who are *building owners*
3. Emphasizing to customers the benefits of Quality Maintenance, particularly the avoidance of emergency calls and unplanned outages

Recommendation 2: Reach out to new and *Limited* program partners to share these success factors and provide guidance on how to incorporate these approaches into their own business models.

Conclusion 3: The program's *Limited* partners – the ones who enrolled and went through training, but experienced difficulty gaining traction – cited a variety of reasons for their lack of success. Most commonly though, these reasons had to do with a lack of time, a lack of confidence in general Quality Maintenance expertise, and limited ability to find the right customers.

Recommendation 3: Track partner program activity and periodically reach out to *Limited* partners with a set of suggestions and recommendations based on this research to help them obtain program momentum.

Conclusion 4: In the first year of the program, partners encountered two key challenges to selling Quality Maintenance to their customers:

1. The owner vs. renter divide
2. The timing of program rollout

Recommendation 4: Research potential solutions to the owner/renter problem and carefully time program training and initiation before the cooling season, when contractors have time to devote to learning how to apply Standard 180 and the diagnostic tools.

Conclusion 5: Program evaluability could be enhanced with the development of a formal program logic model. A logic model would serve as a tool for outlining the program theory and showing its progression from inception, to short- and medium-term objectives, through desired market outcomes. A program that clearly articulates its desired market outcomes greatly improves its ability to track market progress over time and attribute market outcomes to specific program efforts.

Recommendation 5: Prepare to work with Energy Analysis on developing a logic model by defining the program's measurable desired market outcomes. Market transformation efforts are by

their very nature long-term, and typically require multiple inputs and interventions into the marketplace. These interventions might include: a variety of programs implemented by utilities and/or public benefit corporations or energy efficiency consortia; voluntary and regulatory codes and standards; and efforts to collect and track key data that help to describe market changes over time.

Therefore, evaluability of any one program effort requires a clear understanding of that program's intended market effect. To prepare for working with Energy Analysis on the development of a program logic model, it will be useful for program staff to clearly define the desired market outcomes. A clear understanding of the market change the program seeks is a necessary input into the logic model and will enable future evaluations to attribute market progress to the HVAC Business Partners Program, where appropriate.

INTRODUCTION

The **New York Energy \$martSM** programs are funded by an electric distribution System Benefits Charge (SBC) paid by customers of Central Hudson Gas and Electric Corporation (Central Hudson), Consolidated Edison Company of New York, Inc. (Con Edison), New York State Electric and Gas Corporation (NYSEG), National Grid, Orange and Rockland Utilities (Orange and Rockland), and Rochester Gas and Electric Corporation (Rochester Gas and Electric). The programs are available to all electricity distribution customers that pay into the SBC. The New York State Energy Research and Development Authority (NYSERDA), a public benefit corporation established in 1975, began administering the SBC funds in 1998 through NYSEDA's **New York Energy \$martSM** Program. The 2006-2011 **New York Energy \$martSM** budget includes funding to create the Business Partners Program for Heating Ventilating and Air Conditioning (HVAC) Contractors and associated businesses.

1.1 PROGRAM DESCRIPTION

SBC funds support NYSEDA's Midstream⁴ Business Partners Program (BPP), which assists commercial and industrial contractors and technicians – trade allies that the program calls “Business Partners” – in expanding business models to promote energy-efficient products and services. NYSEDA does this by developing a brand identity and message for energy-efficient equipment and services, raising awareness of energy efficiency among end-users and making incentive applications easy to follow. The BPP works with the following types of trade allies:

- HVAC
- Lighting (through “The Right Light” Commercial Lighting Program)
- Motor systems, including motor management

This evaluation examines the HVAC Business Partners only. A previous evaluation examined the Lighting and Motors components of the Business Partners program (Peters, et al., 2010).

The goal of the HVAC component of the BPP (BPP-HVAC) is to transform the commercial HVAC market into one where contractors routinely offer and conduct “Quality Maintenance” on HVAC equipment in accordance with the voluntary ANSI/ASHRAE/ACCA Standard 180 (Standard 180).⁵ This standard outlines a prescriptive set of diagnostic, maintenance, and repair steps that optimize system performance and energy efficiency. Standard 180 requires that the refrigerant and air flow are tested. In order to meet this requirement, the program adopted the use of advanced diagnostic tools. This approach to HVAC system maintenance is preventive; if implemented widely, it will mark an important improvement in the

⁴ NYSEDA also implements an Upstream HVAC Program, which targets manufacturers, manufacturer representatives, and distributors. That program was evaluated in 2011 (Peters et al., 2011).

⁵ ANSI: American National Standards Institute; ASHRAE: American Society of Heating, Refrigeration, and Air-Conditioning Engineers; ACCA: Air Conditioning Contractors of America. The standard went into effect in 2008: [http://www.aiha.org/localsections/html/neaiha/ASHRAE_180_standard_\(Ann_Eckmann\).pdf](http://www.aiha.org/localsections/html/neaiha/ASHRAE_180_standard_(Ann_Eckmann).pdf)

frequency and thoroughness of maintenance service contracts, which in turn will improve the efficiency and life of rooftop HVAC units.

NYSERDA launched the BPP-HVAC in May 2010, and the first Business Partners enrolled in it in November 2010. KEMA is the program implementation contractor. NYSERDA program staff provides program oversight and works closely with KEMA staff to deliver the BPP-HVAC. KEMA staff recruits program Business Partners from across the state of New York.

1.2 RESEARCH OBJECTIVES

The goal of this report is to provide insight into which elements of the BPP-HVAC worked well as the program got off the ground in its first year and which elements might be improved as the program moves into its second year in 2012.

The Statement of Work for this evaluation contains the following research objectives.

- Assess barriers to participation in the BPP-HVAC components, including understanding reasons for program inactivity
- Document Year-1 program implementation activities in the areas of:
 - NYSERDA staff and implementation contractor activities
 - Business Partners' awareness, use, and perception of BPP-HVAC training opportunities
 - Business Partners' awareness of and engagement with NYSERDA programs and those of other utilities
 - Business Partners' perceptions of their ability to expand their business models through the incorporation of the ANSI/ASHRAE/ACCA Standard 180 for Quality Maintenance and rooftop unit diagnostic tools, and other energy-efficient products and services
- Assess the value of services provided to Business Partners, including:
 - Business Partners' views of the quality and value of the training services for ANSI/ASHRAE/ACCA Standard 180 and incentive offerings for both the diagnostic tools and completion of Quality Maintenance projects
 - Ability of Business Partners' firms to differentiate themselves in the market as a result of program services
 - Business Partners' assessments of the effectiveness of the program's end-user outreach activities
- Assess first-year partners' ability to move forward with Quality Maintenance service offerings in their businesses, including:
 - Success factors of the program's most active partners
 - Business characteristics or factors of the most active Business Partners and moderately active partners
 - Barriers holding back the least active Business Partners – those that have completed the training but had not taken steps toward implementing the practices

- Research program Partner's experience with different kinds of building controls, including:
 - Types of controls offered to customers
 - Types of controls typically installed
 - Who makes the decision on what types of controls to install
- Research the potential for program spillover, including:
 - The extent to which early active Business Partners have used their HVAC test instrument(s) for work outside the program
 - Future expectations for non-program uses of the test instrument
- Provide actionable recommendations for the current or future program design, if modifications are necessary

1.3 EVALUATION METHODOLOGY

The evaluation relied on three data collection activities.

1. Review of existing documentation (printed and electronic) and websites about the BPP-HVAC
2. In-depth interviews with program and implementation staff
3. In-depth interviews with participating Business Partners

The following sections outline the methods used to conduct these activities.

1.3.1 Review of Existing Documentation and Websites

The evaluation team (the team) reviewed documentation, websites, and previous reports about the overall Business Partners program to gain insight into program purposes and processes. The evaluation team paid particular attention to the BPP website, program participation data provided by KEMA, and the interim evaluation report describing the Lighting and Motors components of the program.

1.3.2 In-Depth Interviews with Program and Implementation Staff

In September 2011, evaluators interviewed one NYSERDA program staff member and one program implementation staff member from KEMA. These interviews provided the evaluation team with an understanding of how the program works and what program staff would like to know from the evaluation. Subsequent to these interviews, the evaluation team developed the Business Partner interview guides in consultation with NYSERDA staff (see Appendix A). The evaluation team recorded all interviews and used *NVivo 9* qualitative analysis software and Microsoft *Excel* to analyze all responses.

1.3.3 In-Depth Interviews with Participating Business Partners

In November and December 2011, the evaluation team interviewed HVAC contractors that elected to participate in the program. These interviews provided insight into their experience with the application process, their rationale for participating in the program, the value of the program, and associated topics. The evaluators paid particular attention to gathering suggestions about how the program might be improved.

NYSERDA provided the evaluation team with a list of 32 participants to contact. However, five of the 32 were deemed ineligible for contact. Three of the five had decided to opt out of the program after enrolling and the other two had entered the program too recently to provide any insights. The evaluation team contacted the remaining 27 eligible Business Partners for interviews.

The evaluation team used program data to sort these 27 participants into three categories (*Leading*, *Moderate*, and *Limited*) based on each participant’s level of engagement with any of three “program activities.” The “program activities” include: 1) submitting maintenance data, 2) applying for incentives, or 3) receiving incentives. At the time interviews started, there were five Leading participants that did at least five activities under the program, and six Moderate participants that did one to five activities. The remaining 16 participants were classified as Limited because they had enrolled in the program but had not yet undertaken any activities. The evaluators asked each group a different set of questions in order to better understand that group’s unique experiences with the program. See Table 1-1 for a disposition summary.

Table 1-1: Disposition Summary by Respondent Type⁶

Participant Type	Completed Interview	Contact Attempted	Total
Leading	3	2	5
Moderate	5	1	6
Limited	11	5	16
Total	19	8	27

The evaluation team contacted program partners by telephone, and all interviews were recorded and transcribed. Each interview lasted about 30 minutes. Evaluators used *NVivo 9* qualitative analysis software and Microsoft *Excel* to analyze all responses.

1.4 REPORT CONTENTS

Following this section, which overviews the program and evaluation, Section 2 provides additional background about the program and how it is administered, and summarizes program progress. In Section 3, the evaluation team describes participants’ experiences with the program, including recruitment, number of projects entered in the program, interactions with program implementation staff, the value of the program, and suggestions for program improvement. Section 4 provides conclusions and recommendations.

⁶ Respondent type was based on program data received prior to interviews. Analysis of interview data in this report was based on respondents’ reported number of projects, which sometimes differed from program data.

THE PROGRAM

2.1 PROGRAM DESCRIPTION

The overall goal of NYSERDA’s Midstream HVAC Business Partners Program (BPP-HVAC) is to transform the commercial HVAC market so that service providers routinely provide high-quality and energy-efficient preventive maintenance (Quality Maintenance) on rooftop AC systems in accordance with Standard 180.

To encourage market adoption of Quality Maintenance, BPP-HVAC establishes partnerships with pre-screened, high-quality HVAC firms (Business Partners), and provides them with funding, training, and technical support. NYSERDA hopes that by providing this support, program partners will:

1. Incorporate Quality Maintenance services per Standard 180 into their service contracts
2. Enhance the portfolio of services offered to customers
3. Effectively explain or “sell” the benefits of this preventive, more full-service offering.

Participating Business Partners agree to participate in the program by signing a non-legally-binding partnership agreement and a document that outlines incentive guidelines. They then receive training on:

- How to effectively provide Quality Maintenance with reference to Standard 180
- How Standard 180 improves energy efficiency, thermal comfort, and indoor air quality
- How to use an HVAC test instrument (also commonly called a “diagnostic tool”)⁷ to apply Standard 180 to service contracts
- What a Quality Maintenance contract should look like

Trainings are held throughout New York. Upon completion of the training, Business Partners are encouraged to sell Quality Maintenance contracts to their commercial customers.

In addition, NYSERDA provides Business Partners with the following financial incentives:

- One-hundred percent reimbursement – up to \$3,000 – for the purchase of a diagnostic tool after the Business Partner completes ten projects (NYSERDA also provides up to \$1,500 toward the purchase of additional diagnostic tools.⁸
- A \$250 incentive for each HVAC unit maintained per Standard 180, plus a \$500 bonus incentive after completing the first three projects

⁷ Two approved vendors sell diagnostic tools to NYSERDA’s BPP-HVAC: Stargate and Field Diagnostics.

⁸ Subsequent tools require completion of 10 additional projects in order to earn an incentive. In addition, firms must have at least one trained technician per tool.

The evaluation team reviewed program materials and conducted interviews with key staff from both NYSERDA and KEMA to learn about the program’s goals and partner activity. This section summarizes results from those interviews and program materials.

2.2 FIRST-YEAR PROGRAM OBJECTIVES

In the first year of the program, NYSERDA hoped to recruit 30 HVAC contractors as program partners. They achieved this objective, and then shifted focus away from recruiting and toward contractor training and support. However, program/implementation staff did continue some recruitment and by May 2011, 32 partners had signed on to the program. Program staff did not articulate any specific training goals, but as of June 2011, 69 contractors had completed program training on both Standard 180 and how to operate one of the HVAC test instruments.

2.3 PROGRAM LOGIC AND EVALUABILITY

According to staff interviews, BPP-HVAC is based on the premise that most maintenance on HVAC systems is “sub-standard.” Through the BPP-HVAC, NYSERDA seeks to transform the commercial HVAC market away from the common “bare-bones” approach to maintenance – e.g., changing an air filter once a year – and toward a market where systematic, preventive maintenance becomes the norm.

NYSERDA worked in the first year of the program to carefully select and work with only the highest quality HVAC companies, as they are well-positioned to become industry leaders in Quality Maintenance. Program logic posits that market laggards will look to these leading firms for guidance and eventually begin to adopt those practices into their own business models. NYSERDA also plans to reach out to a broader group of market actors in subsequent program years.

Since Standard 180 is a voluntary standard, NYSERDA’s program aims to speed its market uptake by helping Business Partners integrate Quality Maintenance into their businesses. In addition to providing training and incentivizing both the purchase of a diagnostic tool and completed Quality Maintenance jobs, this includes supporting Business Partners as they learn techniques for “selling” Quality Maintenance to customers. Toward this aim, the program teaches Business Partners how to convey the key benefits of Quality Maintenance: fewer premature failures and comfort calls; higher equipment performance (i.e., energy efficiency); and such non-energy benefits as indoor air quality (i.e., reducing risk of airborne contaminants, dirt, mold, mildew, and foul smells from the outside).

Both NYSERDA and KEMA staff contacts were able to explain the program’s logic, long-term market transformation goal, and program approach. However, neither had identified short-term or intermediate program objectives, nor did they have a formal logic model for the program. The evaluation team used this general theory to construct the evaluation approach. From an evaluability standpoint, such documentation will be important in future evaluations as the program looks to assess progress toward the market transformation NYSERDA seeks.

Key Benefits of Quality Maintenance

- Fewer premature failures and “comfort calls”
- Enhanced equipment performance, including energy efficiency and consistency of temperature
- Non-energy benefits, such as indoor air quality (i.e., reducing risk of airborne contaminants, dirt, mold, mildew, foul smells from the outside)

2.4 PROGRAM ENROLLMENT AND ACTIVITY

In the first year of the program, KEMA worked to recruit at least 30 potential Business Partners that were known to be supportive of energy efficiency efforts (for example, via their website or other available company information). Recruitment primarily occurred in two phases: October 2010 to January 2011; and in April and May 2011.

KEMA used the following eligibility criteria:

- A strong professional commitment to sell and promote the highest energy efficiencies possible in unitary AC installation and maintenance – evidence of this includes contractors that are NATE⁹ certified or are active members of local ACCA¹⁰ chapters
- A history of dedicating company resources to staff training programs that ensure technicians are knowledgeable about and proficient in energy-efficient air conditioning design, installation, and maintenance
- Employment of at least five full-time technicians

KEMA mailed or emailed letters to the targeted firms introducing the Business Partners Program. Either potential participants contacted KEMA, or KEMA followed up with a phone call to further explain the program and benefits. At that time, KEMA arranged a more formal meeting at which they would provide detailed information to the potential Business Partner.

As of October 2011, KEMA had successfully recruited 32 contractors across New York. However, as discussed above, three of these Business Partners dropped out of the program, leaving 29 active Business Partners at the time of this evaluation. The evaluation team deemed that two of these 29 contractors did not yet have enough program experience to be eligible for analysis. Thus, the evaluation team attempted to contact 27 Business Partners for interviews.

After successfully enrolling in the program, 21 Business Partners attended introductory program training in February and March 2011 on how the HVAC Business Partners program works. Following this initial program training, NYSERDA then offered two training courses – one in March 2011 that covered Standard 180, and one in April 2011 that covered how to operate the advanced diagnostic tools. In July 2011, NYSERDA offered another training session, this time combining Standard 180 and the diagnostic tool into one course. A total of 55 Business Partner employees attended *both* types of training in March and April, and another 15 attended the combined training in July, for a total of 70 employees who were fully trained in how to implement Quality Maintenance. Most partners sent two or three employees, but one partner sent six.

In the first year¹¹ of the program, 11 (approximately 40%) of the 27 program partners submitted a total of 206 Quality Maintenance data sets, 99 applications for incentives, and received \$35,835 in incentives. Program participation was not distributed equally across the state. The five Leading participants representing Central NY, Far West NY, and the Southern Tier regions received over 95% of all program

⁹ NATE: North American Technician Excellence: <http://www.natex.org/>

¹⁰ ACCA: Air Conditioning Contractors of America

¹¹ Program data are through October 2011.

incentives as of October 2011. Table 2-1 shows where in New York these 27 Business Partners operate and where the incentive dollars went as of October 2011.

Table 2-1: Number of Active Program Participants by Location and Incentives–October 2011 Data

Characteristic	Region						Total
	Central NY	Far West NY	Hudson Valley	Southern Tier	Capital Region	New York City	
Participant Type: Leading							
Number of Partners	2	2	0	1	0	0	5
Number of Quality Maintenance Projects	93	91	0	10	0	0	194
Number of Incentive Applications Submitted	45	48	0	3	0	0	96
Total Incentives Paid	\$16,950	\$16,285	\$0	\$1,250	\$0	\$0	\$34,485
Participant Type: Moderate							
Number of Partners	1	2	2	0	0	1	6
Number of Quality Maintenance Projects	6	0	1	0	0	5	12
Number of Incentive Applications Submitted	0	0	3	0	0	0	3
Total Incentives Paid	\$0	\$0	\$1,350	\$0	\$0	\$0	\$1,350
Participant Type: Limited							
Number of Partners	3	1	0	0	4	8	16
Number of Quality Maintenance Projects	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Number of Incentive Applications Submitted	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total Incentives Paid	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total Participants							
Number of Partners	6	5	2	1	4	9	27
Number of Quality Maintenance Projects	99	91	1	10	0	5	206
Number of Incentive Applications Submitted	45	48	3	3	0	0	99
Total Program Incentives Paid	\$16,950	\$16,285	\$1,350	\$1,250	\$0	\$0	\$35,835

Section 3:

PARTNER EXPERIENCE WITH THE PROGRAM

In October and November 2011, the evaluation team interviewed 19 participants – or about 70% of the 27 eligible¹² program partners. Participants shared information about their experiences with different aspects of the program, including:

- How they heard of the program
- Why they chose to become a partner
- How they found the process of joining the program
- Experience with program training
- Getting started with Quality Maintenance, including
 - Incorporating Quality Maintenance into their business models
 - Selling Quality Maintenance to customers
 - Conducting Quality Maintenance projects

Key findings about partner experiences during the program’s inaugural year are provided below.

3.1 THREE LEVELS OF PARTICIPANTS

Prior to conducting interviews, the evaluation team categorized the participants (using program data through October 2011) into three categories based on their level of activity in the program: *Leading*, *Moderate*, and *Limited*. This categorization enabled the team to research why some partners have been able to be more successful with Quality Maintenance than others. For example, the evaluation team wanted to know: What are the characteristics of the Leading partners? What are the barriers holding the Limited partners back?

However, during the course of the evaluation, program partners continued doing program activities and receiving incentives – in some cases changing their category from the evaluation team’s original designation. Therefore, the evaluation team re-categorized respondents based on newer program data. Table 3-1 shows how the classifications changed for each group.

The remainder of this section describes partner experiences with the program according to the *most recent* (December 2011) partner type designations.

¹² See Section 1.3.3 for details on evaluation methodology.

Table 3-1: Participant Type Categorizations

Participant Type	Description	October 2011	December 2011
Leading	Conducted more than five activities	3	5
Moderate	Conducted at least one program activity, including: <ul style="list-style-type: none"> • Purchase of a diagnostic tool • Completion of at least one Quality Maintenance project 	5	9
Limited	Enrolled, but conducted no program activities	11	5
Total		19	19

3.2 DESCRIPTION OF RESPONDENTS

3.2.1 Company Size and Location

Seventeen respondents worked for companies with one location in New York, one company had two locations, and one had five. Companies ranged in size from 2.5 to 230 FTE.¹³ All but one respondent reported doing over 90% of their work in New York - with the sole outlier, based in New Jersey, doing only 35%.

3.2.2 Company Types

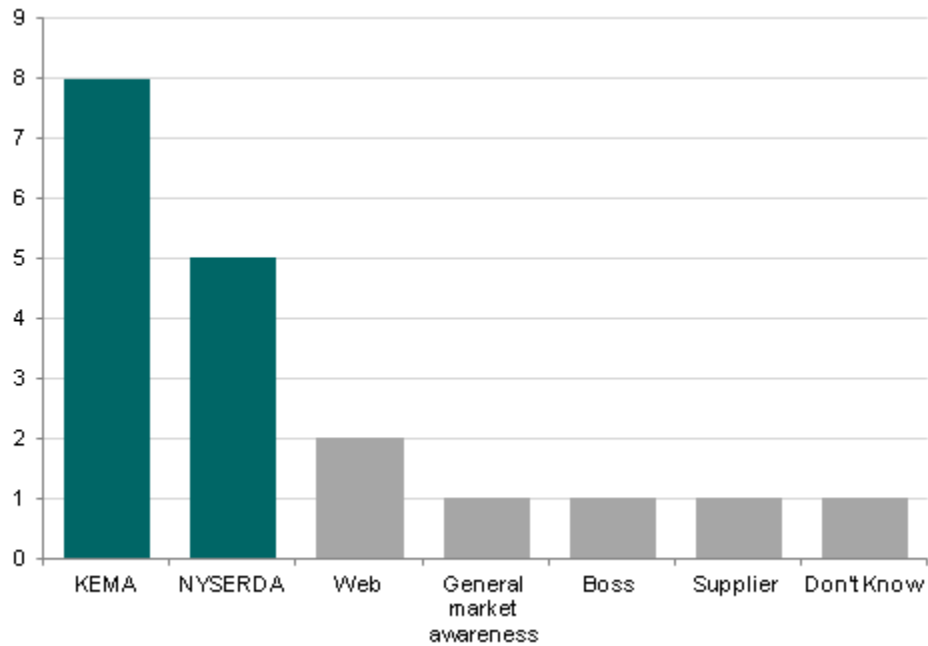
Eighteen respondents worked for HVAC companies and one worked for an energy service company (ESCO). On average, respondents did about two-thirds of their work in the commercial/industrial market and one-third in the residential market. However, six respondents reported doing commercial work only. About one-quarter of respondents' commercial work was maintenance related, about one-third was service related, and the remaining work was installations.

3.2.3 Program Awareness

Over two-thirds of respondents reported awareness of the program through direct contact with KEMA or NYSERDA (see Figure 3-1). All but one of the Leading participants claimed to have learned about the program directly from KEMA or NYSERDA contacts. Two of the Moderate respondents and two of the Limited respondents learned about the program through non-KEMA or NYSERDA contacts. The remaining respondents learned of the program through a variety of sources, including the web, general market awareness, and word-of-mouth from a boss or supplier.

¹³ FTE: Full-time equivalent employees.

Figure 3-1: How Respondents Learned About the BPP-HVAC Program (n=19)



3.3 WHY PARTICIPANTS BECAME A BUSINESS PARTNER

Most program partners cited one of two main reasons they wanted to participate in the program: about half (ten of 19) wanted to use the program to expand the range of services they offered; and about half (nine of 19) wanted to use the program to better promote energy efficiency (see Table 3-2). This latter group had two primary motivations for wanting to promote energy efficiency: 1) to provide added value to their customers, and 2) to become a leader in their field.

Additionally, three respondents thought the program would help them sell more contracts and three hoped the program would help them differentiate themselves from their competition. Lastly, one respondent reported becoming a partner because he was specifically contacted by NYSERDA to help pilot the Business Partners Program.

Table 3-2: Reasons Respondents Became a Partner (Multiple Responses Accepted)

Reason	Participant Type			Total
	Limited (n=5)	Moderate (n=9)	Leading (n=5)	
Expand/Promote Business	4	5	1	10
Promote Energy Efficiency	3	4	2	9
Make Selling Quality Maintenance Easier	1	1	1	3
Differentiation in Marketplace	0	3	0	3
Help Develop Program	0	0	1	1
Total	8	13	5	26

3.4 VALUE OF PROGRAM SERVICES

Partners found value in a variety of program attributes, but the three most commonly cited perceived benefits were training; being able to use a diagnostic tool in the field; and the ability to expand their company’s service offerings (see Table 3-3).

Table 3-3: Value of Program Attributes to Respondents

Attribute	Participant Type			Total
	Limited (n=5)	Moderate (n=9)	Leading (n=5)	
Training	4	5	1	10
Enhanced Service Offerings	3	1	2	6
Use of Tool	1	4	1	6
Differentiate from Competition	0	3	1	4
Incentive for Quality Maintenance Projects	2	0	2	4
Third-Party Verification	0	1	2	3
Document Program Savings	0	2	0	2
Total	10	16	9	35

3.4.1 Partner Comments About Program Training

During interviews, five respondents made specific comments about the value of the training. Two Limited respondents valued the training because their service technicians are more confident and doing better work since receiving training. One of these respondents stated the training “makes technicians better in the field [which is] always a benefit.” One Moderate respondent reported the training adequately prepared his company to do Quality Maintenance projects, and a Leading respondent found the training particularly useful for his younger technicians. One Leading respondent identified the training as “essential” and would like to see additional training made available in the future.

3.4.2 Enhanced Service Offerings

Two respondents expanded on how the program helped their business offer additional services. One Leading participant found that the program helps “get them in the door” with potential new clients because they are able to offer more energy efficiency services. The ESCO respondent reported his familiarity with the program allows him to suggest things like Quality Maintenance contracts to customers as part of their energy audits.

3.4.3 The Value of the Diagnostic Tool

One Leading contractor particularly appreciated the tool’s ability to provide unbiased information to customers, while another Leading contractor liked the tool’s usefulness outside of the program. One Moderate partner said he liked that the tool could help him “validate the work we are already doing for our customers and back it up with hard data.”

“[The tool can] validate the work we are already doing for our customers and back it up with hard data.”

– Moderate Program Partner

3.4.4 Quality Maintenance Incentives

One Leading respondent that valued the Quality Maintenance incentives specifically appreciated the chance to show the importance of program services to customers at little or no cost to his company.

3.5 EARLY SUCCESS FACTORS

Fourteen of the 19 interviewed program partners fell into the Moderate (nine participants) or Leading (five participants) categories of program activities. These are partners who either completed between one and five (Moderate) or completed greater than five (Leading) program activities at the time of the evaluation.

The evaluation team asked these most active program partners to describe why they think they have been successful in selling Quality Maintenance contracts to their customers. The most common response was that they emphasized the benefits of avoiding emergency calls, unscheduled maintenance, and “unplanned outages.” Another common thread that emerged from this group was a philosophy and focus on excellent customer service. Most of the active partners presented the Quality Maintenance service offering to their well-established customers and suggested that this approach was part of their early success. These partners indicated that they intended to reach out to new customers in coming years, but it did not appear that many of the program’s first-year Quality Maintenance projects were the result of partners obtaining new customers.

Finally, at least two of these partners had performed Quality Maintenance for their customers at no extra charge, implying that they viewed their first year in the program as a Quality Maintenance pilot effort of sorts for their business.

3.6 BARRIERS TO PARTICIPATION

Although this evaluation did not seek input from program nonparticipants, the team was able to glean some insight into participation barriers from the program’s five Limited participants. These are HVAC contractors, who signed on to become program partners, but were not able to make any progress toward implementing Quality Maintenance projects for their customers. Most of these partners indicated that they made some attempts to sell Quality Maintenance to their customers, but ran into a variety of roadblocks. These barriers included the following:

- Lack of time
- Not being able to find customers with appropriate equipment for Quality Maintenance contracts
- Trouble accessing customer utility bills
- Customers being “leery” about the program because they feared the diagnostic tool would determine that their equipment was obsolete, thus costing them more money
- Difficulty operating the tool
- Needing more information/training from the program to be able to move forward

In addition to the difficulty of finding the time “to become an expert in Quality Maintenance,” two of the Limited partners noted that the timing of program rollout was inopportune due to the early, hot summer weather of 2011. One of these partners found it difficult to access customer utility bills due to customer type; some customers are small retail outlets controlled by large national chains.

One respondent did not feel he had enough information about the program to undertake selling Quality Maintenance contracts and specifically made a request for “someone to come talk with us about the program.”

Finally, one respondent unfortunately reported that one of his technicians was injured this year, which affected his company’s ability to promote the program.

3.7 EARLY CHALLENGES TO SELLING QUALITY MAINTENANCE

Those respondents who did engage with the program and conduct some program activities (Moderate and Leading partners) identified nine challenges to selling Quality Maintenance Contracts (see Table 3-4).

Table 3-4: Challenges to Selling Quality Maintenance Contracts

Challenge	Participant Type		Total
	Moderate (n=9)	Leading (n=5)	
Owners versus Renters	6	3	9
Program Rolled Out at Wrong Time of Year	5	2	7
Conveying Benefits of Energy Efficiency to Customers	4	1	5
Cost	2	3	5
Getting New Customers to Buy Quality Maintenance	3	1	4
Tool Did Not Work First Time	1	0	1
Hard to Find Right Customers for Program	1	0	1
Non-Institutional Customers	1	0	1
Accessing Utility Bills	1	0	1
Total	24	10	34

3.7.1 Customer as Building Owner versus Renter

When asked to describe any challenges they have encountered with selling Quality Maintenance, the program’s most active partners most commonly cited a divide between customers who own/rent their building. One partner went so far as to say, “Only owners, not tenants, are interested in Quality Maintenance.” Several other partners echoed this sentiment, noting that operational incentives are different for building owners, who “pay their own electricity bills [and] take much better care of equipment than tenants.”

“[We focus on] customers that own, not lease, their property as they have a bigger stake in properly maintaining it and considering life cycle costs and saving energy.”

– Moderate Program Partner

It is interesting to note that one partner also said that property managers, similarly to building owners, are interested in pursuing Quality Maintenance contracts.

3.7.2 Program Timing

In 2011, summer arrived a bit early in the northeastern United States, which made for a very busy cooling season for HVAC contractors. Indeed, seven of the 14 active program partners reported that the timing of program rollout was problematic due to having a “short spring” and getting bogged down with service calls early in the season. These partners explained that by the time they were ready to sell the program to customers, the outside temperatures were unseasonably warm, prompting many service calls, which limited their ability to sell maintenance contracts. One respondent described the bad timing of the program rollout this way: “The air conditioning preventive maintenance and tune-up season was over before we could sell or market the program.” In another example, one partner’s region was struck by flooding, which increased his service and installation work, thereby limiting his ability to sell Quality Maintenance contracts.

3.7.3 Conveying the Benefits of Quality Maintenance (and Overcoming Initial Cost)

As noted above in Section 3.5, the ability to effectively explain the benefits of energy efficiency and HVAC Quality Maintenance was a key reason why the active partners have been able to achieve early success in the program. However, these same partners explained that conveying the benefits of energy efficiency to customers is not always easy. Three respondents indicated that customers want to be shown hard data or evidence before they will agree to a Quality Maintenance contract. One partner found it particularly difficult to sell contracts to new “big box” store customers, saying that it was difficult to convince big box stores of the value of energy efficiency. Another partner reported that some customers believe they can accomplish maintenance tasks with their in-house staff and therefore do not need a contractor.

Another commonly cited challenge to selling Quality Maintenance (five respondents) was getting customers to accept the cost of the contracts. Three of these respondents suspected the bad economy has kept customers from purchasing Quality Maintenance contracts. The other respondents reported that any additional costs above and beyond basic maintenance were untenable to some customers.

3.7.4 Other Challenges

Partners also mentioned a few other challenges to practicing Quality Maintenance in the field. As noted in Section 3.4, several partners suggested difficulty in selling contracts to new customers, saying it was easier to sell the service to existing customers. One of these respondents stated it is “much easier to sell maintenance contracts to [existing customers] because we are already [providing this service]. The incentives make it a no-brainer.” Another partner echoed this statement simply stating, “Existing customers are easier to sell to.” Still another partner reported particular difficulty with selling contracts to big box store chain customers due to their large contracts with low-bid HVAC firms that do not stress preventive maintenance.¹⁴ A fourth contractor suggested it was very hard to sell any HVAC service in his region, including maintenance contracts.

3.8 PARTNER EXPERIENCE WITH BUILDING CONTROLS

The evaluation team asked respondents to identify what building controls services they offer and what types of controls they commonly install. Additionally, the team asked who makes the decision about what

¹⁴ According to this partner, big box stores hire large national HVAC firms that prioritize low first cost over strategies such as investing in maintenance.

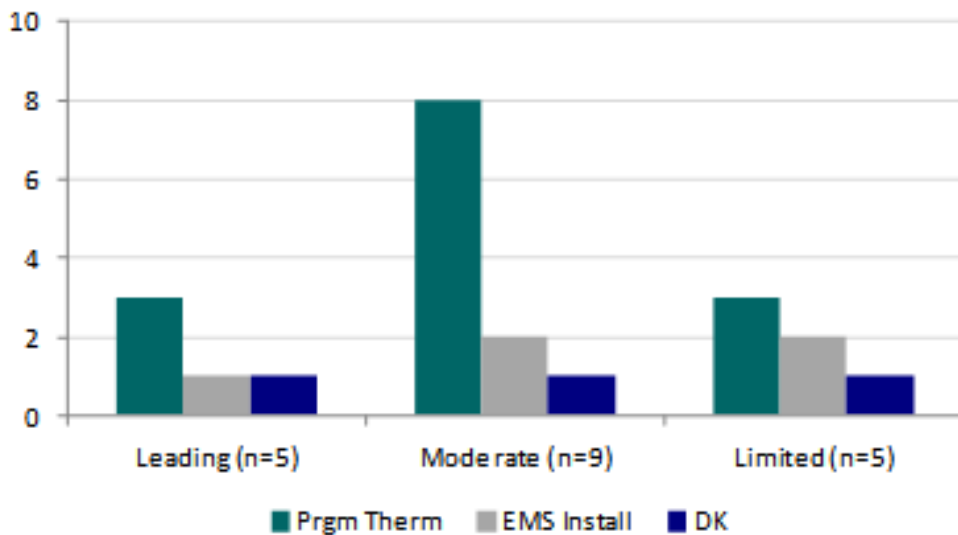
type of control to install in a building. Table 3-5 summarizes partner responses to building controls questions.

Table 3-5: Building Controls Summary

Characteristic		Participant Type		
		Limited (n=5)	Moderate (n=9)	Leading (n=5)
Control Services Offered to Customers	Programmable Thermostats	4	9	5
	EMS Install	1	6	2
	EMS Service & Repair	3	1	1
Controls Commonly Installed	Programmable Thermostats	3	8	3
	EMS	2	2	1
Primary Decision-Maker	Contractor	4	7	5
	Owner	2	5	1
	Architect/Engineer	0	1	0
	Varies	0	1	0

Almost all respondents reported offering programmable thermostat installations and service (see Figure 3-2). The only respondent that did not report offering a thermostat did not answer the questions about controls during the interview and did not respond to follow-up emails about this topic. About half the respondents reported they offer energy management systems (EMS) installation services. Of the half of respondents that do not offer EMS installations, five reported offering EMS service to their customers. The businesses that install EMSs were generally Leading and Moderate participants, while those that offer only EMS service tended to be Limited participants.

Figure 3-2: Building Controls Commonly Installed by Program Partners



The decision about what kind of building control to install appears to be the contractor’s decision according to respondents. Sixteen of the 19 respondents reported that the contractor decides what control unit to install. However, seven respondents specifically indicated the decision is made by the contractor in consultation with the building owner. Only one respondent, representing a Moderate participant company, reported that the building architect or engineer is the primary decision-maker.

3.9 ADMINISTRATIVE PROCESSES

Of the 18 respondents familiar with the enrollment process, all used words such as “smooth” and “simple” to describe the process.

When asked to report on satisfaction with their communication with program (implementation) staff, 17 of the 19 respondents said they were satisfied. Only two (both Limited) partners were not satisfied with communication with program staff. One of these partners expressed a lack of knowledge about the program and requested that someone come to his office to train him on the program. The other was dissatisfied with his communication with program staff, saying they did not return his request for assistance call when he tried to do his first project. This partner stated that by the time program staff contacted this respondent he had moved on to another project and was too busy to pursue program projects further.

Respondents indicated how often they received communications from program staff: two reported weekly contact; six reported bi-weekly contact; four reported monthly contact; and seven indicated they had less frequent contact with program staff (see Table 3-6).

Table 3-6: Frequency of Communication with Program Staff

Participant Type	Weekly	Bi-weekly	Monthly	Other	Total
Limited	1	0	0	4	5
Moderate	0	3	4	2	9
Leading	1	3	0	1	5
Total	2	6	4	7	19

3.10 PROGRAM STRENGTHS

Respondents noted several perceived strengths of NYSERDA’s HVAC Business Partners Program. Perhaps most important among them is the partners’ perceived ability to improve their customer service as a result of offering Quality Maintenance as a new service. Some of these partners noted that reducing unplanned outages and emergency calls is an added benefit to their customers. Two respondents specifically liked the “industry tested service” the program allows them to offer customers. Another liked that the program “saves [customers] real money” and one partner appreciated that the program is allowing him to “pilot” the expanded service at no cost to the customer. Furthermore, at least one respondent liked that the tool provides customers real data about how much energy they are saving.

Partners also thought the program gave them the ability to help customers link the concept of energy efficiency with preventive maintenance. As one respondent stated, “The program is a great idea...it’s great...to be able to promote energy efficiency and preventive maintenance at the same time.” Another partner described the program as “a win-win” for both NYSERDA and for their business. This partner noted that the program aligns nicely with their corporate philosophy of preventive maintenance.

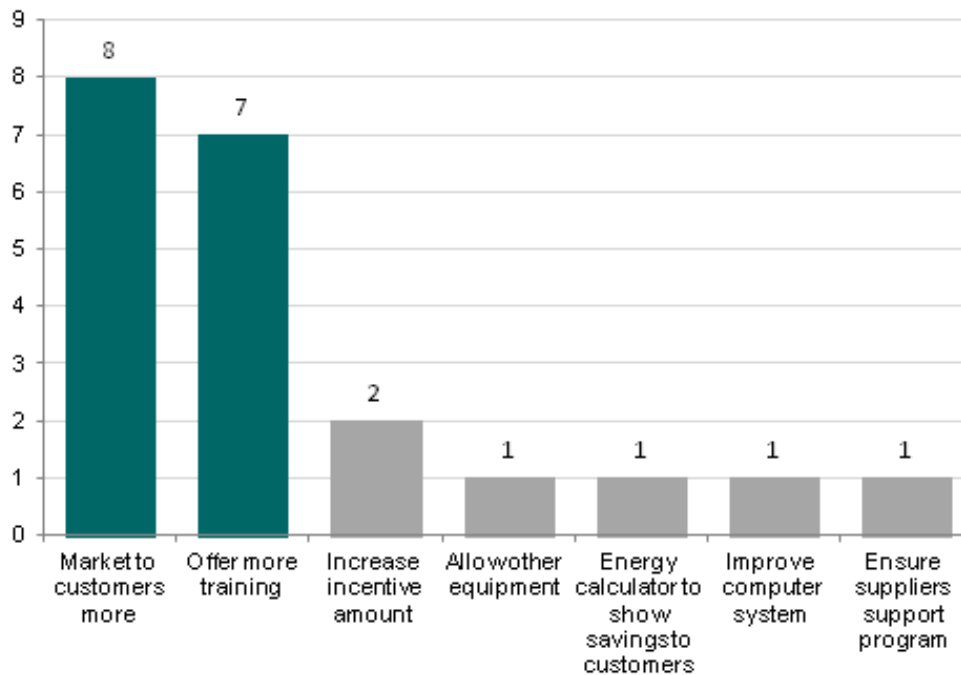
Finally, one Leading partner indicated that the training and program support he received was the reason why he had been successful in selling Quality Maintenance contracts.

3.11 SUGGESTIONS FOR PROGRAM IMPROVEMENT

Fourteen respondents identified seven suggestions for program improvement (see Figure 3-3). The most commonly cited suggestion was for NYSERDA to conduct more outreach or marketing to program-eligible customers. Specific suggestions for outreach included:

- Marketing the program to national chains
- Provide up to date marketing materials for contractors
- Offer program signage for contractor trucks
- Create a program logo for use on brochures and letterhead

Figure 3-3: Respondent Suggestions for Program Improvement (n=19) (Multiple Responses Allowed)



The second most common suggestion was for the program to offer additional training to contractors (seven respondents). These suggestions ranged from Leading partners suggesting expanded training formats (including added locations, webinars, and sessions offered after hours or on weekends) to a few Limited partners who simply asked for *more* training, including “more hands-on training,” a refresher course including practical lessons learned, and merely “more information” about the program.

Other suggestions for program improvement included: increasing incentive amounts paid to contractors; making sure suppliers have the equipment necessary to support the program; improving the program website; providing an energy calculator for customers; and offering a tool incentive for additional equipment, including the Daikin Service Checker. The one program partner who desired more support from

suppliers was referring the advanced diagnostic tool; when he called with a question, his local supplier did not seem knowledgeable and was not able to provide the needed support.

Section 4:

CONCLUSIONS AND RECOMMENDATIONS

These conclusions and recommendations focus on key issues that emerged during the process evaluation.

Conclusion 1: Due to an early, hot summer, the timing of the program rollout in spring 2011 was problematic for almost half the program partners.

Recommendation 1: Offer training in locations and times where the tool will function optimally. Time the program training to correspond with cooler weather and contractors' slow time.

Conclusion 2: The program's most active partners attributed their early success in the program to three key factors:

1. A company commitment to excellence in customer service
2. Primarily offering Quality Maintenance to *existing customers* who are *building owners*
3. Emphasizing to customers the benefits of Quality Maintenance, particularly the avoidance of emergency calls and unplanned outages

Recommendation 2: Reach out to new and Limited program partners to share these success factors and provide guidance on how to incorporate these approaches into their own business models.

Conclusion 3: The program's Limited partners – the ones who enrolled and went through training, but experienced difficulty gaining traction – cited a variety of reasons for their lack of success. Most commonly though, these reasons had to do with a lack of time, a lack of confidence in general Quality Maintenance expertise, and limited ability to find the right customers.

Recommendation 3: Track partner program activity and periodically reach out to Limited partners with a set of suggestions and recommendations based on this research to help them obtain program momentum.

Conclusion 4: In the first year of the program, partners encountered two key challenges to selling Quality Maintenance to their customers:

1. The owner vs. renter divide
2. The timing of program rollout

Recommendation 4: Research potential solutions to the owner/renter problem and carefully time program training and initiation before the cooling season, when contractors have time to devote to learning how to apply Standard 180 and the diagnostic tools.

Conclusion 5: Program evaluability could be enhanced with the development of a formal program logic model. A logic model would serve as a tool for outlining the program theory and showing its progression from inception, to short- and medium-term objectives, through desired market outcomes. A program that clearly articulates its desired market outcomes greatly improves its ability to track market progress over time and attribute market outcomes to specific program efforts.

Recommendation 5: Prepare to work with Energy Analysis on developing a logic model by defining the program's measurable desired market outcomes. Market transformation efforts

are by their very nature long-term, and typically require multiple inputs and interventions into the marketplace. These interventions might include: a variety of programs implemented by utilities and/or public benefit corporations or energy efficiency consortia; voluntary and regulatory codes and standards; and efforts to collect and track key data that help to describe market changes over time.

Therefore, evaluability of any one program effort requires a clear understanding of that program's intended market effect. To prepare for working with Energy Analysis on the development of a program logic model, it will be useful for program staff to clearly define the desired market outcomes. A clear understanding of the market change the program seeks is a necessary input into the logic model and will enable future evaluations to attribute market progress to the HVAC Business Partners Program, where appropriate.

APPENDIX A:

INTERVIEW GUIDES

INTERVIEW GUIDE FOR PARTICIPATING BUSINESS PARTNERS

Name: _____ Title: _____
Company Name: _____ Business Partner Type: _____
Date: _____ Interviewer: _____
Respondent Email: _____ Respondent Phone: _____
Participant Rating (Leading, Moderate, Limited): _____

Introduction

Hello, my name is _____ and I'm with Research Into Action we are an independent contractor to NYSERDA working for Energy Analysis to conduct an evaluation of their HVAC Business Partners program to learn about your experiences as a program partner. I'd like to have about 15-20 minutes of your time to ask you about program activities, procedures, and communications. Is now a convenient time for you to talk, or would you prefer to schedule another time? [Proceed or schedule appointment as appropriate.]

I want to assure you that this interview is confidential to the extent permitted by law. We will report all responses in aggregate and will not attribute any comments to you.

Call Back No. 202-333-3262

[IF NEEDED: New York State Energy Research and Development Authority (NYSERDA) is a public benefit corporation created in 1975 under Article 8, Title 9 of the State Public Authorities Law. NYSERDA's aim is to help New York meet its energy goals: reducing energy consumption, promoting the use of renewable energy sources, and protecting the environment. Currently, NYSERDA is primarily funded by state rate payers through the System Benefits Charge (SBC)]

[IF NEEDED: Ed Smythe is the primary contact for the program. He is an employee of KEMA contracted to implement the program for NYSERDA. Ed's number is (518) 266-9360. Allison Neligan is the program staff person at NYSERDA. Her number is 518-862-1090 x3397]

Role & Program History

For the purposes of this interview, please comment on your commercial work in NY State only.

1. What is your job title [If necessary, probe for role]?
2. According to my records, you have been a NYSERDA HVAC Business Partner since _____, is that correct?

3. About what percent of your business falls under the following sectors?

Residential _____%
Small to mid Commercial _____ %
Large Commercial
Industrial %

Program/Market Experience

4. What activities have you undertaken as a Business Partner?

a) How many projects have you done that received NYSERDA incentives?

5. Why did your firm become a Business Partner?

Proceed with appropriate set of questions below based on responses to Q3 – Q5.

Limited Participants (Signed up for program but have not done projects) (n=6)

6. It appears you have not conducted any program activities yet. Have you tried to sell Quality Maintenance (QM) Contracts recently?

a) If yes...

- Have you performed QM services and have yet to submit your paperwork to NYSERDA for reimbursement?
- What challenges have you experienced in trying to sell or explain QM contracts to customers [PROBE: Trainings, contract duration, cost issues]?
- What reasons have customers given for not purchasing a QM contract?
- What customer types have you tried to sell QM contracts?
- Have you noticed if any customer type appears more or less interested in QM contracts than other customer types?
- Have you noticed if any customer type appears to be more accepting of recommended repairs as part of your QM service than others?
- Are there any other customer characteristics that seem to affect their willingness to purchase a QM contract? PROBE: For example, size of customer, private corporation, or government entity?

b) If no, why have you not tried to sell QM contracts? [PROBES: Too new to program, have not trained all sales staff yet, too busy to start new project?]

c) Do you think most of your customers would be reluctant to purchase a QM contract? Why?

7. Is there assistance you need from NYSERDA in order to grow energy efficiency services as part of your business model? If so, what assistance do you need?

8. Is there assistance you need from KEMA in order to grow energy efficiency services as part of your business model? If so, what assistance do you need?

9. Do you expect to see value for your business from the program? How so?

10. [If not addressed] Which of the program services do you think will be most valuable to your firm? Why?

[Program activities include the following:

- *Training on the national ASHRAE Quality Maintenance standard*
- *Training on advanced diagnostic tools*
- *Incentive for purchasing the diagnostic tool*
- *Incentives for performing Quality Maintenance Services*
- *Training on HVAC electric, gas, propane, or oil systems*
- *Quality Installation*
- *Differentiate from other contractors*
- *Ability to expand business models and services*
- *Awareness of incentives (rebates) for high efficiency HVAC equipment*
- *Other services or support (please specify)*

11. Which services have been least valuable? Why?

Moderate Participants (Signed up for program and done less than five projects) (n=14)

12. You have conducted some project activities already. What are some characteristics of the customers that have received your QM contracts?
13. Why do you think you've been successful in selling QM contracts?
14. Which program tools have assisted you in successfully selling and explaining QM ?
15. What challenges, if any, have you experienced in trying to sell QM contracts to customers?
- a) What reasons have customers given for not purchasing a QM contract [PROBE: Trainings, contract duration, cost issues]?
 - b) Have you noticed if any customer type appears more or less interested in QM contracts than other customer types? If so, what customer types appear more willing to purchase QM contracts?
 - Are there customer characteristics that seem to affect their willingness to purchase a QM contract? [PROBE: For example, new versus old customer, private corporation versus government entity]
 - c) Are there circumstances where you do not try to sell QM contracts? If so, please describe those circumstances. [PROBES: For example, customer has very specific capital constraints, customer does not have right type of equipment]
16. Do you think that the opportunity to participate in the program has been valuable to your business? How so?
17. Which of the program services have been most valuable to your firm? Why?
- [Program activities include the following:*
- *Training on the national ASHRAE Quality Maintenance standard*
 - *Training on advanced diagnostic tools*
 - *Incentive for purchasing the diagnostic tool*
 - *Incentives for performing Quality Maintenance services*
 - *Training on HVAC electric, gas, propane, or oil systems*
 - *Quality Installation*

- *Differentiate from other contractors*
- *Ability to expand business models and services*
- *Awareness of incentives (rebates) for high efficiency HVAC equipment*
- *Other services or support (please specify)*

18. Which services have been least valuable? Why?
19. Are there any additional tools or training you, or your firm, would like to have in order to be more effective at expanding the number of preventive/QM contracts you can sell to customers?

Leading Participants (Signed up for program and have done > five projects) (n=7)

20. You have conducted many project activities already. Why do you think you have been successful selling QM contracts?
21. Why do you think you've been successful in selling QM contracts? [PROBE IF NECESSARY]: talking about reduced unplanned outages, emergency calls, improved customer service?
22. Which program tools have provided you the most assistance in understanding, explaining, selling, and performing QM services? E.g. reduced unplanned outages, emergency calls, improved customer service.
23. What challenges, if any, have you experienced in trying to sell QM contracts to customers?
- a) What reasons have customers given for not purchasing a QM contract [PROBE: Trainings, contract duration, cost issues]?
 - b) Have you noticed if any customer type appears more or less interested in QM contracts than other customer types? If so, what customer type appears more willing to purchase QM contracts?
 - 1) Are there customer characteristics that seem to affect their willingness to purchase a QM contract? [PROBE: For example, new versus old customer, private corporation versus government entity.]
 - c) Are there circumstances where you do not try to sell QM contracts? If so, please describe those circumstances? [PROBES: For example, customer has very specific capital constraints, customer does not have right type of equipment]
24. Do you think that the opportunity to participate in the program has been valuable to your business? How so?
- a) Has the Business Partners program helped you differentiate yourself in the market of HVAC service providers? How so?
 - b) How has participation in the Business Partners Program affected your sales approach with customers or your overall business model?
25. Which of the program services are the most valuable to your firm? Why?
[Program activities include the following:
- *Training on the national ASHRAE Quality Maintenance standard*
 - *Training on advanced diagnostic tools*
 - *Incentive for purchasing the diagnostic tool*
 - *Incentives for performing Quality Maintenance services*

- *Training on HVAC electric, gas, propane, or oil systems*
 - *Quality Installation*
 - *Differentiate from other contractors*
 - *Ability to expand business models and services*
 - *Awareness of incentives (rebates) for high efficiency HVAC equipment*
 - *Other services or support (please specify)*
26. Which services have been least valuable? Why?
27. Have you used the program diagnostic tool in applications other than program activities? If so, for what kinds of projects have you used the tool? [PROBE: Residential projects instead of commercial, new equipment testing]
28. Are there any additional tools or training you, or your firm, would like to have in order to be more effective at expanding the number of preventive/QM contracts you can sell to customers?

All Respondents

29. Could you explain to me the different types of building controls you offer, beyond QM. For example, various types of programmable thermostats. [PROBE for industry lingo on what the different devices are called, if they know about them]
30. What are the most common types of HVAC building controls you work with? [PROBE for what controls they install most often vs. sometimes]
31. Who typically makes the decision about what type of control to install?
- *You, the contractor*
 - *Building owner*
 - *Building manager*
 - *Designer*
 - *Other*
32. Have you, or do you have plans to use the program's diagnostic tool outside of tuning up existing commercial equipment? If so, in what applications have you (or do you) anticipate using the tool?
- a) Verifying refrigerant charge and airflow of newly installed equipment (please explain)
 - b) Tuning up residential equipment (please explain)

Administrative Processes

33. How did you become aware of NYSERDA's Business Partners program?
34. How did the program enrollment process work for you?
- a) How smooth or difficult was the enrollment process, in general?
 - b) Did you have any difficulties with the paperwork requirements?
 - c) How satisfied have you been with the support you've received from program staff?
[Probe for frequency, effectiveness]
35. Please describe your communications with implementation staff (KEMA Services).
[Probe for frequency, media, satisfaction]

36. [If not addressed] How would you rate the level of communication you receive from KEMA?
- *Too much information, it's overwhelming*
 - *Too little information*
 - *The amount of information is just right*
 - *Frequency – too often?*
 - *Frequency – not often enough?*
37. What, if any, improvements would you like to see in the level and frequency of communication you receive from KEMA?

Summary

38. What would you say are the greatest strengths of the Business Partners program?
39. [If not addressed] Do you have any suggestions for how the program could work more effectively with you?
40. Do you have any other thoughts or comments about the Business Partners program that we have not discussed?

Firmographics

41. How many locations does your firm have in New York State?¹⁵
42. About what percent of your work is located in NYS versus neighboring states?
43. What is the total number of employees who work out of your NYS locations?
44. What percent of your business is:
- Installing systems _____%
 - Maintenance contracts _____%
 - Service calls _____%
45. Do you serve a specific market type more than others? Please describe the markets you work in. (For example, multifamily, municipal, office, retail, etc.)
46. Is your company independent, or part of a larger company?

Thank you for your time.

¹⁵ The New York Energy \$martSM Program area consists of the Central Hudson Gas & Electric Corp., Consolidated Edison Company of New York, Inc., New York State Electric & Gas Corporation, National Grid, Orange and Rockland Utilities, Inc., and Rochester Gas & Electric utility service areas.

INTERVIEW GUIDE FOR NYSERDA BUSINESS PARTNERS HVAC PROGRAM STAFF

Name:

Title:

Date:

Interviewer:

Introduction

Hello, my name is _____. I'm with Research Into Action. As you know, we have been asked by NYSERDA to conduct a process evaluation of the Business Partners program. We would like to have 45 minutes of your time to talk with you about your involvement and experiences with the HVAC component of the program. Is this a convenient time for you to talk, or would you prefer to schedule another time? [Proceed or schedule appointment as appropriate.]

Role and Program Description

1. To begin, what are your role and responsibilities with the Business Partners program?
2. With whom at NYSERDA do you work most frequently on Business Partners matters? What are their roles?

The website describes the program as follows:

NYSERDA's HVAC Partner programs support the efforts of New York's Heating, Ventilation and Air-Conditioning (HVAC) contractors, manufacturers, and distributors to improve the visibility of energy-efficient HVAC equipment and maintenance services.

- *A professional commitment to sell and promote the ANSI/ASHRAE/ACCA 180 QM Standard*
- *Support to sell and install highly efficient HVAC equipment*
- *Dedication to their company's training programs to produce technicians knowledgeable about energy-efficient equipment and services*
- *Training and promotional assistance to distinguish themselves as a trusted advisor to customers and expand their business*

The program appears to have evolved since RFP 1056 was issued, describing the five levels of Building Performance and HVAC assistance the program could offer as:

- a) Owner/Building Project Screening to assess efficiency opportunities,
 - b) HVAC Tune-up focusing on refrigeration charge and airflow,
 - c) HVAC System Repair for economizer/outside air adjustments and/or thermostat reset or replacement (same as "d." above),
 - d) Early replacement of older unitary HVAC units, and
 - e) Incentive strategies to support Building Performance (retro-commissioning) services.
3. Should we assume that the RFP is outdated, and refer only to the website for program services?
 4. Is there any updated literature, beyond what's on the website, that explains the types of services and support NYSERDA offers to its HVAC partners?
 5. Are there plans for further program changes? [If so] What changes, and why will they be made?

Administration and Program Processes

6. Projects through this program have only recently begun, but has a database for the program been created or are there plans to incorporate program data into an existing database?
7. [If new database] Who (w/in NYSERDA as well as contractors) has been involved in the database development? [Probe for how NYSERDA will know what is happening in the field; who has responsibility for tracking, recording, and providing reports; also for difficulties or challenges in completing these tasks.]
8. Please describe the steps in the HVAC partner enrollment process. [Probe for ease/difficulty].
9. [If not addressed] What training has the program provided to HVAC partners?
10. And would you please describe the steps in the project application process?
11. Have any projects to date received incentives through the program? [If so] How many projects? Were this program's incentives for those projects coordinated with incentives through other NYSERDA programs? [If so] How many projects, what programs, and how were the incentives coordinated?
12. [If not addressed] Have improvements or adjustments been made to any of the foregoing processes? [If so] What changes were made, and why?
13. Are any (further) changes being contemplated? [If so] What changes, and why?
14. [If not addressed] Are you aware of any other ways in which those processes could be improved?
15. Have you received any feedback from implementation staff or Business Partners about the program's data tracking, Partner enrollment, project application, or incentive payment processes? [If so] What have you heard?

Communications

16. How and how often do you communicate with HVAC implementation staff? [Probe for frequency, regular v. ad hoc, media employed, topics addressed.]
17. [If not addressed] Are there ways in which these communications could be improved? [Probe for effectiveness, contact's satisfaction].
18. Have you received any feedback from implementation staff about program communications with Business Partners? [If so] What feedback?
19. Have you received any feedback from Business Partners about program communications with them? [If so] What was that?

Business Partners' Activities

20. How many projects have HVAC Partners completed? [If any] What kinds of projects were those? [Probe for the program services provided to customers, staff satisfaction or concerns]
21. How many projects are underway? What kinds of projects are those? [Probe for the program services provided or expected to be provided to customers, staff satisfaction or concerns]

22. [If not addressed] Do HVAC Partners typically offer all program services required by a given customer, or do multiple Partners work on the same customer's project? [If multiple Partners] Who coordinates the activities of the different Partners, and how is that done?
23. [Other than previously addressed coordination of incentives] To what extent and in what ways have you seen the Business Partners program coordinate with other energy efficiency programs? [If any] Which programs?
24. Do you think the program could coordinate better with other efficiency programs? [If so] How?
25. What, if anything, seems to limit or discourage contractors' active participation in the Business partners program? [Probe for obstructive program features or processes, and for externalities such as the economy, or information or training shortcomings] [If any] What do you think can be done about them?
26. Are the program activities you have seen so far, meeting your expectations for the program? [numbers of partners, project activity level, sizes of projects]
27. [If not previously addressed] Are you aware of education or training that HVAC partners or prospective partners may be lacking? [If so] What kind of training?

Overview and Summary

28. What effect, if any, have you seen on the HVAC component from the adoption of the Business Partners umbrella over the lighting, motors, and building performance programs?
29. [If not addressed] What is the status of Business Partners branding efforts?
30. What is your assessment of the HVAC component's overall effectiveness? [If not previously addressed, probe for satisfaction with number of Business Partners, and number and quality of projects].
31. Have there been any unexpected issues or occurrences in the implementation of the HVAC component to date?
32. [If not addressed] Have there been any significant difficulties to date or unforeseen challenges?
33. [If not addressed] What would you say are the greatest strengths of the HVAC component?
34. [Other than previously discussed matters] What are the most important improvements that still need to be made?
35. What would you most like to learn from implementation staff about the program?
36. What would you most like to learn from HVAC Business Partners about the program?
37. Are there any other program matters that we have not discussed that you would like to mention?

Thank you for your time.

INTERVIEW GUIDE FOR NYSERDA BUSINESS PARTNERS HVAC IMPLEMENTATION STAFF

Name: _____ Title: _____

Date: _____ Interviewer: _____

Introduction

Hello, my name is _____. I'm with Research Into Action. As you know, we have been asked by NYSERDA to conduct a process evaluation of the Business Partners program. We would like to have 45 minutes of your time to talk with you about your involvement and experiences with the HVAC component of the program. Is this a convenient time for you to talk, or would you prefer to schedule another time? [Proceed or schedule appointment as appropriate.]

Role and Program Description

1. To begin, what are your role and responsibilities with the Business Partners program?
2. With whom at NYSERDA do you work most frequently on Business Partners matters? What are their roles?
3. Who is the program implementer for the HVAC Business Partners component? [Obtain contact information]

Website describes the program as follows: **The New York Energy \$martSM** Unitary HVAC program is designed to increase the availability, promotion, sale and long-term performance of energy efficient commercial and industrial heating, ventilation and air conditioning (HVAC) products and services, specifically including:

- *Advanced Diagnostics (AD)*
- *Demand Control Ventilation (DCV)*
- *Quality Installation and QM (QI/QM)*
- *Economizer repair or replacement*

RFP 1056 described five levels of Building Performance and HVAC assistance the program could offer, four of which appear to be different or in addition to the website list:

- *Owner/Building Project Screening to assess efficiency opportunities,*
- *HVAC Tune-up focusing on refrigeration charge and airflow,*
- *HVAC System Repair for economizer/outside air adjustments and/or thermostat reset or replacement (same as "d." above),*
- *Early replacement of older unitary HVAC units, and*
- *Incentive strategies to support Building Performance (retro-commissioning) services.*

4. Which of the foregoing services does the program offer?
5. Does it offer any other services?
6. [If additions or deletions occurred] Why were the changes made?
7. Are there plans for further program changes? [If so] What changes, and why will they be made?

Administration and Program Processes

8. Can you provide a typical example of how a partner participates in the program? Does the partner receive incentives, cooperative marketing funds, training on selling EE equipment?

9. Projects through this program have only recently begun, but has a database for the program been created or are there plans to incorporate program data into an existing database?
10. Please describe the steps in the HVAC partner enrollment process. [Probe for ease/difficulty].
11. [If not addressed] What training has the program provided to HVAC partners?
12. And would you please describe the steps in the project application process? How does a partner apply to be a Business Partner?
13. Have any projects to date received incentives through the program? [If so] How many projects? Were this program's incentives for those projects coordinated with incentives through other NYSERDA programs? [If so] How many projects, what programs, and how were the incentives coordinated?
14. [If not addressed] Have improvements or adjustments been made to any of the foregoing processes? [If so] What changes were made, and why?
15. Are any (further) changes being contemplated? [If so] What changes, and why?
16. [If not addressed] Are you aware of any other ways in which those processes could be improved?
17. Have you received any feedback from implementation staff or Business Partners about the program's data tracking, Partner enrollment, project application, or incentive payment processes? [If so] What have you heard?

Communications

18. How and how often do you communicate with NYSERDA program staff? [Probe for frequency, regular v. ad hoc, media employed, topics addressed.]
19. [If not addressed] Are there ways in which these communications could be improved? [Probe for effectiveness, contact's satisfaction].
20. Have you received any feedback from program staff about program communications with Business Partners? [If so] What feedback?
21. Have you received any feedback from Business Partners about program communications with them? [If so] What was that?

Business Partners' Activities

22. How many projects have HVAC Partners completed? [If any] What kinds of projects were those? [Probe for the program services provided to customers, staff satisfaction or concerns]
23. How many projects are underway? What kinds of projects are those? [Probe for the program services provided or expected to be provided to customers, staff satisfaction or concerns]
24. [Other than previously addressed coordination of incentives] To what extent and in what ways have you seen the Business Partners program coordinate with other energy efficiency programs? [If any] Which programs?
25. Do you think the program could coordinate better with other efficiency programs? [If so] How?

26. What, if anything, seems to limit or discourage contractors' active participation in the Business partners program? [Probe for obstructive program features or processes, and for externalities such as the economy, or information or training shortcomings] [If any] What do you think can be done about them?
27. Are the program activities you have seen so far, meeting your expectations for the program? [numbers of partners, project activity level, sizes of projects]
28. [If not previously addressed] Are you aware of education or training that HVAC partners or prospective partners may be lacking? [If so] What kind of training?

Overview and Summary

29. [If not addressed] What is the status of Business Partners branding efforts?
30. What is your assessment of the HVAC component's overall effectiveness? [If not previously addressed, probe for satisfaction with number of Business Partners, and number and quality of projects].
31. Have there been any unexpected issues or occurrences in the implementation of the HVAC component to date?
32. [If not addressed] Have there been any significant difficulties to date or unforeseen challenges?
33. [If not addressed] What would you say are the greatest strengths of the HVAC component?
34. [Other than previously discussed matters] What are the most important improvements that still need to be made?
35. What would you most like to learn from HVAC Business Partners about the program?
36. Are there any other program matters that we have not discussed that you would like to mention?

Thank you for your time.