

PROCESS EVALUATION

FlexTech Program

Final Report

Prepared for:

New York State Energy Research and Development Authority

Albany, NY

Tracey DeSimone
Project Manager

Prepared by:

Navigant Consulting, Inc.

1375 Walnut Street, Suite 200
Boulder, CO 80302

Jane Pater Salmon
Nicole Wobus
Beth Davis
Brittany Gibson
Amy Meyer
Brent Barkett
Jane S. Peters, Research Into Action

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Notice

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Abstract

The report presents the outcomes from a process evaluation of the New York State Energy Research and Development Authority's FlexTech program, which provides cost-sharing incentives to support procurement of technical assistance to complete in-depth energy studies. Objectives of the research included a review of barriers and drivers associated with both program participation and implementation of recommended measures, assessment of the program's role within NYSERDA's portfolio of programs, as well as the broader market, and documenting program processes and participant satisfaction. Research methods employed included a review of program data as well as program literature and other relevant market literature. Primary data collection included in-depth interviews with 67 market actors representing a range of perspectives. Overall, this evaluation found that FlexTech is viewed as a valuable and influential program in the New York market for energy efficiency. Based on the research, the Process Evaluation team believes that NYSERDA could further enhance the program's role in the market by addressing the following recommendations: 1) provide end users clearer, more consistent expectations for the participation experience, 2) streamline program processes to shorten participation timelines, 3) offer greater strategic support to help participants implement recommended measures, 4) increase targeted marketing and outreach efforts, and 5) strive to achieve a consistent and streamlined approach for data reporting.

Keywords

FlexTech, technical assistance, feasibility study, process evaluation

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S Summary

S.1 Introduction

This report presents findings from comprehensive process-focused research and analysis of NYSERDA’s FlexTech program. Recognizing that FlexTech is a mature program with an established track record for serving New York’s energy efficiency market, the Process Evaluation team (PE Team) sought to gather feedback on topics that would help the program maximize its impacts and result in an enhanced participation experience. This summary highlights key elements from the report, including a synopsis of evaluation findings and recommendations.

S.1.1 Program Overview

The FlexTech program has existed in some form for over a decade. FlexTech provides cost-sharing to offset the cost of consultant energy studies aimed at providing objective and customized information to help customers make informed energy decisions. All commercial and industrial end users that pay into either the electric or natural gas Systems Benefits Charge are eligible. Studies can be carried out either by FlexTech Consultants, technical consultants competitively selected through a request for proposals, or by Independent Service Providers selected by the end user. By offering this cost-shared assistance the program seeks to provide New York facilities with an increased ability to pursue “mission-central projects” and to increase the quality of service providers active in the market.

The FlexTech program provides a source of cost-shared, objective, site-specific technical support that can recommend approaches to achieve energy savings. The program primarily engages medium-large energy consuming facilities.¹ It has a unique opportunity to generate significant energy savings while addressing market barriers to energy efficiency (e.g., lack of awareness of energy saving opportunities, inability to integrate energy efficiency with management decision-making regarding mission delivery and capital allocation, and poor access to high quality technical services).

S.1.2 Evaluation Objectives and Methodology

The PE Team conducted the first process evaluation of the FlexTech program since 2004. The Team prioritized the following primary research objectives based on a review of program literature and feedback from program staff:

¹ The Small Commercial Assistance Program separately addresses smaller facilities.

- Review and update the FlexTech program logic model to reflect current program design and market conditions
- Examine program processes and market opportunities
- Identify and assess drivers for and barriers to participation in the program
- Identify and assess the program's position within NYSERDA's portfolio of programs, and within the market for energy efficiency services
- Identify and assess decision-making processes regarding measure implementation
- Document program progress and participant satisfaction, and make recommendations for program improvements

The PE Team used the following research methods to complete this evaluation: a review of secondary literature and program documents, a review and analysis of program tracking data, and completion of 67 in-depth interviews with a range of market actors. Interviewees included program staff, FlexTech Consultants, Independent Service Providers, participating and partial-participating end users (those who initiate but do not complete participation), external review contractors (those retained by NYSERDA to review draft study reports), as well as other entities with a valuable perspective on the market served by the program, such as representatives from trade organizations.

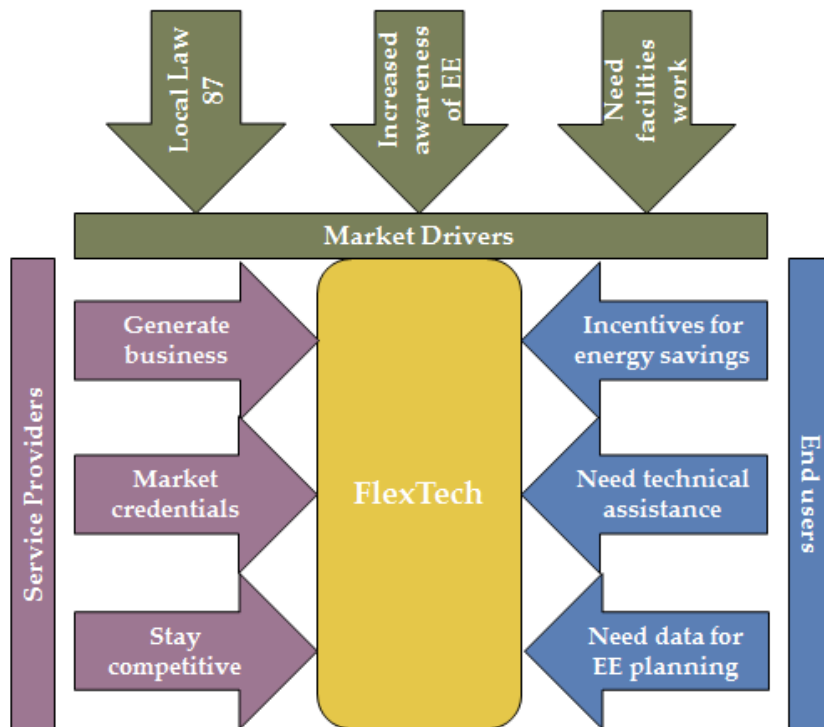
S.2 Market Perceptions of the Program

Overall, much of the feedback gathered from this evaluation indicated that FlexTech is viewed as a valuable and influential program in the New York market for energy efficiency. Participating end users and service providers alike recognize the benefits of the program and appreciate the resources to which it provides them access. Even some parts of the process that are perceived as slowing down project completion (e.g., the report review process) are viewed as improving the end result and therefore worth the investment of time and capital. However, based on feedback from program participants, FlexTech could increase its impact on the market and increase participant satisfaction by making some process-related improvements.

Key drivers for program participation that affect both end users and service providers include the program's cost-sharing activities and the NYSERDA brand. As shown in Figure S-1, end users participate in the program because they see it as an opportunity to gain access to high quality technical services at a reduced cost. Service providers seek to become FlexTech Consultants to generate new business, both through leads from the program and because program affiliation serves as a valuable credential. General growth in awareness of and demand for energy efficiency also drives program participation. Local Law 87, which mandates that buildings meeting certain criteria (e.g., existing buildings larger than 50,000 square feet) conduct energy audits and retro-commissioning, may be impacting demand for program services downstate.

Figure S-1. Summary of Drivers for Program Participation

Source: Navigant in-depth interviews with service providers and participating end users, 2013.



Study costs and required investments of staff time present the most significant barriers to participation by end users. A lack of awareness of program benefits appears to limit participation by some end users not previously engaged in the program. Service providers report that they refrain from bringing certain projects to the program because the investment of time and effort required for program participation does not align with their clients' timeline or available resources (e.g., capital and staff time).

End users expressed the highest levels of satisfaction among the categories of interviewees, and they noted minimal concern with the program's processes. The program's cost share and high quality technical services were the characteristics most favored by end users.

Service providers play a central role in the program. They generate the majority of project leads, complete the energy study, and may assist their clients in acting on recommended measures. They also have the opportunity to observe a broad range of customer perspectives and decision making considerations (both from participating and non-participating customers). Observations from comments provided by this group include:

- Service providers exhibited greater disparity in their levels of satisfaction with the program than did end users. This reflects stated inconsistencies in their experience with the program from project to project, including both project manager expectations and the value service provider's

gain from the report review process. FlexTech Consultants reported slightly higher levels of satisfaction than Independent Service Providers.

- Several service providers shared positive comments about the program as well. Much of the positive commentary related to the program’s branding benefits (e.g., the FlexTech Consultant status is viewed as an important credential), and its potential to open doors to new business. Other positive comments pertained to the level of quality of the reports that come out of the program due to the rigorous scoping and report review processes. In addition, one respondent noted that the availability of program assistance triggers greater activity in energy efficiency markets, helping to “get [projects] off the ground” in New York.
- Feedback from both FlexTech Consultants and Independent Service Providers yielded concerns about the complexity of the program and the resources (e.g., cost and staff time) required for participation. The most critical feedback focused on the earliest stages of program participation, including gaining approval of a program scope of work. However, the program’s careful project scoping process also has the potential to ensure the program provides the most appropriate type of support to each project; program staff highlights this project initiation phase as a key program strength.

The program clearly plays an important role both within NYSERDA’s portfolio of programs and in the broader market for energy efficiency services in New York. FlexTech studies provide the market with improved access to high quality, site-specific analysis that informs commercial and industrial facility investments in and implementation of energy efficient systems and approaches.

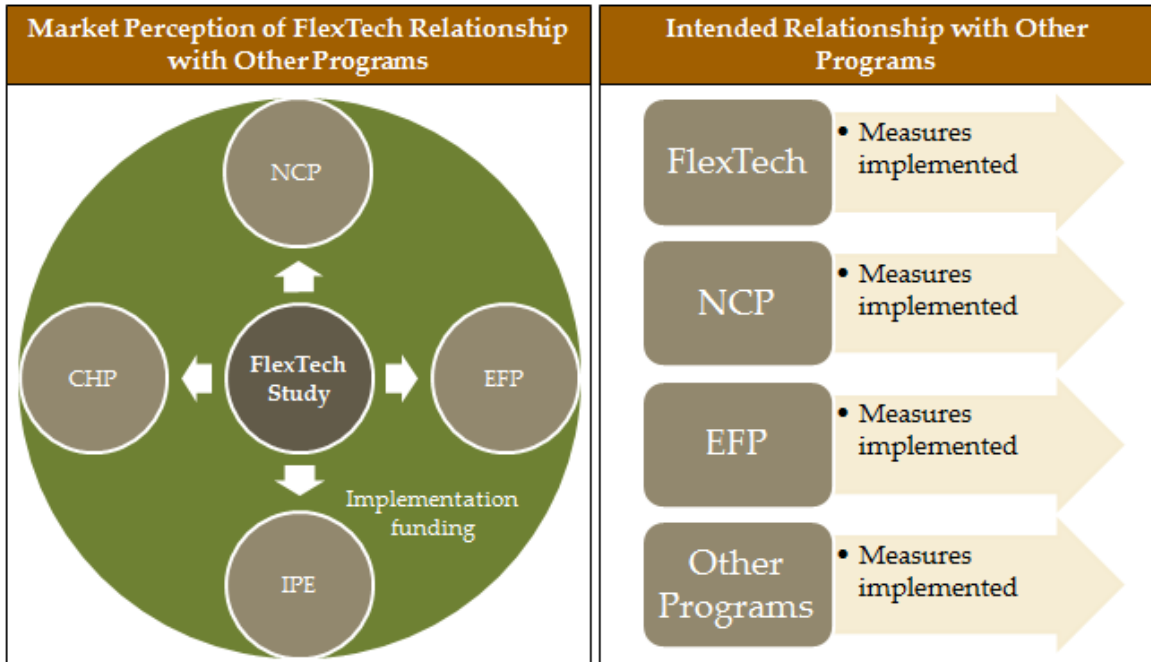
Unlike technical assistance programs offered in other markets, and by New York’s utilities, the FlexTech program is not intended to function as a feeder to other programs that offer funding for measure implementation. Rather, the program seeks to match participants with compelling information to justify investment. This is shown in the left-hand portion of Figure S-2.²

Despite program staff’s intentions, program participants indicated that they look to FlexTech as a first step in the process of ultimately securing implementation funding to support energy efficiency investments. This is shown in the right-hand portion of Figure S-2. Utility programs and other NYSERDA programs provide incentives to support the project implementation stage, and a majority of end users reported receiving assistance from other programs in order to implement the measures outlined in their FlexTech reports.

² A 2012 FlexTech program impact evaluation found an energy-savings weighted measure adoption rate (MAR) of 65%. However, the MAR cited in that report does not account for the fact that some portion of the energy saving measures were adopted with funding from other energy efficiency programs (i.e., the savings are not fully attributable to FlexTech). The impact evaluation did not address that overlap in funding sources (and counting of associated savings), as the topic is addressed by NYSERDA at the portfolio level. [Megdal and Associates. 2012. “Impact Evaluation: NYSERDA 2007-2009 FlexTech Program.” Prepared for NYSERDA.]

Figure S-2. Relationship with Other NYSERDA Programs: Market Perception vs. NYSERDA Intent

Source: Navigant in-depth interviews with service providers, 2013.



Note: The right hand box is intended to depict that measures supported through a particular program are implemented with outside funds (those external to the customer) coming only from that program, and only in an amount sufficient to induce implementation.

With New York State providing large budgets for programs offering funding for measure implementation, it may be unrealistic to expect participants to implement recommended measures without utilizing additional funding sources. Service providers believe they have a responsibility to ensure that their clients do not “leave funds on the table,” even for measures that may prove financially viable without additional financial support. Recognizing the existence of funding overlap across programs, NYSERDA currently discounts FlexTech savings at the portfolio level by a program overlap factor of 19%.^{3 4}

³ This value was obtained from a past independent Impact Evaluation contractor. [Osei-Antwi, D., and D. Gowans. 2006. “M&V Evaluation: Cross-Program Overlap in New York Energy SmartSM Program Savings.” Prepared by Nexant for NYSERDA.] This analysis is currently being updated by NYSERDA staff using the latest independent Impact Evaluation.

⁴ NYSERDA also plans to address the issue of accurate tracking of savings across NYSERDA programs by updating a 2006 study of overlap of savings across programs. NYSERDA plans to incorporate this into the scope of an upcoming impact evaluation of the FlexTech program,

S.3 Decision-Making Processes

Most participating end users consider energy investments as part of their capital planning process. Investments with a simple payback of up to five years typically pass the initial screen. Organizational considerations also play a key role in decision-making. Interviewees reported that these include non-financial factors, such as synergistic benefit to the organization mission, a need to comply with codes and standards, a need to upgrade facilities, and the logistics and potential downtime that go along with implementing recommended measures.

Barriers to measure implementation include both financial and organizational factors. Challenges securing capital, both internal and external, pose the most substantial barrier to implementation of recommended measures. In some cases, insufficiency of capital is due to an inability of a project champion to secure approval from within his/her own organization to fund an energy efficiency project. This can reflect threshold investment criteria that are too aggressive for some energy efficiency project economics to meet or deficiencies in the decision-making structure within an organization (e.g., the project champion lacks clout within the organization). In other cases, a more basic inability to secure capital from outside sources exists. In addition to the capital-related barriers, operational challenges also stand in the way of measure implementation (i.e., downtime and other logistical considerations associated with the installing measures). Alignment of the program's timeline with the end user's decision-making timelines is also a factor for some, especially the interviewed partial participants.⁵

Availability of implementation funds is a key driver for measure implementation. The factors most commonly associated with decisions to act on energy saving opportunities include facility size and the presence of flexible budgets. Larger facilities with longer investment time horizons are more likely to act on FlexTech study recommendations.

FlexTech has a sustained long-term impact on end user decision-making, an indicator of potential program spillover and market effects. All participating end users indicated that they would pursue energy efficiency projects in the future. Half of those interviewed reported that their perceptions of energy efficiency investments improved because of program participation. Respondents explained that their improved access to high quality information helped make the case for energy efficiency investments and that the experience of making the decisions once helps build energy efficiency decision-making into their organization's corporate culture.

⁵ Program staff believe that those who cease to participate in the program due to timing considerations may have ultimately been free riders. However, this topic was not explored as part of the process evaluation.

S.4 Recommendations

FlexTech experiences plenty of program interest and activity, yet opportunities remain for the program to increase the amount of potential savings realized by end users. The PE Team offers the following recommendations to support increased program impacts and participant satisfaction. The Team anticipates that NYSERDA and program staff will weigh the benefits and costs associated with the recommendations and suggested tactics presented here, and will make resource allocation decisions that make sense for the program as a whole.

1. **Provide clear consistent expectations regarding program application materials, report content, and timelines.** Making guidance related to program participation more accessible and easier to interpret would enable participants to operate more efficiently and would likely increase program satisfaction. Examples of steps that would make participation expectations more transparent include: 1) provide links to document templates (e.g., scope of work and final report) readily accessible from the program website, and 2) more clearly communicate timeframe expectations for various stages of participation. Specifically, service providers indicated that a process flow diagram, similar to the one developed for this evaluation, would prove valuable in planning for and communicating to end users about timelines at various stages of participation.
2. **Streamline program processes to shorten the participation timelines where possible, while maintaining high standards for report quality.** The program would benefit from identifying additional opportunities to streamline processes. Some service providers report that program staff have already taken some steps to do so, which are appreciated. In addition, program staff report that some delays in the participation process result from slow response times on the part of participants. Potential changes that may help to avoid delays include the following: 1) hold program staff and external technical review contractors (ETRs), service providers, and participants accountable for adhering to timelines; 2) consider having project managers consistently work with the same types of projects, and/or the same service providers to the extent possible.
3. **Provide clear guidance regarding recommended actions following study completion.** Specifically, the PE Team recommends that program staff provide participants with a list of actions they can take and informational resources they can access to help them proceed toward successful implementation of recommended measures. The purpose of this recommendation is two-fold.
 - First, it would address program participants' lack of knowledge of the program's intended role as a stand-alone source of support. Providing participants with a clear set of recommended actions following study completion presents an opportunity to communicate the program's intent: the implementation of cost effective energy efficiency measures without additional outside funding. The PE Team does not take a position on whether FlexTech should revisit its program logic to confirm its role as a stand-alone program; the Team views that as a policy decision for NYSERDA and DPS to address.
 - Second, communications with participants following study completion would provide valuable information and guidance that may increase the adoption of recommended measures. Program communications following study completion could include case studies of projects that have been implemented without additional funding sources, highlighting this as a viable potential option. Communications could also include information about the availability of other funding and financing options, including the new Green Bank.

4. **Increase targeted marketing and outreach efforts.** The program would benefit from an increase in targeted marketing and outreach activity. This may include requesting more resources and attention from NYSERDA's Customer Relationship Management (CRM) system. It may also include establishing a collaborative relationship between FlexTech Consultants and the CRM system to ensure that Consultants have access to the informational resources (e.g., client leads) necessary to act as an effective channel for targeted recruitment.

5. **Strive to achieve a consistent and efficient approach to data tracking.** The PE Team suggests that program staff consider reviewing the data tracking approach for this program and streamlining data reporting activities where possible. Increased efforts by the Department of Public Service to track end user participation across programs would improve the accuracy of reported energy savings across program administrators.⁶ Establishing data entry protocols for program staff (e.g., introducing structure and protocols that enable the database to capture iterative processes like those related to submitting initial and revised draft reports) would enhance program staff's ability to analyze project milestones. Establishing a system for consistently tracking end users' participation across NYSERDA's programs (e.g., through use of unique identifiers) would increase the accuracy of reported energy savings. These improvements are, to some extent, beyond the control of program staff as they would require cooperation and action on the part of NYSERDA IT staff. In addition, the program would benefit from creating a database dictionary to ensure a consistent use of the tracked FlexTech data.

⁶ This recommendation pertains to tracking participation across NYSERDA's portfolio of programs. Tracking participation across programs outside of NYSERDA's portfolio is also important. However, as noted in the Public Service Commission's Order Approving EEPS Changes, a statewide project tracking system is envisioned for the state. Therefore, at this time the PE Team suggests that NYSERDA start by focusing specifically on tracking participation within the NYSERDA portfolio. New York Public Service Commission. Case 07-M-0548, Order Approving EEPS Changes. Issued and Effective December 26, 2013.

1 Introduction

The New York Public Service Commission established the Energy Efficiency Portfolio Standard (EEPS) to fund energy efficiency assistance in New York. Customers of Central Hudson Gas and Electric Corporation, Consolidated Edison Company of New York, Inc., New York State Electric and Gas Corporation, Niagara Mohawk Power Corporation d/b/a National Grid, Orange and Rockland Utilities, Rochester Gas and Electric Corporation, Corning Natural Gas Corporation, KeySpan Gas East Corporation d/b/a National Grid, Brooklyn Union Gas Company d/b/a National Grid NY, and National Fuel Gas Distribution Corporation fund EEPS through payment of the System Benefits Charge (SBC) on utility bills. The FlexTech program is available to all customers that pay into the SBC and only to such customers. NYSERDA, a public benefit corporation established in 1975, began administering the SBC funds in 1998 through NYSERDA's **New York Energy \$martSM** program.

1.1 Program Overview

NYSERDA's FlexTech program provides end users in New York's commercial, industrial, institutional, government, and not-for-profit sectors with objective and customized information to help them make informed energy efficiency, productivity, and financing decisions. FlexTech's goal is to increase the productivity and economic competitiveness of participating facilities by identifying and encouraging the implementation of cost-effective opportunities to improve energy use. The program seeks to accomplish this by providing cost-shared technical assistance to eligible end users.

Projects completed through FlexTech are classified into three separate components: 1) Energy Efficiency; 2) Combined Heat and Power (CHP); and, 3) Peak Load Curtailment Plans (PLCPs). Table 1 presents a summary of the types of projects completed under each of these three program components.

Table 1. Summary of Flex Tech Program Components and Project Types

Program Component	Project Types
Energy Efficiency	General energy feasibility studies Peak load reduction and load management* Industrial and process efficiency analysis Data center efficiency analysis Energy efficiency retro-commissioning Long-term energy and carbon master plans
Combined Heat and Power	Technical and economic feasibility studies to evaluate onsite gas-fired combined heat and power production
Peak Load Curtailment Plans	Service providers develop comprehensive protocols which allow their customers to respond to load curtailment calls from the NYISO during system capacity constraints

* These studies are distinct from PLCPs in that they focus on identifying opportunities for short-term load management and long-term permanent load reduction and analyzing the technical and financial implications of pursuing such opportunities. In contrast, PLCPs involve developing actual protocols for responding to load curtailment events.

FlexTech studies recommend energy efficiency measures and actions based on site-specific analysis of economic and technical feasibility. The reports provide detailed documentation to support the recommendations. Detailed engineering design, however, is outside the scope of FlexTech.

For energy efficiency and CHP projects, NYSERDA provides a cost-share up to 50 percent of eligible study costs up to the lesser of \$1,000,000 or ten percent of the participating facility’s annual energy costs. For PLCP development, NYSERDA provides \$2/kW of the facility’s peak summer (May-October) electrical demand, up to \$8,000, directly to Independent Service Providers.

The FlexTech program engages with two types of service providers⁷:

6. **Flex Tech Consultants.** The FlexTech program maintains a list of competitively selected FlexTech Consultants. These consultants are under contract with NYSERDA and have been selected to ensure the availability of high quality technical services that span the entire state. Opportunity to become a FlexTech Consultant is offered annually, and the performance of FlexTech Consultants is evaluated annually to determine whether a service provider can remain listed as a FlexTech Consultant.
7. **Independent Service Providers.** Customers may also select their own service providers, which may include Energy Services Companies (ESCOs), energy consultants, and engineering companies. These service providers may have no formal relationship with NYSERDA prior to engaging in the FlexTech study.

⁷ Throughout this report, the term “service providers” is used to refer to FlexTech Consultants and Independent Service Providers collectively.

1.1.1 Prior Evaluations

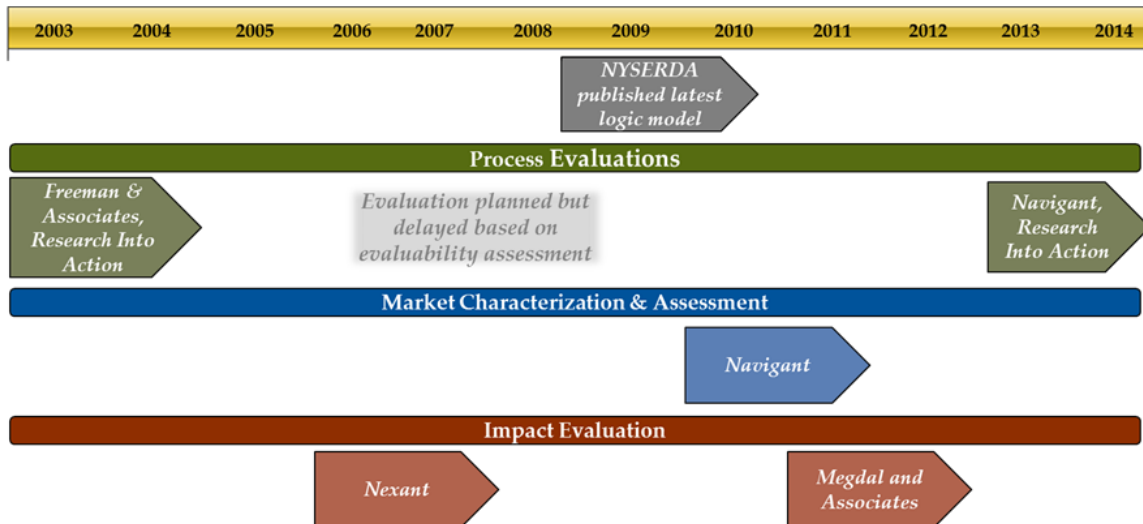
The process evaluation of the FlexTech program builds on the previous process and market characterization and assessment (MCA) evaluations of the program and the program logic model:

- The last process evaluation of the program was completed in 2004. A follow-on process evaluation was proposed for the 2006-2007 timeframe but was abandoned based on the results of an evaluability assessment conducted at that time.
 - The last MCA evaluation of the program was completed in 2011. That evaluation found that the FlexTech program, operating in concert with other NYSERDA programs, is positively influencing the market for energy efficiency in New York by contributing to the growth of a more robust market infrastructure. The evaluation also noted that additional market opportunities remain for the program.
8. The last impact evaluation was completed in 2012. That evaluation found that 65% of the savings associated with recommended measures were eventually adopted by participants.⁸
- NYSERDA published the most recent update to the logic model in March 2010.

Figure 1 summarizes the timeline for completion of the process evaluations and market characterizations and assessments conducted for the FlexTech program.

Figure 1. History of FlexTech Process Evaluations and Market Characterization and Assessments

Sources: Navigant literature review



Note: End of arrow indicates year of evaluation report publication.

⁸ This finding did not account for potential overlap in savings counted by other NYSERDA or other programs that may contribute to the implementation of recommended measures.

In prior evaluation cycles, NYSERDA contracted separately for Process Evaluation (PE); MCA; and Impact Assessment studies for its programs. In the current cycle, NYSERDA's approach integrates Process Evaluation and Market Characterization and Assessment (PE/MCA) within one contractor team; Impact Assessments will continue to be conducted by a separate contractor.

This evaluation focused primarily on process-related issues given that an MCA evaluation of the FlexTech program was completed in 2011. Should program funding be extended beyond 2015, a second process and market evaluation will be conducted in 2015 to follow up on findings of the current evaluation and to explore any new issues identified at that time.⁹

1.2 Evaluation Overview

The primary purpose of this process evaluation is to provide NYSERDA with a set of actionable recommendations to enhance the delivery of the FlexTech program. The PE Team also sought to identify positive aspects of the program which can be preserved and enhanced, The evaluation's objectives were to review and update the program logic as needed; to examine program processes and market opportunities; to identify and assess drivers for and barriers to participation; to identify and assess the program's role within NYSERDA's portfolio; to identify and assess decision-making processes regarding measure implementation; to document program progress and satisfaction..

In addition to analysis of the program database and other secondary sources, the evaluation team conducted a series of in-depth interviews to accomplish the goals of the evaluation. The interview approach enables the team to target fewer respondents to obtain more comprehensive qualitative information on the priority issues. Through the interviews, the evaluation team sought to better understand the priorities, needs, and decision-making processes of targeted end users and service providers.

1.2.1 Evaluation Research Objectives

As stated in the New York State Process Evaluation Protocols, "The goal of a process evaluation is to review how program activities and customers interact, and to recommend ways to improve program processes and to increase effectiveness."¹⁰ Table 2 summarizes the research objectives examined by the evaluation team to achieve this process evaluation goal.

⁹ NYSERDA. April 19, 2013. *NYSERDA FlexTech Program Final Evaluation, Measurement, and Verification Plan*.

¹⁰ Johnson, K. and Eisenberg, G. *New York State Process Evaluation Protocols, A Supplement to the New York State Evaluation Guidelines Updated 2012*. January 6, 2012. (p. 5)

Table 2. Process Evaluation Research Objectives and Coverage in Report

Research Objective	Location in Report
1. Review and update the FlexTech program logic model to reflect current program design and market conditions. This included a review of market and program changes with program staff to determine potential additions or revisions.	Section 2.1
2. Examine program processes and market opportunities.	
a. Assess program process flow and identify opportunities for streamlining	Section 2.3
b. Assess the efforts of the program to coordinate with other key market actors and program administrators (e.g., utilities, entities administering related energy efficiency initiatives, the NYISO)	Sections 2.1.3 and 3.4
c. Highlight any findings related to program tracking systems and associated quality assurance procedures that are beyond those mentioned in the 2013 audit conducted by NYSERDA ^a	Sections 2.2 and 5
d. Understand sources of program awareness and knowledge of efficiency opportunities, and assess marketing and outreach activities	Section 3.2.1
e. Identify level of program awareness among non-participating consultants and end users	Section 3.2.1
f. Examine level of participation across participating consultants, study types, sectors served and geography (i.e., which study types account for the greatest / least amount of participation and funding, how is this activity distributed across end-use sectors and upstate and downstate regions, and which consultants are most / least active in the program)	Section 2.2
3. Identify and assess drivers for and barriers to participation in the program.	Section 3.1
a. Assess reasons for participation and reasons for partial participation	Section 3.1
b. Assess barriers to participation and perceptions of importance of energy efficiency	Sections 3.1 and 4
c. Assess decision-making process for participation	Section 3.1
4. Identify and assess the program's position within NYSERDA's portfolio of programs, and within the market for energy efficiency services. ^b	Sections 2.1.2, 2.1.3, and 3.4
5. Identify and assess decision-making processes regarding measure implementation.	Section 4.2
a. Assess participant expectations for implementation of recommended measures and key issues to consider in decision-making processes	Section 4.2
b. Assess barriers to implementation and perception of value of energy efficiency investment	Section 4
c. Examine whether and how FlexTech participation results in lasting changes in end-use customers' decision-making practices	Section 4.3

Research Objective	Location in Report
d. Assess awareness of other programs that could assist in implementation of recommended measures, and participants' perceptions of these programs	Section 3.4
e. Examine issues regarding potential free ridership in other programs (e.g., would participants install recommended measures without incentives from other programs) ^c	Section 4.2.2
f. Explore what factors contribute to the FlexTech program's high Measure Adoption Rate relative to other peer programs ^d	Section 3.4.2
6. Document program progress and participant satisfaction, and make recommendations for program improvements.	
a. Assess the effectiveness and efficiency of the program in increasing the energy efficiency market's technical assistance capabilities and capacity for serving existing buildings	Sections 3.4.1
b. Assess the quality and timeliness of services provided by participating consultants. FlexTech Consultant responses versus Independent Service Provider responses will be called out where applicable.	Section 3.2.3
c. Assess customer and service provider satisfaction with program experience, perceptions of the cost-share agreement, and perception of quality of program services	Section 3.2, 3.3
d. Determine whether gaps exist between services provided and needs of participating end-use customers	Section 3.3.2

Notes:

^a NYSERDA conducted an internal audit on FlexTech that included a review of the tracking system. Final results were presented in a memo, which was finalized on September 5, 2013. The PE Team considered the program tracking system in terms of its functionality related to program management and process evaluation activities. The PE Team sought to minimize duplicating findings of the audit report.

^b As outlined in Protocol D (p. 27): Johnson Consulting Group. 2012. *New York State Process Evaluation Protocols: A Supplement to the New York State Evaluation Guidelines Updated 2012*.

^c The evaluation team did not intend to develop free ridership estimates or net-to-gross (NTG) adjustment factors; doing so remains the responsibility of the Impact Evaluation contractor. Rather, the PE Team generated contextual information that can be used by the Impact Evaluation contractor to refine its NTG estimates.

^d The most recent impact evaluation found that the FlexTech program's measure adoption rate significantly exceeded those of its similar programs in other jurisdictions. The PE Team conducted preliminary research to address this question, but stopped the research after finding that the comparison programs were different in structure from FlexTech, limiting the ability to make an effective comparison.

This research was designed to examine program processes, document the extent to which these processes meet end user and service-provider needs, and provide actionable recommendations to enhance program performance. The evaluation results can be used by NYSERDA program staff and managers to adjust program implementation as needed to optimize market interest and uptake of program offerings.

The PE Team adapted the original research objectives developed for the assignment in consultation with NYSERDA's evaluation team and program staff. Staff input helped shape the issues examined using the

interview guides, which had to be streamlined in order to complete interviews in a reasonable amount of time. This process resulted in eliminating the following research objectives for the following reasons:

Original Research Objective Eliminated: 2c. Assess the impact of recent program changes (i.e., rebranding effort, consultant selection process, consultant performance evaluation criteria, and others to be determined based on input from program staff)

- **Rationale for Elimination:** Based on an early review of program data and findings from staff interviews, this was not prioritized as a research issue and was not specifically addressed in in-depth interviews. Evaluation findings presented in Sections 3 and 4 of this report do provide insight into the effectiveness of the program as it is currently implemented, including recent changes that have gone into effect.

Original Research Objective Eliminated: 4a. Assess whether program funding increases have accomplished the goal of increasing consultant recruitment (i.e., Energy Efficiency Portfolio Standard [EEPS] funding was aimed at these goals; FlexTech program Logic Model Report 2010)

- **Rationale for Elimination:** This fell outside of the scope of the evaluation because other issues were of higher priority. Interviews did not touch on this specifically, but interviews did not indicate any major issues with recruiting consultants; on the contrary, interviews indicated that Independent Service Providers recognize the value of becoming FlexTech Consultants and plan to apply to do so as they become eligible.

1.2.2 Methods

The process evaluation team initiated the evaluation by documenting the program as it currently stands. This included a review of the existing program logic, the development of a program process flow diagram, and analysis of the program's database. Creating a comprehensive view of the program's underlying theory, its operational framework, and its achievements to date established a firm foundation for the evaluation of program activity. Program staff provided input to ensure that this documentation accurately reflects the current program.

The remaining tasks sought to document the perspective of participating customers, service providers, and external review consultants.¹¹ The evaluation team conducted in-depth interviews with customers and technical consultants to understand drivers for and barriers to participation, to explore decision-making frameworks that influence participation and implementation of recommended measures, and satisfaction with the program experience. Gaining insights from customers at different stages in the program – from initial application through six months after completion of a study – provided insight into the different dynamics within customer organizations at each stage. Interviews with service providers will highlight differences in program experience and awareness related to their affiliation with the program.

¹¹ NYSERDA uses the term “service providers” to describe technical consultants that work for the end users; these include FlexTech Consultants and customer-selected consultants (Independent Service Providers). NYSERDA utilizes external review contractors to provide program support, such as reviewing scopes of work and reports.

Table 3 summarizes the evaluation activities, methodology, and key goals.

Table 3: Activities for FlexTech Process Evaluation

Evaluation Activity	Methodology	Goals of the Activity
<p>Project Planning and Work Plan Development</p>	<p>Review available program documentation and prior program evaluation results and meet with NYSERDA evaluation, program, and marketing staff to develop a final project work plan.</p>	<ul style="list-style-type: none"> • Identify and prioritize research items of interest to ensure development of a research agenda complements staff's existing knowledge of the program's effectiveness • Inform the evaluation work plan.
<p>Review and Update Program Logic Model and Develop Program Process Flow Diagram</p>	<p>Coordinate with NYSERDA evaluation and program staff, as well as other evaluation contractors, to review and discuss necessary updates to the 2010 FlexTech Logic Model Report. Drive a review process to reach consensus on the updated logic model. Review existing materials and coordinate with program staff to develop a program process flow diagram that accurately reflects the intended interaction between the program and customers/contractors.*</p>	<ul style="list-style-type: none"> • Ensure the program Logic Model Report accurately reflects the current program design • Examine program processes and market opportunities
<p>Secondary Research</p>	<p>Conduct a secondary literature review, including program materials and evaluations of similar technical assistance programs. Analyze FlexTech tracking database and other related datasets to document program activity</p>	<ul style="list-style-type: none"> • Draw on existing knowledge of FlexTech and other technical assistance programs. • Examine program processes and market opportunities. • Identify and assess decision-making processes regarding measure implementation. • Inform the development of primary data collection sample frames and instruments. • Document program progress and participant satisfaction, and make recommendations for program improvements.

Evaluation Activity	Methodology	Goals of the Activity
<p align="center">Primary Data Collection: Market Actor In-depth Interviews</p>	<p>Conduct in-depth interviews among several market actor groups:</p> <ul style="list-style-type: none"> • Program staff • External review contractors • FlexTech Consultants with projects active in the program pipeline in 2011-2012 • Independent Service Providers with projects in the pipeline during that time • End users that completed a study during that time • Partial-participating end users with projects canceled or discontinued during that time • Other market actors, including staff of peer programs <p>Completion of up to 83 interviews was targeted, and 67 interviews were actually completed. Table 4 details how the interviews were distributed among these market actor groups.</p>	<ul style="list-style-type: none"> • Identify and assess drivers for and barriers to participation in the program. • Identify and assess decision-making processes regarding measure implementation. • Document program progress and participant satisfaction, and make recommendations for program improvements.

* The program process flow diagrams built on the high-level program process flow diagrams developed by NYSERDA's internal audit team in 2013.

This evaluation focused on projects in the FlexTech program pipeline in 2011 or 2012. The bulk of the program database analysis and the sample frames for in-depth interviews with service providers and participating end users included projects that completed a report during one of these two years. The sample frames for the in-depth interviews with partial-participating end users included projects that were canceled or rejected from the program during this time.¹² Analysis for this project began in mid-2013, making it impractical to include a full 2013 calendar year of participant data.

The in-depth interviews served as the main source of primary data for this evaluation. It was a qualitative approach to data collection and did not seek to achieve statistical significance, though the sample selection did reflect actual program participation. This approach enabled the PE Team to target significantly fewer respondents than required in a formal survey and to obtain in-depth qualitative information on program and market issues (i.e., via follow-up questions). For end users and service providers, the PE Team sought to achieve coverage (1) across the most prevalent study types (feasibility studies, CHP studies, and PLCPs)

¹² In order to complete the targeted number of interviews with partial participating end users, however, the PE team had to add a few projects that were canceled or rejected in 2013. These more recent partial participants could recall better the reasons that they did not complete the program.

and (2) across the upstate/downstate dimension¹³. For end users, the sample plan also targeted coverage of end users that used either FlexTech Consultants or Independent Service Providers. Appendix D includes a more detailed discussion of the sampling plan.

Table 4 includes a breakdown of the targeted number of completions for each market actor category and the actual number of completes achieved in that category.

Table 4. Distribution of Market Actor In-depth Interviews

Market Actor Category	Estimated Population Size	Target Number of Completes	Number of Completes
Program Staff	20 ^a	3	3
External Review Contractors	2	2	2
FlexTech Consultants	37	10 to 15	18
Independent Service Providers	70	10 to 15	11
Participating End Users	365	15 to 20	17
Partial-Participating End Users	30 ^b	10 to 15	11
Other Market Actors	N/A	5 to 10	5
Total		55 to 80	67

^a Includes all staff listed in the data set as project managers.

^b Reflects the population of partial participants for which contact data could be obtained from the Buildings Portal.

The PE Team developed interview instruments specific to each of the market actor categories identified in Table 4. Each interview question mapped to one of the research objectives outlined in Section 1.2.1. Staff experienced in qualitative market research and familiar with the market and FlexTech program completed the interviews. Each interviewer took detailed notes during the interviews and recorded the conversation in order to verify notes as necessary.

¹³ The study found almost no differences in feedback between the upstate and downstate regions. In only one area (service providers' experience responding to requests for proposals) was any difference noted; Section 3.2.1 includes a discussion of this issue.

The PE Team presented preliminary findings to NYSERDA’s evaluation and program staff periodically throughout the evaluation. This provided a venue for vetting preliminary results and for sharing intermediate results that could be acted upon prior to the conclusion of the evaluation. Staff input during these conversations provided valuable context and helped to resolve questions that arose prior to preparing results.

1.3 Context for Reviewing the Results

The results presented in this report are intended to create a comprehensive view of the FlexTech program. The PE Team analyzed the results of primary and secondary data analysis to identify key themes that emerged. The report emphasizes messages that were consistent across multiple data sources or that had significant opportunity to positively impact program performance. The PE Team used its professional judgment to determine which feedback rose to the level of inclusion in the report; as such, the report does not include every suggestion provided by interview respondents.¹⁴

Overall, much of the feedback gathered for this evaluation indicated that FlexTech is viewed as a valuable and influential program in the market for energy efficiency in New York. Participating end users and service providers alike recognize the benefits of the FlexTech program and appreciate the resources to which it provides them access. Even some parts of the process that are perceived to slow down project completion (e.g., the draft report review process) are viewed as improving the result and therefore worth the investment of time and capital.

That said, end users and service providers report that they continue to encounter a variety of challenges to implementing energy efficiency projects – both those funded by FlexTech and those projects aimed at implementing measures. To the extent that FlexTech can help reduce those barriers, the program is positioned to continue to influence the market. It will only be able to maximize its ability to exert that influence, however, if the program minimizes the introduction of additional barriers to project development and execution.

The market perceives that some process-related aspects of FlexTech serve to add barriers without adding value. The report discusses areas for improving FlexTech that focus on these aspects. The market actors interviewed for this evaluation are invested in the program and want to see it continue to thrive. Their input

¹⁴ Because the in-depth interview process was intended to collect qualitative information, the report only includes the number of respondents (“n”) who provided a certain response in one of two cases: (1) results are presented quantitatively (e.g., in a pie chart) or (2) the finding is tied to a recommendation at the end of this report. In many other cases, the findings present themes derived from data collected in response to multiple questions; providing the number of respondents in these cases is less appropriate.

was provided in this spirit. At the high level, end users and service providers value the FlexTech program, and they see ways to improve the program such that it can help more people adopt energy efficiency.

1.4 Organization of the Report

The remainder of this report is organized as follows:

- Section 2 provides a discussion of the program’s context, including the program logic, composition of program participation, and the program process flow.
- Section 3 reviews the market’s perceptions of the program, including drivers for and barriers to participation, program process-related feedback, overall program satisfaction, and the role of the program in the market.
- Section 4 discusses end user decision-making, including a high-level discussion of the factors that affect end users’ decisions about investing in energy efficiency, drivers for and barriers to measure implementation, and the effects of participating in FlexTech on long-term end user decision-making.
- Section 5 summarizes the key findings from each of the previous three sections and provides a concise set of recommendations for program staff to consider in the future.

The PE Team has provided a set of appendices that include additional details on the methodology and preliminary findings for this project. They are organized as follows:

- **Appendix A** includes a summary of the PE Team’s analysis of program tracking data. This memo presents findings related to trends in program participation, including information about the type and location of participating companies, the concentration of activity among service providers, and the types of measures identified in program studies.
- **Appendix B** maps out the steps involved with program participation, and draws on a review of program tracking data to summarize the duration of time it typically takes for projects to proceed through various stages of program participation.
- **Appendix C** provides an overview of the key components of the program logic model report (i.e., market barriers addressed through program activities, and expected outcomes) and highlights a few areas in which the program’s operations are somewhat inconsistent with the material presented in the logic model report. This could be due either to changes in the program or the market since the logic model report was written, or minor clarifications regarding program objectives based on input from staff.
- **Appendix D** is the sample design memo developed by the PE Team to guide the in-depth interview data collection effort.
- **Appendix E** includes the final in-depth interview guides used for each group of market actors.

2 Program Context

This section provides an overview of the program's structure, functional goals, offerings to the marketplace, and trends in participation. Section 2.1 reviews the program logic, discusses FlexTech's position within the NYSERDA portfolio of programs, and outlines the program's intended relationship with other energy efficiency programs available in the marketplace. Section 2.2 highlights key findings related to the volume and types of participants active in the program. Section 2.3 overviews the program process flow diagram and reports findings related to timelines according to which projects flow through the program.

Much of the material presented in this section summarizes interim work products prepared by Navigant during the course of the evaluation process. Those more detailed work products are available as appendices to this report (see Appendices A-C).

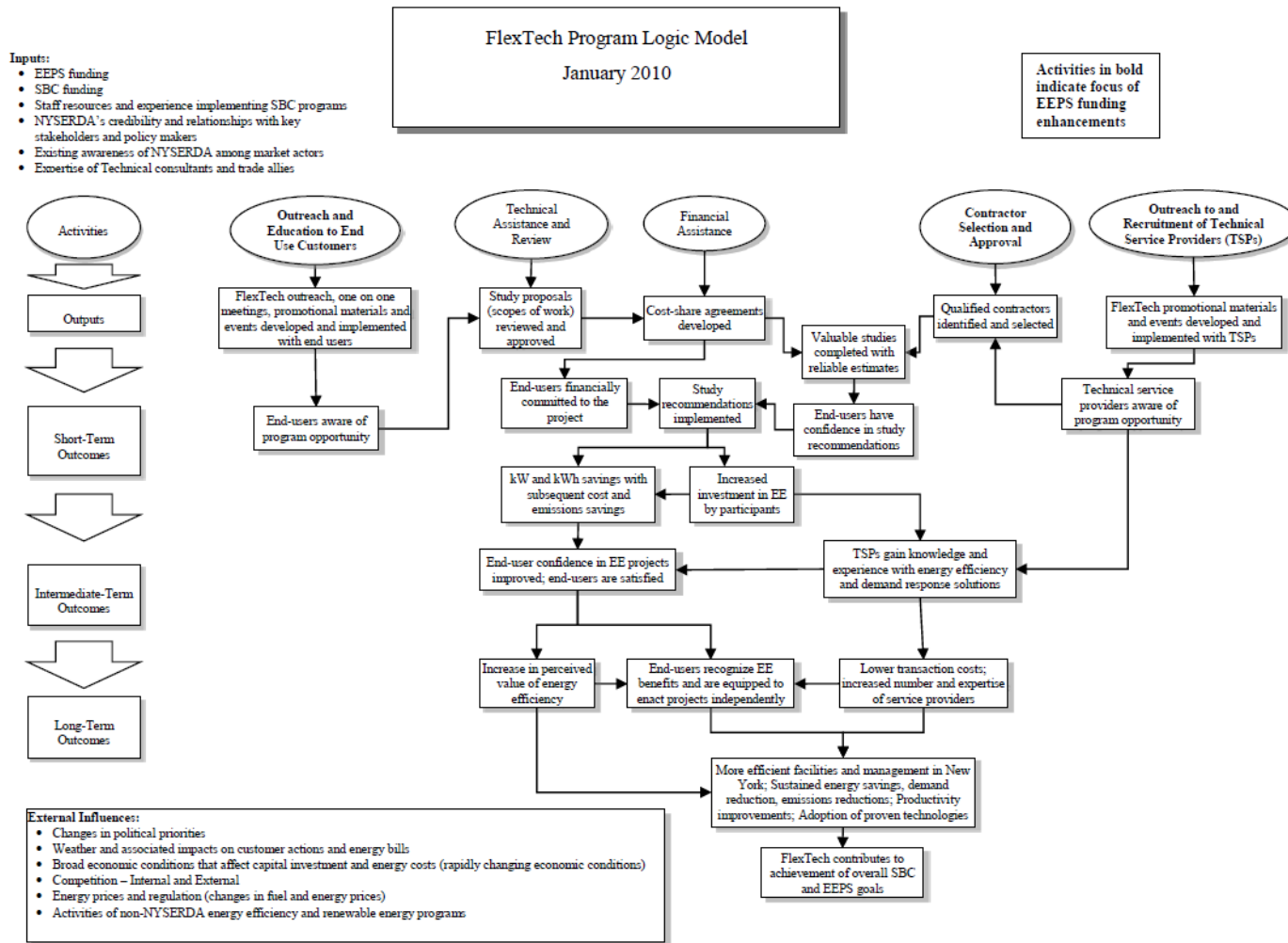
2.1 Overview of Program Logic and Objectives

This section summarizes the program's intended role in the market. The overview of program logic highlights key elements of the program's design, and the specific interventions it employs to bring about market improvements. Discussion of the program's intended role within the NYSERDA portfolio of programs and the broader market for energy efficiency services in New York follows.

For reference, Figure 2 presents the logic model diagram from the Program Logic Report. It serves as a guide to the remainder of the discussion in this section about barriers, activities, and expected outcomes.

Figure 2. FlexTech Program Logic Model

Source: GDS Associates, Inc. January 2010. NYSERDA Flexible Technical (FlexTech) Assistance Program Logic Model Report Update. Prepared for NYSERDA



2.1.1 Program Logic

Early in the evaluation process, the PE Team drafted a memo summarizing key elements of the FlexTech program's Logic Model Report, and identifying areas where the report's content did not appear to align fully with the program's implementation approach. The team revised that memo to reflect outcomes of a discussion with program staff. This section draws on the content of that memo, summarizing the barriers the program seeks to address, the program activities, and the expected program outcomes.

2.1.1.1 Barriers

The FlexTech program explicitly aims to reduce barriers to the adoption of energy efficiency measures and services affecting the supply side, mid-market/infrastructure, and the demand side of the market. The barriers cited as impeding the adoption of energy saving technologies and strategies include the following:

- Lack of time and competing priorities
- Volatility and risk related to energy prices and business environment
- Lack of information to support energy efficiency investment in the commercial and industrial (C&I) sector
- A diverse set of targeted customers that include different sizes and types of customer facilities and systems, with a wide range of needs for technical information
- Lack of funding to support analysis; competing needs for capital
- Lack of awareness, knowledge and understanding of energy efficiency features
- Uncertainty about savings
- High incremental or first costs¹⁵
- The Logic Model Report concludes that these barriers are being addressed by FlexTech program activities with measureable success.^{16 17}

Logic model clarifications based on process evaluation research:

- In addition to the stated barriers, the program also seeks to address the difficulty facility managers face in their efforts to package and sell energy efficiency opportunities to decision-makers. A key objective of the program is to find alignment between its offerings and the mission or objectives of its prospective participants. The program does this by investing significant effort into developing client interaction and learning client priorities, which helps develop an appropriate scope of work at the outset of each project. Program staff believe that when the program offers services that are well suited to the needs of the participant, the findings presented in the study will stand on their own, making a compelling case for investment in the recommended measures.

¹⁵ GDS Associates, Inc. January 2010. *NYSERDA Flexible Technical (FlexTech) Assistance Program Program Logic Model Report Update*. Prepared for NYSERDA.

¹⁶ *Ibid.*

¹⁷ Megdal & Associates, et. al. March 2012. *NYSERDA 2007-2009 FlexTech Program Impact Evaluation Final Report*. Section 3 Results, pg. 3-1 to 3-33.

2.1.1.2 Activities

The program activities aim to provide objective information and expertise needed to aid end users in making decisions about energy saving measures. The logic model report notes that the FlexTech program executes the following targeted activities to support different components of the market:

- Outreach and Education targeting End-Use Customers → *Demand-Side & Mid-Market/Infrastructure*
- Outreach and Consultant Recruitment → *Mid-Market/Infrastructure*
- Financial Assistance → *Demand-Side/Mid-Market/Infrastructure*
- Technical Assistance and Review → *Demand-Side*
- Consultant Selection and Approval → *Mid-Market/Infrastructure and Demand-Side*
- In an ongoing effort to evolve with the New York market, the FlexTech program committed to program enhancements associated with being selected as an EEPS Fast Track programs. Through the deployment of additional funds, the FlexTech program committed, and then took steps to increase the number of consultants, introduce new initiatives, and expand ongoing activities:¹⁸

Logic model clarifications based on process evaluation research:

After securing EEPS funding, the program took steps to coordinate with utilities, working to complement each other's offerings rather than competing with one another for potential participants. Examples of these collaborative efforts include a data center program offered in collaboration with Consolidated Edison (Con Edison), and a healthcare program offered in collaboration with National Grid.¹⁹

- The program has implemented other elements of its EEPS Fast Track plan as well. One of the most substantial actions the program has taken is to create an annual solicitation process through which non-FlexTech Consultants already working on some projects through the program are invited to apply to become FlexTech Consultants.

2.1.1.3 Expected Outcomes

The Flex Tech program logic model outlines the following expected program **outcomes**:

Short-Term (1-3 years)

- Valuable studies completed with reliable estimates
- End users aware of program opportunity
- Technical service providers aware of program opportunity
- End users have confidence in FlexTech study recommendations
- End users are finally committed to the project
- Study recommendations implemented
- kW and kWh savings with subsequent cost and emission savings
- Increased investment in energy efficiency by participants

¹⁸ System Benefits Charge Supplemental Revision for New York Energy Smart Program 2008-2011 (as amended August 22, 2008 and revised March 12, 2009) Section 3.2.2 – FlexTech – Program Enhancements for EEPS Fast Track.

¹⁹ See a description of NYSERDA's "[Con Ed and NYSERDA Datacenter Initiative](#)," and its "[Energy Efficiency for Health](#)" partnership with National Grid.

Intermediate-Term (3-5 years)

- End users are satisfied
- End-user confidence in energy efficiency projects improves
- Consultants gain knowledge and experience with energy efficiency and demand response solutions

Long-Term (5+ years)

- Lower transaction costs
- Increasing numbers of and expertise in technical consultants
- Increase in perceived value of energy efficiency
- End users recognize energy efficiency benefits and are equipped to enact projects independently
- More efficient facilities and facility management in New York
- Sustained energy savings, emissions reductions, and demand reduction
- Productivity improvements
- Adoption of proven technologies

Logic model clarifications based on process evaluation research:

- An additional expected long-term outcome of the program is to increase reports of participants' ability to complete "mission-central projects." This reflects the theory that more efficient use of energy frees up capital, enabling the company to make investments that are central to the company's mission.
- Program staff explains that plenty of service providers already exist in the market; the program seeks to improve the quality not just the quantity of service providers active in the market.
- Program staff recognizes that significant potential exists to improve the efficiency of building systems as opposed to individual equipment items.
- Unlike technical assistance programs offered in other markets, the FlexTech program is not intended to function as a feeder to other programs in the portfolio of NYSERDA offerings. Rather, the program seeks to match participants with compelling investment opportunities that require no outside financial support to justify investment.
- Program staff envisions the program as a gateway to bigger thinking about energy efficiency on the part of participants. They hope that program participants will go on to pursue new, different energy saving projects in addition to implementing the measures recommended in the FlexTech study.

2.1.2 Position within NYSERDA Portfolio

The FlexTech program is designed to provide end users with the technical expertise they need to identify and clearly document the financial viability of completing energy efficiency improvements. This is distinct from most other NYSERDA programs that offer incentives to directly support the implementation of energy efficiency measures. The program generally serves the needs of larger facilities that can benefit most from in-depth, comprehensive technical assistance, and that have the resources available to navigate program processes.

FlexTech seeks to provide end users the information they need to move forward with economically viable energy efficiency investments, without additional financial incentives. Offering NYSERDA funding to support measures that are deemed acceptable even without an incentive would be an inefficient use of ratepayer funds. For this reason, program staff does not proactively encourage FlexTech-funded projects to solicit funds from other NYSERDA programs, such as the Existing Facilities Program or the Industrial Process Efficiency Program.²⁰

2.1.3 Intended Relationship with Other Programs in the Market

Outside of NYSERDA's portfolio of programs, each utility offers its own form of technical assistance funding. These services are generally embedded as part of the utility's broader C&I energy efficiency programs. Prior to the introduction of the EEPS, NYSERDA was the sole player in the market for funding energy efficiency services in the state. A component of EEPS called for the utilities to offer energy efficiency programs of their own. This shift in the market was widely recognized as having the potential to introduce some confusion among end-use customers who would have to sift through the various program offerings to identify which program is most suitable. NYSERDA sought to address this potential confusion by initiating collaborative efforts with utilities, to provide technical assistance and, through other NYSERDA funding sources, funding to implement energy saving measures. These efforts included offering support to improve the energy efficiency of data centers (working with Con Edison) and healthcare facilities (working with National Grid).

Despite these isolated collaborative arrangements, NYSERDA's FlexTech program has little interaction with the utility programs. Because the FlexTech program seeks to make efficient use of ratepayer funds, and retain the ability to claim the maximum amount of savings it can, program staff do not actively encourage FlexTech participants to go on and install recommended measures through a NYSERDA or utility implementation incentive programs. However, as discussed in Section 3.4.2, it is not uncommon for a FlexTech participant to complete a FlexTech study, and then go on to receive implementation funds from a utility.

²⁰ The program's success is also measured based on the volume of savings ultimately resulting from the studies it funds.

2.2 Composition of Program Participation

The team reviewed the program data in order to summarize program participation across multiple dimensions.²¹ The team's goal of reviewing the data was to understand the market sectors that are participating in the program, the measure types that consultants recommend through the program projects, the project types that receive incentives through the program, the consultants that participate in the program, and the geographic location of projects. This analysis helps identify whether the population of projects served by the program aligns with program objectives, and it provides supplemental data to support feedback received from staff and market actor interviews.

This section summarizes the FlexTech data at a high level by market sector, measure category, and project type. Appendix A provides additional details on the composition of program participation, including summaries of the program data by consultant type (FlexTech Consultant versus Independent Service Provider), electric utility, and study location (geographic spread).

2.2.1 Market Sector Summary

The commercial-wholesale/retail and industrial/manufacturing sectors completed a large percentage of FlexTech studies in 2011 and 2012. The commercial-wholesale/retail sector completed 42% of the studies, and the industrial/manufacturing sector completed 23% of the studies during that period. The studies completed within these two sectors also accounted for the greatest percentage of recommended kWh savings (69% of total) and received the greatest portion of incentives (53% of total). In addition, the healthcare sector completed studies with the greatest percentage of MMBTU savings. The FlexTech program conducted a small proportion of studies in the federal and state government, not-for-profit, multifamily, services and agriculture/forestry sectors. Figure 3 details the project count, recommended savings, and incentives spent by market sector for FlexTech studies completed in 2011 and 2012.

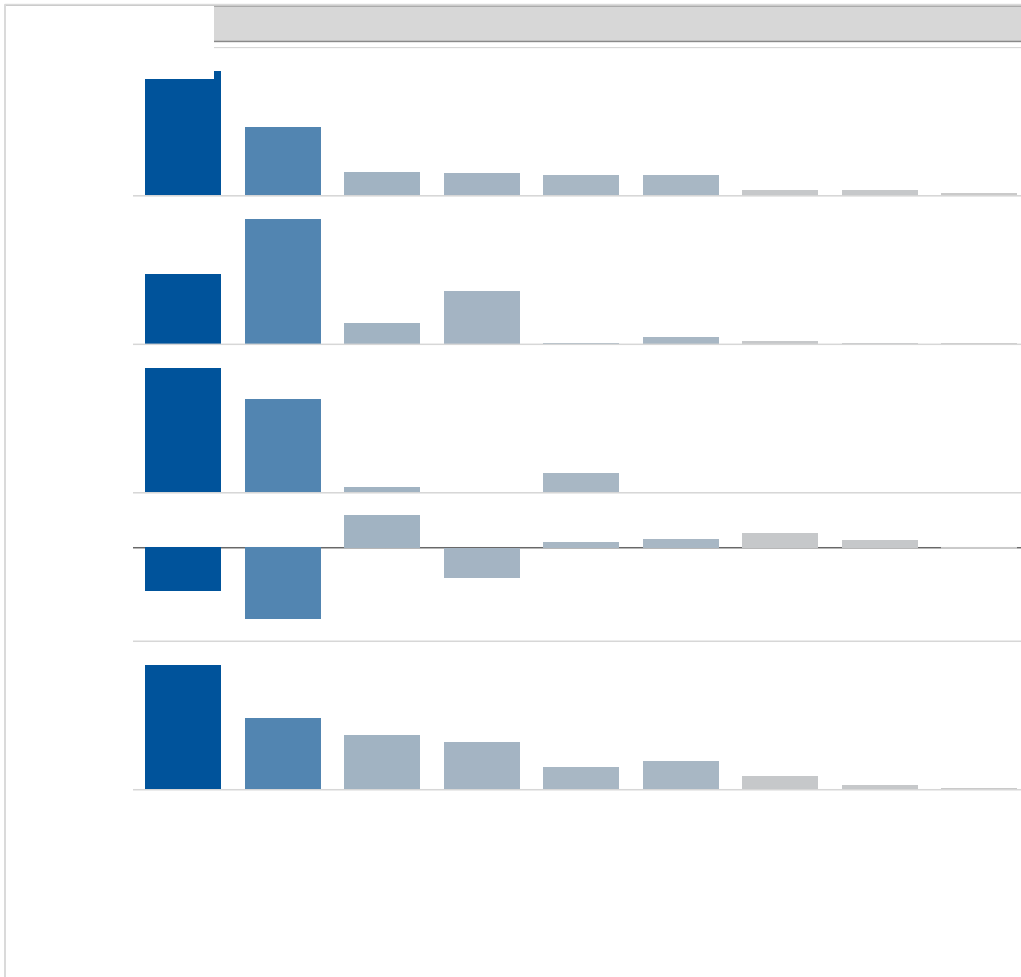
“Recommended savings” refers to the savings that would result if recommended measures were installed.²²

²¹ The team included 405 projects in the program data review. These projects had a report approved in 2011 or 2012 and included at least one measure with a status of implemented, recommended, recommended mutually exclusive, or null. The majority of measures with a null status were benchmarking measures with no savings. Appendix A contains details on the methodology.

²² In the case of “recommended MMBtu savings” several of the building sectors show negative savings values. This reflects the fact that combined heat and power systems were recommended for facilities in these sectors, and the installation of CHP systems would result in a net increase in natural gas use at the facility despite the overall increase in energy efficiency resulting from the measure.

Figure 3. Project Count, Recommended Savings, and Incentives Spent by Market Sector

Source: Navigant analysis of the FlexTech database, projects completed during 2011-2012.



2.2.2 Measure Category Summary

The FlexTech studies' recommendations include a range of measure categories (energy efficient technologies) including (but not limited to) lighting, HVAC, motors, and generation. More than a third of all projects included HVAC, controls, or lighting measures. These three categories combined contributed to 28% of the recommended kWh savings. The generation measure²³ was the key contributor to the recommended kWh savings, at 55% of the total, even though generation was a recommended measure in only 3% of the 2011 and 2012 studies. HVAC measures led in terms of positive recommended MMBTU

²³ The generation measure included a variety of technology types, including combined heat and power (CHP) systems, microturbine CHP upgrades, and a hydropower system. Projects that included the generation measure were classified as either CHP studies or feasibility studies.

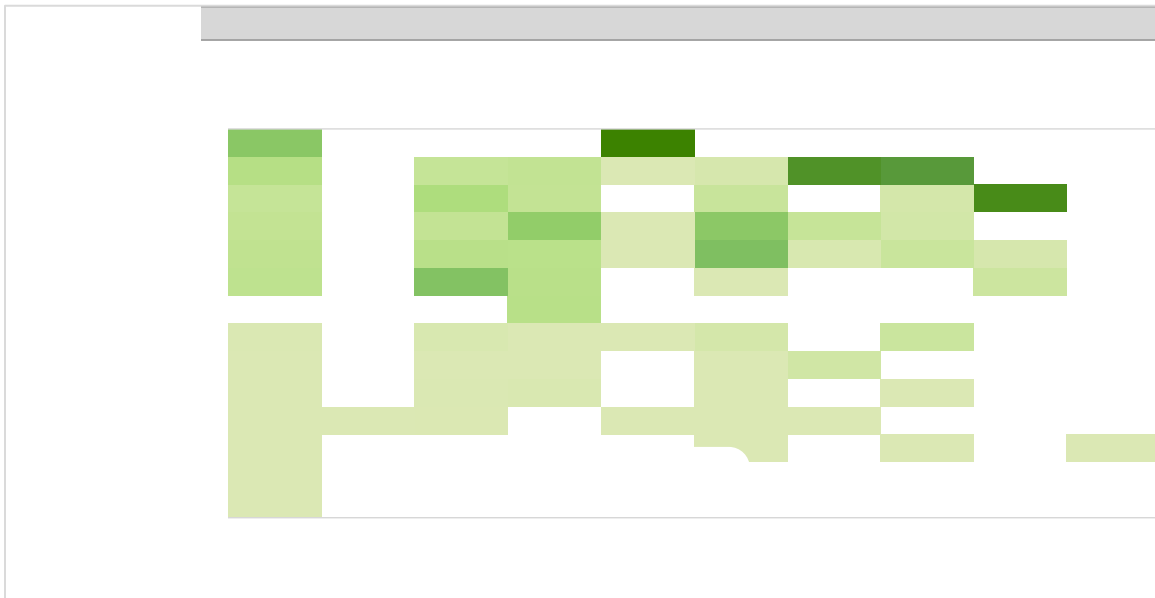
savings, and controls and industrial process measure also contributed to the positive recommended MMBTU savings.

2.2.3 Project Type Summary

The FlexTech program provides cost-sharing incentives for a range of project types including feasibility studies, PLCPs, data centers, retro-commissioning, and CHP studies. However, it is important to note that a single study may include multiple measure types as shown in Figure 4. Feasibility studies, PLCPs, and CHP studies had the greatest presence in 2011 and 2012. Combined, these three project types accounted for 77% of the project count, 84% of the recommended kWh savings, and 72% of the incentives. Feasibility studies represented the largest number of completed projects, contained the most recommended savings (recommended kWh and MMBTU savings), and received the most incentive dollars from the FlexTech program. In addition, CHP studies contained 35% of the recommended kWh savings though they received only 9% of the incentives in 2011 and 2012.

Figure 4. Project Types and Measures by Recommended kWh Savings

Source: Navigant analysis of the FlexTech database, projects completed during 2011-2012



2.3 Program Process Flow

This section provides an overview of key procedural elements of the program participation followed by a summary of typical timeframes associated with various phases of participation.

2.3.1 Process

For the purposes of analyzing the timelines associated with the flow of projects through the program, Navigant assessed the FlexTech program processes and categorized them into four primary sections: Program Entry, Project Initiation, Technical Assistance & Review, and Financial Assistance. These phases detail how the program engages the market and moves a project through to completion. Figure 5 shows the flow of activities in each of these phases.

During **Program Entry**, the program engages in market outreach and communications in order to recruit service providers and end users to the program. This includes releasing brochures, hosting webinars, and building relationships with market actors. Program staff recruits service providers to contract with the program as FlexTech Consultants through RFPs, and Independent Service Providers meeting certain eligibility criteria have an opportunity to apply to become FlexTech Consultants through an annual process.

During **Project Initiation**, service providers develop a scope of work for an energy study. Projects are initiated through four channels:

1. *FlexTech Consultants* refer their customers to the program
2. *Independent Service Providers* refer their customers to the program
3. *End users* solicit program support independently
4. *Vertical Outreach Contractors* refer customers to the program

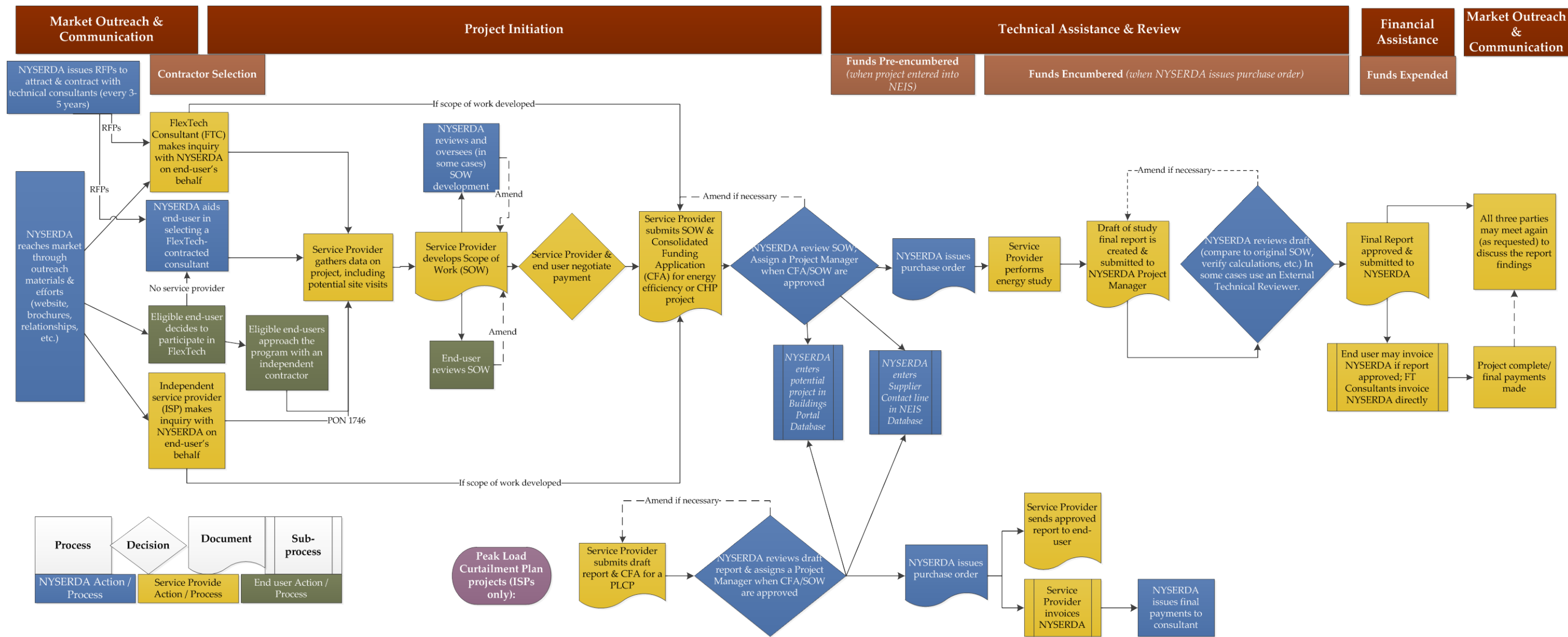
After program staff approves the scope of work, service providers embark on the energy study with the end user. Service providers develop a draft report of their findings from the study during the **Technical Assistance & Review** processes. Staff then often assigns an ETR who compares that report to the original scope of work to validate assumptions and analysis in the report. After the service provider makes all requested amendments to the report, program staff approves the report and provides **Financial Assistance**. If a FlexTech Consultant completed the study, staff pays the firm.²⁴ Conversely, if an Independent Service Provider completed the study, staff pays funds directly to the end user.

Variations to the program processes shown in Figure 5 do occur, and sometimes relationship with program staff can change the program experience. Project teams working on PLCPs interact with the program differently – using different approval processes and funding structures. CHP projects also use a different approval process.

²⁴ FlexTech Consultants can receive payments before the end of the project through a milestone payment structure.

Figure 5. NYSEERDA FlexTech Process Flow Diagram

Source: Navigant review of program literature, and in-depth interviews with program staff and service providers, 2013.



2.3.2 Timelines for Major Steps (Milestone Analysis)

The team reviewed the FlexTech data²⁵ to understand the flow of studies through the program and the time it takes studies to complete major steps (or milestones) in the process. The goal of this review was to understand if steps take longer than anticipated, if steps take longer for some project types, or if steps take longer for FlexTech Consultants than Independent Service Providers. The FlexTech data (Milestones Report) included four key dates that represent a project lifecycle in the FlexTech program: application received, signed date²⁶, report draft in, and report approved. The periods in between these key dates are explained below:

- 1. Application received to signed date:** Applicant/consultant teams deliver a scope of work and Consolidated Funding Application (CFA). FlexTech program staff review the scope of work and coordinate with the end user and service providers to ensure that necessary revisions are made. FlexTech program staff approves project funding.
- 2. Signed date to report draft in:** Consultants conduct studies, with participant input, and draft the report.
- 3. Draft in to report approved:** FlexTech program staff and/or ETRs review draft reports and coordinate with the service providers to ensure that necessary report revisions are completed.

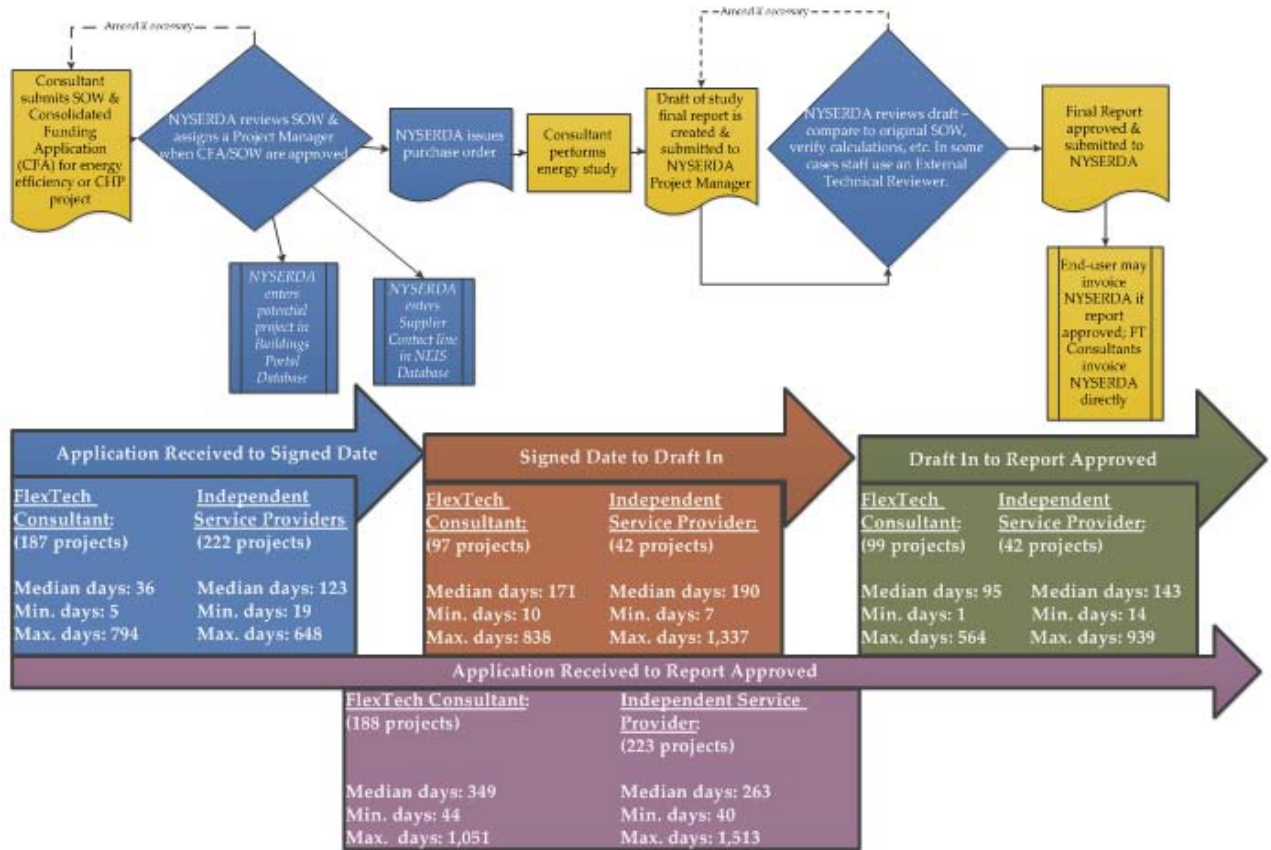
The team analyzed the data and calculated the minimum, median, and maximum days that completed projects in 2011 and 2012 took to complete each period. The team completed the analysis for all projects in aggregate, by select project types (feasibility studies, CHP studies, benchmarking and PLCPs), and by consultant type. Figure 6 shows the results of the analysis for all projects by consultant type.

²⁵ NYSERDA staff provided the program data from the Buildings Portal Database in a Milestones Report, which provided completion dates for varying steps in the process.

²⁶ Signed date refers to the date when FlexTech issues a purchase order and encumbers incentive funds.

Figure 6. Key Milestones Analysis by Consultant Type: All Projects

Source: Navigant analysis of the FlexTech database



Note: The project count included below each consultant type in parentheses indicates the number of data points used to calculate the number of days between project milestones. The days between each project milestone are dependent on this project count. Not all projects included dates for every project milestone as project managers are not required to populate interim dates. Therefore, the total days from the application received to report approved (the purple box) does not equal the sum of the days for each stage (the blue, orange, and green boxes).

The key findings from the analysis for all projects in aggregate, by select project types (feasibility studies, CHP studies, benchmarking and PLCPs), and by consultant type include the following points. Appendix B provides additional details on this analysis.

- In aggregate, FlexTech projects required about **ten months** from the time NYSERDA received the application to when NYSERDA approved the report.
- Feasibility studies took the most time to complete of the project types reviewed. Feasibility studies took roughly **fifteen months** from application received to report approved.
- PLCPs took the least amount of time to complete of the project types reviewed. PLCPs took roughly **four months** from application received to report approved. This, in part, reflects the unique program format used for PLCP projects, in which the completed plan is submitted as the application for program participation.

- **FlexTech Consultants took less time to complete feasibility studies and CHP studies than Independent Service Providers.** FlexTech Consultants completed feasibility studies in about twelve months and CHP studies in about ten months, compared to Independent Service Providers who completed feasibility studies in about sixteen months and CHP studies in about fifteen months.

3 Market Perceptions of the Program

Investments in energy efficiency require businesses to allocate scarce time and money, and to interrupt normal operations. The market needs support that makes these investments easier and less cumbersome. FlexTech provides technical assistance services aimed at identifying energy saving opportunities and facilitating project development. Why do some choose to take advantage of the program while others do not? This section explores this topic. First, the section addresses drivers for and barriers to participation, and then it discusses overall satisfaction with the program. Finally, the section includes discussion of the role of the program in the market.

The material in this section draws on in-depth interviews conducted with 66 market actors providing a range of perspectives on the program. As presented in Table 4 interviewees included participating and partial-participating end users, FlexTech Consultants, and Independent Service Providers, as well as trade associations and a utility representative active in the New York market.

Critical feedback from FlexTech Consultants presented in this section may seem to contradict the high levels of reported satisfaction (described later in Section 3.3). Rather, the constructive input provided by FlexTech Consultants demonstrates their investment in the program. They wish to see adjustments to the program's operations that have the potential to improve the participation experience and program impacts.

3.1 Drivers for and Barriers to Program Participation

This section summarizes the most significant reasons that end users and service providers choose to participate in the FlexTech program, as well as the barriers that limit participation. Section 3.1.1 summarizes factors affecting both end users and service providers. Sections 3.1.2 and 3.1.3 discuss the drivers and barriers affecting end users and service providers, respectively.

3.1.1 Overall Market Drivers and Barriers Affecting Both End Users and Service Providers

This section summarizes drivers and barriers to program participation that pertain to both end users and service providers. Some drivers and barriers discussed in the following sections are so significant they also contribute to overall program satisfaction. Those factors are discussed in greater depth in this section and are referenced briefly in Section 3.3.

3.1.1.1 Cross-Cutting Drivers for Participation

As shown in Figure 7, numerous factors compel end-use customers and service providers to participate in NYSERDA's FlexTech program. Factors leading service providers to participate are shown on the left FlexTech side of the figure, and factors driving end user participation are shown on the right side. Broad market drivers are shown at the top in green.

The availability of incentives plays the most substantial role in driving participants to the FlexTech program. FlexTech incentives provide financial support necessary to help both end users and service providers accomplish their efficiency objectives. The incentives reduce study costs and make exploration of advanced energy efficiency opportunities more financially viable for end users. This generates project activity that provides revenue and growth opportunities for service providers.

New York City's Local Law 87

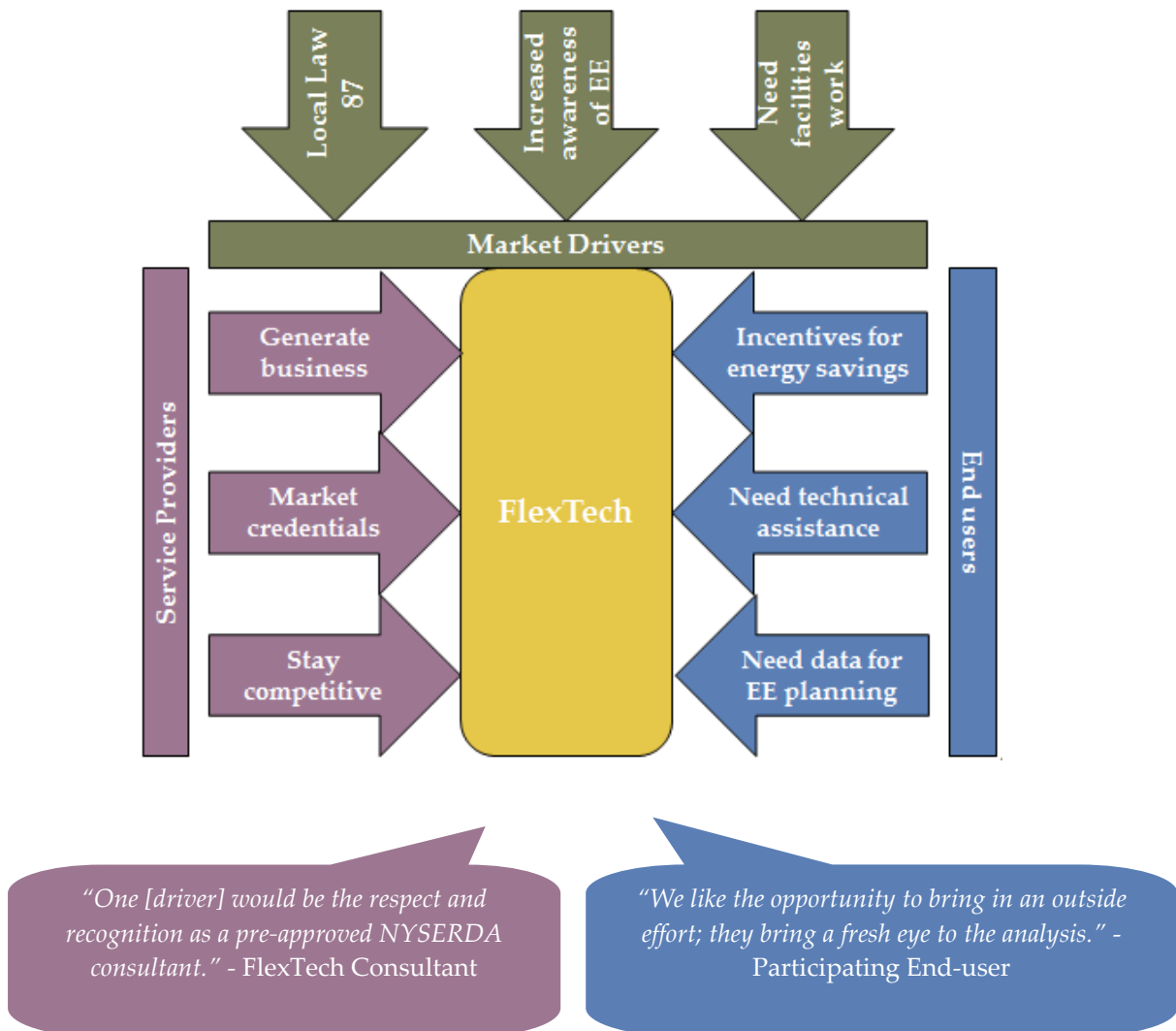
Passed by New York's City Council in 2009, Local Law 87 requires that comprehensive energy audits and retro-commissioning be performed at all existing buildings larger than 50,000 square feet, as well as buildings meeting other criteria. Reporting requirements went into effect in 2013. A rolling, address-based system determines in which year a facility must submit its first report, and then additional reports must be completed every decade following.

FlexTech's reputation in the market also plays a strong role in driving both end users and service providers to participate, and it contributes to long-term engagement with the program. For end users, NYSERDA's reputation helps garner buy-in from key decision-makers to complete a study. It also lends credibility to the findings, increasing the likelihood for implementation of recommended measures. For service providers, NYSERDA's brand serves as a key market credential that helps them differentiate themselves from their competition.

Broad market drivers leading to program participation include a growing awareness of energy efficiency opportunities and an ongoing need to make improvements at existing facilities. Local and regional policies continue to reinforce the importance of energy efficiency and drive energy projects. Interviewees noted particularly strong drivers in the downstate region, such as Local Law 87, which is described in the corresponding text box.

Figure 7. Summary of Drivers for Participation in NYSERDA’s FlexTech Program

Source: Navigant in-depth interviews with service providers and participating end users, 2013.



3.1.1.2 Cross-Cutting Barriers to Participation

Overall, market actors expressed that **some program processes are cumbersome**, but that the **value of participation outweighs the burdens**. Both end users and service providers noted the complexity of the program creates challenges in their organizations when participating. The degree to which the complexity of the program deters participation varies across the various types of participants. Section 3.2 includes a discussion about the range of concerns about the process-related elements of program participation.

This section discusses a number of challenges that prevent both end users and service providers from participating in the FlexTech program. The barriers are presented in an effort to help program staff hone in on potential areas for program improvement, though some barriers are beyond the control of program staff.

Though the barriers to participation are significant and worthy of attention, market actor feedback indicated that the benefits of program participation outweigh these mostly administrative challenges.

Participating in FlexTech creates challenges in **resource allocation** because ample staff, time, and capital are required to complete a FlexTech study. The FlexTech program is intentionally rigorous to ensure program studies are credible, contribute to broad market adoption of advanced energy efficiency, and focus on site-specific customer needs. The rigorous review of the scope of work and draft reports challenges service providers who provide weak products. However, these program processes demand time and attention from service providers, end users, and staff that, based on feedback from interviewees, present a barrier to participation for some.

For participating end users, the most substantial barrier to program participation is the **high monetary cost** of studies, despite the incentives offered by the program. Participating end users commented on the high cost of studies, and partial-participating end users cited high costs as the primary reason for discontinuing their FlexTech projects. High costs are interrelated with timing issues, also reported as a barrier for partial-participating end users; in some cases, long study timeframes cause end users to miss the window of opportunity to obtain capital to devote toward completing a study.²⁷ Service providers noted that certain projects, particularly small ones, are not worth completing with assistance from the FlexTech program because the benefit of participating does not justify the magnitude of resources and planning required.

Interviewees noted that **misconceptions about the full benefits and costs associated with program participation** might deter potential participants. Service providers believe some market segments know less about the full benefits of FlexTech, and warrant additional attention in the form of program outreach. Similarly, end users noted that their peers who do not participate in FlexTech might not fully understand the benefits the program has to offer. When end users have limited funds to invest in energy efficiency, some may place a priority on investing directly in the implementation of measures, rather than investing in a study. Such customers miss the benefits created by FlexTech participation, such as identification of energy saving opportunities the facility's own staff has overlooked, and avoiding investment in measures that are not optimal given a facility's unique circumstances.

Concerns about divulging proprietary information can also deter end users and service providers from participating in FlexTech. A few end users fear that participating in FlexTech may result in proprietary information about their organization or commercial/industrial processes being shared with the public or their peers. Some believe FlexTech reports may become publicly available and disclose information to the

²⁷ Program staff believes that participants who choose not to participate due to timing issues may have been free riders if they had participated. This process evaluation did not explore that topic.

broader market that would undermine their competitive advantage. Similarly, several service providers expressed discomfort with sharing proprietary information about their technical services or products with other service providers that serve as ETRs. When service providers express this concern to program staff, the program can perform in-house review that would not involve an ETR.

The sections that follow provide more detailed discussion of the drivers and barriers facing end users and service providers specifically.

3.1.2 Drivers and Barriers to End Users' Participation in the Program

End users believe the FlexTech program provides substantial benefits to their organizations. However, process-related challenges may prevent some end users from participating, or from engaging with the program in a consistent manner. The following sections detail the drivers and barriers specific to end users' participation in the program.

3.1.2.1 Drivers for End-User Participation in the Program

End-use customers highlighted the importance of the program's **financial incentives** more than any other driver. Fifteen FlexTech end users noted that the cost-share feature of the program was the most important driver for participating in the program. Among the reasons given for the importance of incentives, end users noted that they aid them in pitching FlexTech studies and subsequent implementation work to their organization's management. Incentives also enable studies to be more in-depth and comprehensive so they can reveal substantive energy saving opportunities. In addition, interviewees indicated that end users are motivated to recapture some of the contributions their organizations make to the Systems Benefit Charge funds.

End users indicated that their **need for technical assistance and desire to pursue energy efficiency** drives them to participate in FlexTech. FlexTech services support end users' efforts to improve their facilities and enable them to incorporate energy efficiency in their facility improvement plans. Interviewees noted that FlexTech service providers bring a fresh eye to existing planning efforts; often, they identify strategies to integrate efficiency into existing facilities improvement plans that staff internal to the end user organization had overlooked. Interviewees also noted that FlexTech provides unique value in helping them navigate complex energy efficiency strategies. A positive experience with the FlexTech service providers' technical expertise also drives repeat participation for end users and contributes to a high level of program satisfaction; many interviewees in the sample were repeat participants.

The opportunity to **access superior technical services and industry peer review** also drives end users to complete FlexTech studies. A few end users indicated that the high quality FlexTech studies, a product of

the superior technical services and a careful review process, impresses their management. This lends credibility to the studies during the capital planning process. For a few end users interviewed, FlexTech studies have focused their management's attention on efficiency issues, resulting in permanent inclusion of energy efficiency in their organization's capital planning processes, as discussed further in Section 4.3. Over time, this may increase the likelihood that efficiency measures will be implemented. Finally, interviewees indicated that the quality and format of the FlexTech studies drives repeat participation for several end users.

3.1.2.2 Barriers to End-User Participation in the Program

Figure 8 summarizes the barriers to program participation for end users. This reflects input from a range of perspectives, including service providers and program staff, as well as partial-participating and participating end users. According to end users, the **capital expense and time required to complete a FlexTech study hinders program participation** more than any other barrier. End users indicate that, while the program's cost share is helpful, program participation still requires an ample amount of several types of resources: capital, staff, and time. When they have access to sufficient amounts of each of these resources, end users do not hesitate to participate in FlexTech.

End users interviewed for the evaluation, indicated that program complexity is a nuisance but not a substantial barrier to participation. Of the end users who commented on the complexity of the program and the length of time required to participate, a few partial-participating and participating end users noted that the complexity led them to participate in utility-funded programs instead of FlexTech. However, most believe the program requirements have a net positive effect, enhancing the rigor of the technical process and improving report quality.

In contrast, service providers view **program complexity** as a substantial barrier to their customers' participation in FlexTech. Taking into consideration their experiences with both participating and non-participating end users, they explain that their customers perceive the program to be complex. Those perceptions of complexity relate to the requirements to initiate a project, including data collection, multiple meetings with project teams, and the long timelines associated with application review.

Comments from program staff counter some of the critical feedback related to the speed at which projects proceed through the program. Program staff noted that delays often occur due to slow response times on the part of the end user and service provider.

A lack of awareness among non-participating end users about the benefits of participating in the program may stand in the way of greater participation. A handful of participating customers noted that they

do not believe their peers fully understand the value proposition offered by the program. Service providers provided similar comments.

Figure 8. End Users’ Barriers to Participation

Source: Navigant in-depth interviews with service providers, participating end users, and program staff, 2013.

	Summary of Barriers to Program Participation			
	Resources Required to Complete Study	Complexity of Program	Lack of Awareness	Proprietary Issues
Participating End Users	N = 9	N = 5	N = 3	
Partial Participating End Users	N = 4	N = 4		
FTCs & ISPs about End Users	FTC = 8 ISP = 1	FTC = 7 ISP = 2	FTC = 1 ISP = 2	FTC = 1 ISP = 3
Staff about End Users	N = 3			

Note: “Resources” includes all investments made in a FlexTech study, including the monetary and non-monetary inputs such as time and staffing resources. Also refers to the lack of internal processes capable of handling FlexTech administrative requirements.
Source: Navigant analysis of interviews with participating end users, service providers, and program staff.

3.1.3 Drivers and Barriers to Service Providers’ Participation in the Program

The following discussion outlines the most substantial drivers and barriers to service providers’ participation in FlexTech. First, the section discusses how service providers leverage FlexTech resources to enhance their organization’s service offerings, market their services, and build a pipeline of work. Next, the section highlights service providers’ barriers to program participation, including the challenges that prevent them from introducing projects to the program.

Some of the barriers to participation discussed in this section are integrally related to program process-related feedback and will be discussed in more detail in Section 3.2.

3.1.3.1 Drivers to Service Providers’ Participation in the Program

FlexTech provides a unique opportunity for service providers to **work on complex, comprehensive studies**. Service providers leverage FlexTech incentives to develop broader scopes of work and pursue more in-depth analysis than might be feasible with a smaller budget. This enables them to identify deep energy saving opportunities for their customers. Service providers use these opportunities to enhance their service offerings, either perfecting newer services or expanding on a portfolio of existing services.

Service providers primarily participate in FlexTech to **leverage NYSERDA's brand and the FlexTech reputation** in order to generate more business. NYSERDA's brand recognition helps service providers validate their credentials and stay competitive in the market. Ongoing affiliation with NYSERDA garners respect from future and current clients, which contributes to a firm's business development efforts. Participating in FlexTech also provides firms with another avenue for marketing to potential customers. Likewise, for those service providers who offer a broad range of services, completing FlexTech builds a queue of potential work to design, engineer and install recommended efficiency improvements.

Independent Service Providers and FlexTech Consultants acknowledge similar benefits of the program, including the **benefits of becoming a FlexTech Consultant**. In addition to serving as a valuable credential, the FlexTech Consultant status offers substantial administrative benefits. FlexTech Consultants already have a contract in place with NYSERDA, and this streamlines the project initiation phase. Further, for projects completed by a FlexTech Consultant, incentive payments are made directly to the service provider, and can be made using a milestone payment system. This means that customers do not need to have the capital available to pay for the full study upfront and then wait for cost-share reimbursement upon study completion, as is the case with studies completed by Independent Service Providers. Independent Service Providers commented that the streamlined administrative processes available for FlexTech Consultants would enhance their customers' experience and simplify program participation.

3.1.3.2 Barriers to Service Providers' Participation in the Program

Section 3.2 describes some critical feedback from service providers related to program processes. However, the factors that service providers wish to change about the program do not appear to deter service provider participation in a significant way.²⁸

Project initiation, completing the studies, and responding to comments received during the technical review process demand a **substantial investment of capital, staff, and time** from service providers. Of the barriers that do stand in the way of participation, a lack of these resources, either on the part of the service provider or on the part of the end user, is the most significant (Figure 9). A few firms noted that they need a dedicated staff member to manage their portfolio of FlexTech projects.

As shown in Figure 9, the process of applying to become a FlexTech Consultant can limit some service providers from participating as FlexTech Consultants. Every few years, the program issues an open solicitation for new prospective FlexTech Consultants to apply for competitive selection. The program also offers an annual opportunity for Independent Service Providers to apply to become FlexTech Consultants if

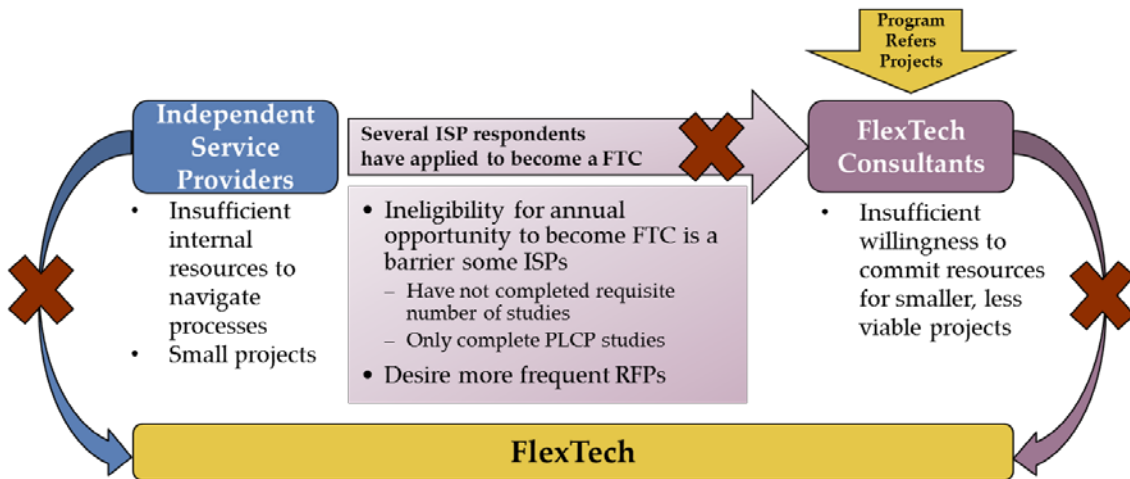
²⁸ The PE team did not conduct in-depth interviews with service providers that have not participated in the program.

they have completed at least three feasibility studies. Independent Service Providers who do not meet these criteria must wait until another open solicitation is issued.²⁹

Even if service providers actively participate in FlexTech, they may not introduce every project or client to the program. Instead, service providers weigh the potential value of a bringing a particular project to the program against the costs. The opportunity costs associated with the long project timelines and the administrative challenges associated with participation cause service providers to be selective about which projects they introduce to the FlexTech program.

Figure 9. Service Providers’ Barriers to Participation

Source: Navigant in-depth interviews with service providers, 2013.



Service providers often apply their own set of screening criteria to the projects that they refer to FlexTech. Service providers most often refer *larger projects with a high likelihood to proceed with measure implementation*. Some service providers indicate that they frequently refer projects of a certain size threshold, a threshold at which the value of the project exceeds the costs of participating in the program; this value is not the same for every firm. Such projects represent ideal FlexTech candidates, as the savings potential is large enough that the benefits of identifying valuable energy saving opportunities far outweigh the burdens of participating.

The fact that service providers are selective about which projects they introduce to the program includes both benefits and drawbacks. It is a positive outcome in some respects because it keeps small projects and

²⁹ In Navigant’s sample of interviewees, only three Independent Service Providers had applied to become a FlexTech Consultant. The remaining eight firms have not pursued the opportunity or are not eligible to become a FlexTech Consultant.

projects not likely to lead to measure implementation out of the program. However, service provider feedback indicates that in some cases, projects that could benefit from the program (e.g., identify larger, more robust savings opportunities than they could in the absence of the program's assistance) are not applying because it would delay the completion of the smaller-scale efforts they would like to pursue immediately. The studies that are completed outside the program due to concerns about FlexTech timelines and administrative hurdles may end up being less comprehensive and lower quality, not ultimately leading to implementation and leaving potential savings on the table. Service providers acknowledge that becoming a FlexTech Consultant simplifies some of the challenges associated with program participation but not all service providers are eligible to or make the effort to make that transition.

3.2 Program Process-Related Feedback

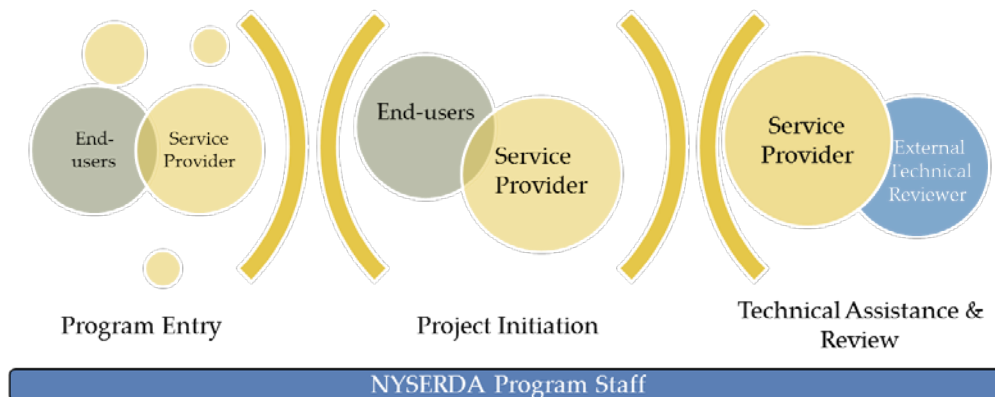
The most substantive feedback resulting from market actor interviews pertained to the processes of participating in the program. This section first introduces some high-level findings related to the roles and levels of responsibility of different types of program participants, and feedback that pertains to all stages of program participation. The remainder of the section uses the process flow diagram introduced in Section 2.3.1 as a framework for presenting this feedback, organizing the discussion according to three key stages of participation:

- Program Entry
- Project Initiation
- Technical Assistance & Review

Figure 10 presents a summary of which FlexTech participants (i.e., end users, service providers, and ETRs) drive the most activity or carry the most responsibility in each of the primary stages of participation. In general, NYSERDA program staff seeks to maintain contact with all participants (end users and service providers) during all stages of the program, though feedback from participants indicated that service providers tend to maintain the greatest amount of communication with NYSERDA. The relative size of each circle in the graphic conveys the extent to which that market actor plays a role during that stage. Overlapping circles represent situations in which market actors share responsibilities for tasks in a given stage of the program participation.

Figure 10. Summary of FlexTech Program Processes & Most Active Participants

Source: Navigant in-depth interviews with service providers and participating end users, 2013.



End users and service providers have different perspectives about the timelines associated with program participation that appear to be tied to their level of interaction with the program. Nearly all end users believe their projects proceed through these processes at a reasonable pace, and they suggested fewer ways to improve project initiation than did service providers. Conversely, service providers almost unanimously agree that FlexTech should take steps to increase the pace of project completion. As discussed in Section 3.3, end users have higher levels of satisfaction with FlexTech than do service providers. It is not clear why the two groups offered different perspectives. It may reflect service providers' more substantial experience with the program, having seen a greater number of projects through the program than any one end user could comment on. It also may reflect that service providers appear to insulate end users from challenges that might undermine their satisfaction. Service providers would benefit if projects could proceed through the program at a faster pace (i.e., they could serve more projects faster), an important perspective to consider when weighing the feedback provided.

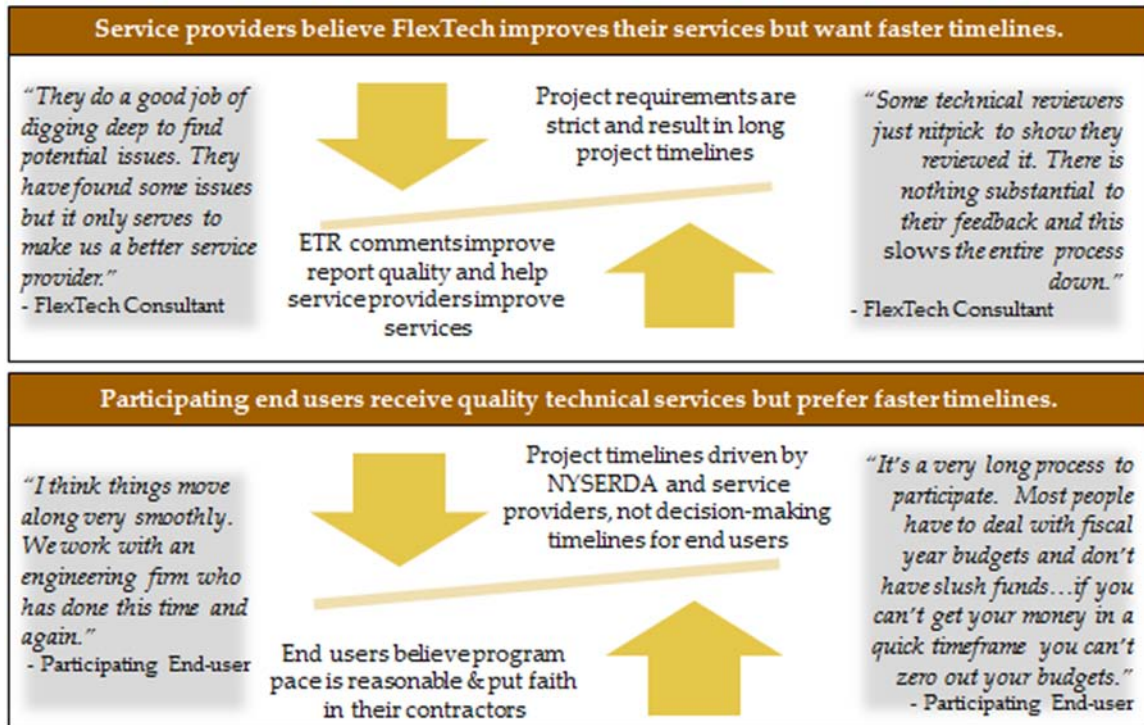
FlexTech Consultants more readily offered feedback about program processes and are likely in a good position to comment due to their repeat engagement with the program. FlexTech Consultants perceive that long program timelines and inconsistencies in program experience create challenges in managing their customers' expectations about project timelines. Long timelines can affect their customers' ability to make timely decisions about implementation of recommended measures. Service providers suggested that the program could improve timelines in nearly all program processes and improve consistency in review of program materials and deliverables.

In general, interviewees offered mixed feedback about the program processes. While all groups acknowledged opportunities for improvement, most interviewees do not view program processes as so

cumbersome that they substantially undermine program participation. Figure 11 summarizes the mixed feedback provided by both service providers and end users. The top half of the figure highlights the balance between positive and negative experiences service providers have with the program. The bottom half of the figure highlights the dynamic between the positive and negative experiences for end users.

Figure 11. Summary of Process-Related Feedback

Source: Navigant in-depth interviews with service providers and participating end users, 2013.

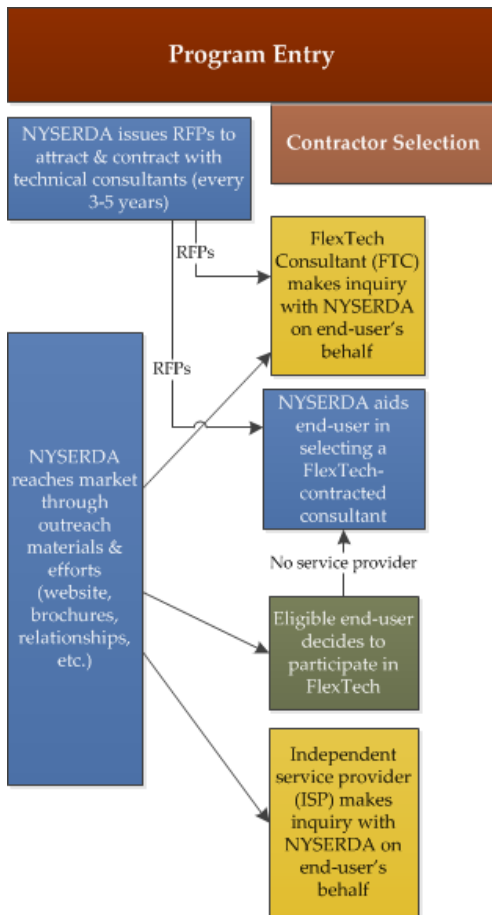


3.2.1 Program Entry: Program Awareness and Pathways to Participation

This section relates to the Program Entry component of the process flow diagram, as shown in Figure 12. The analysis of this phase of participation includes a discussion of the sources and levels of program awareness and the channels through which end users and service providers enter the program.

Figure 12. Program Entry Component of Process Flow Diagram

Source: Navigant Process Flow Diagram, 2013.



3.2.1.1 Sources and Levels of Program Awareness

Awareness of the FlexTech program comes from two distinct sources, depending on the market actor type:

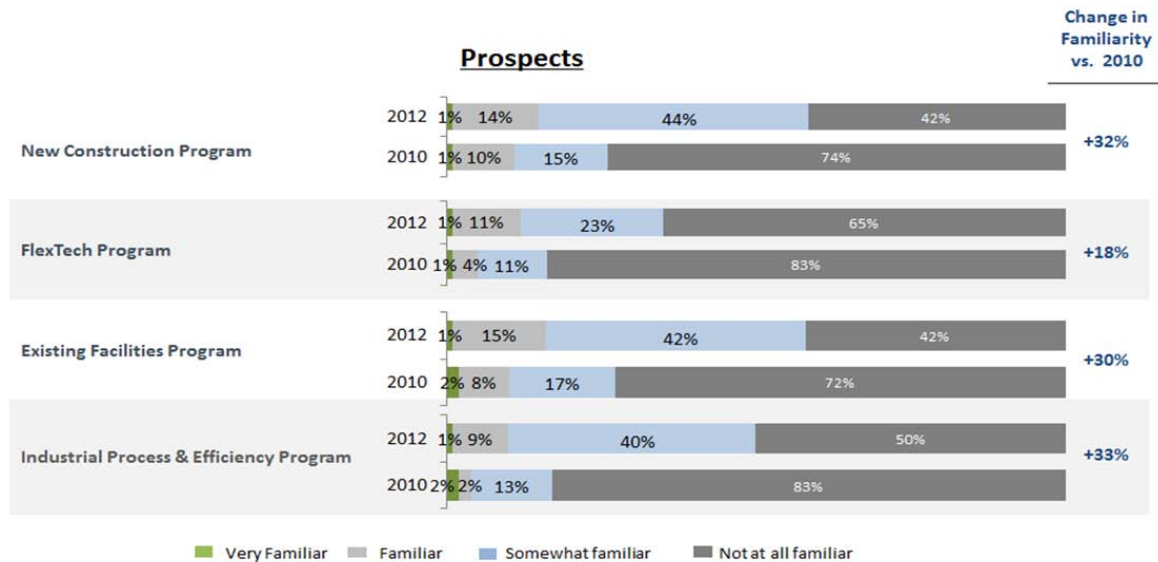
- **Service Providers.** The majority of service providers, both FlexTech Consultants and Independent Service Providers, indicated that a longstanding relationship with NYSERDA overall led to their awareness of the FlexTech program and their subsequent decision to become involved. Many of these contractors note a history of involvement with various NYSERDA programs and view participation in FlexTech as a sound move in line with their business objectives.
- **End Users.** End users typically learn about and enter the program with the assistance of their service provider. Service providers inform their current clients about the opportunity to participate when they identify project opportunities that appear well suited. They also transfer information about the program to new clients via networking at industry conferences and events. End users cited alternate methods of gaining program awareness, including business networks and NYSERDA-specific marketing efforts, less frequently. The PE Team received positive feedback about the program website. A few respondents noted that it plays a large role in educating the market about the offerings of the FlexTech program and any changes made to programs by NYSERDA.

Representatives from two organizations that interact with energy efficiency market stakeholders in the region indicated in interviews with the PE Team that the program could do more to increase awareness and perform targeted recruitment for the FlexTech program (e.g., reaching out directly to facility managers, and recruiting within key industry sectors, leveraging service providers as an outreach channel). Comments from some FlexTech Consultants also indicated that the program would benefit from FlexTech-focused outreach efforts.

Customer awareness of the FlexTech program increased by 18% from 2010-2012, according to a separate study commissioned by NYSERDA (Figure 13). In 2013, Eric Mower and Associates (EMA) completed a study measuring shifts in awareness, attitudes, and participation within the C&I markets. The study collected data from both program participants and prospects (i.e., those eligible for participation but that have not yet participated). Compared with data collected two years prior, the EMA study found a decrease in the percentage of respondents who are ‘not at all familiar’ with the program and an increase in those ‘somewhat familiar’ and ‘familiar’ with the program. The increase in awareness experienced by the FlexTech program was less pronounced than the increases seen by other NYSERDA programs included in the study (New Construction program, Existing Facilities program, and Industrial and Process Efficiency program). Increases in awareness of those programs ranged from 30-33%.

Figure 13. Prospective Customer Awareness of Various NYSERDA Programs, 2010-2012

Source: Eric Mower & Associates. 2013. “Energy Efficiency Services Commercial Industrial Benchmark Research: Wave 2.” PowerPoint Presentation.

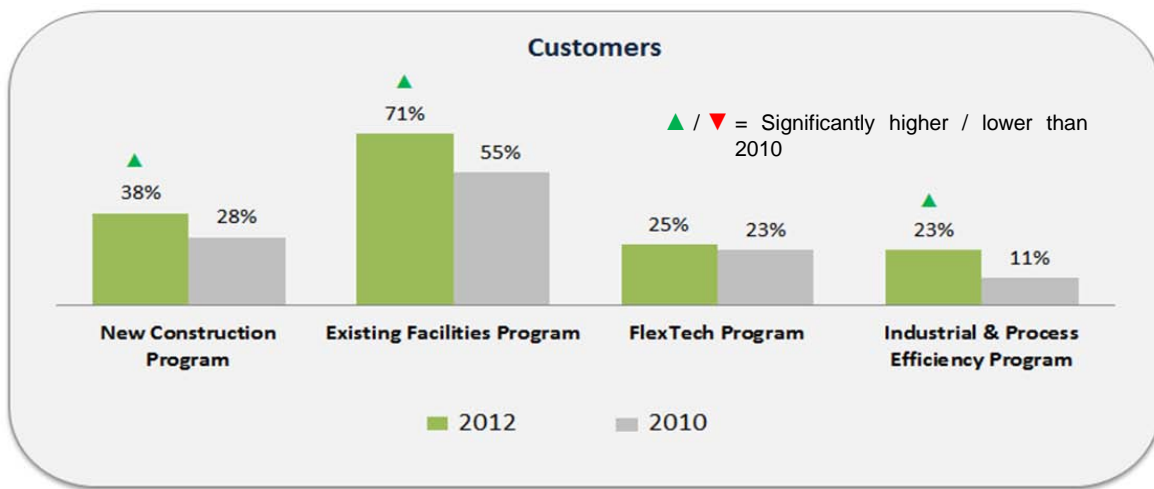


EMA found a 2% increase in the number of customers participating in the FlexTech program between 2010 and 2012, a small margin of growth when compared with that seen by other NYSERDA programs (Figure

14). This limited growth in FlexTech activity relative to that of other programs aligns with comments provided by market actors during this process evaluation effort. Several respondents highlighted a lack of sufficient marketing and outreach on behalf of the FlexTech program – either by FlexTech staff or by the portfolio-level marketing effort.³⁰ An increase in outreach and marketing was the most common suggestion given by market actors about how FlexTech can better serve the market. Section 3.3.2 explores this topic in more depth.

Figure 14. Changes in Customer Participation in Various NYSERDA Programs, 2010-2012

Source: Eric Mower & Associates. 2013. “Energy Efficiency Services Commercial Industrial Benchmark Research: Wave 2.” PowerPoint Presentation



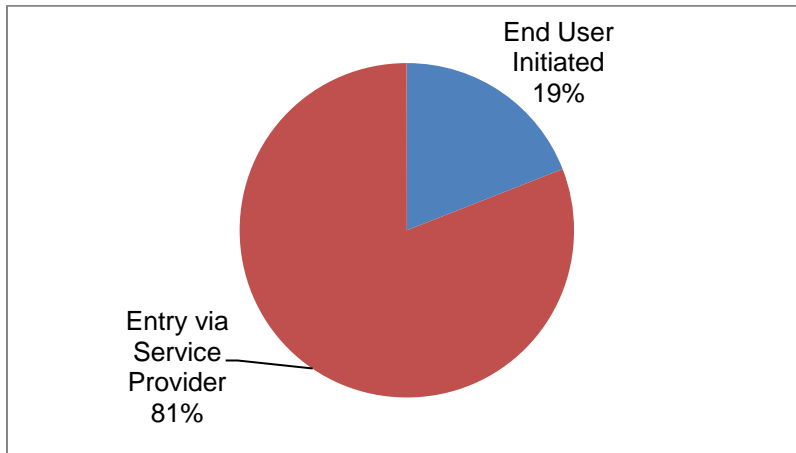
3.2.1.2 Pathways to Program Participation

As shown in Figure 15 approximately 81% of participating projects enter the program with assistance from their service provider. Only about one-fifth of projects (19%) are initiated by end users, emphasizing how important the service providers are in outreach and marketing and in matching client needs to the program offerings.

³⁰ As outlined in the Energy Efficiency Portfolio Standard Operating Plan, FlexTech is part of a broader Commercial and Industrial (C&I) Integrated Marketing Program. This coordinated effort across all C&I programs employs Vertical Outreach Contractors who make use of a Customer Relationship Management (CRM) to track and share leads across programs. According to program staff, the CRM system is not yet used to its full capacity by the Vertical Outreach Contractors engaged by NYSERDA.

Figure 15. Source of Project Entry into Program; n=21

Source: Navigant analysis of in-depth interviews with end users and service providers, 2013.



Almost equal numbers of service providers stated that they have seen an increase in projects solicited via an RFP/RFQ as those who reported seeing no increase. The PE Team prompted service providers to comment on this topic based on interest expressed by program staff. Table 5 presents the distribution of responses by service provider type and geography. For FlexTech Consultants, there appears to be a slight difference in perspectives among those working in the upstate versus downstate regions: seven of nine downstate respondents reported no increase in RFP/RFQ-generated project activity, while a greater proportion of downstate FlexTech Consultants reported seeing an increase in this type of activity (four of six). Given the small sample of respondents providing feedback on this question the PE Team is unable to provide definitive findings on this topic.

Table 5. Changes in Solicitations by RFP/RFQ Seen by Service Providers

Source: Navigant in-depth interviews with service providers, 2013.

	Downstate	Upstate	New Jersey
FlexTech Consultant			
No Increase	2	7	0
Yes Increase	4	2	1
Independent Service Provider			
No Increase	1	1	0
Yes Increase	2	0	0

Most service providers did not see a significant misalignment between what the FlexTech program offers and what solicitors of an RFP/RFQ are seeking. Some did note that at times the client might not fully understand the entirety of what FlexTech offers, and in these cases the consulting firm resolves the situation.

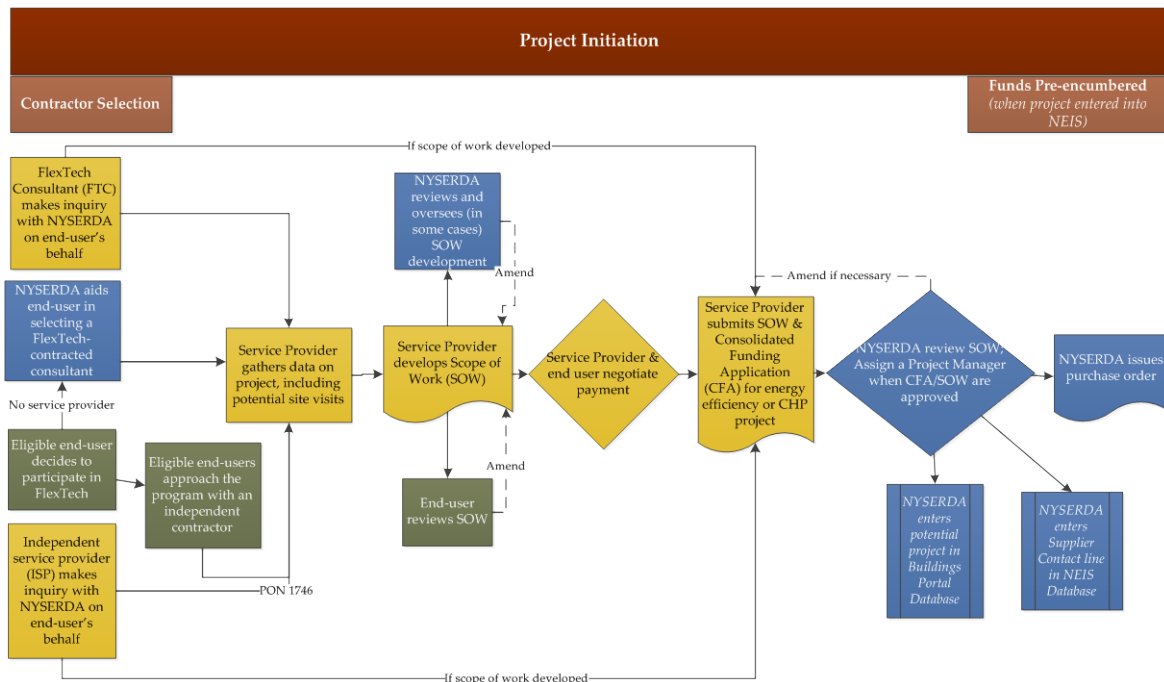
Deviating from general opinion, two service providers did note that they have seen inconsistencies in expectations concerning RFP/RFQ solicitations. One of these respondents explained that end users who initiate projects with an RFP will have a specific project in mind. However, a key feature of the program is the careful scoping of the project to identify a solution that will best serve the needs of the facility. Based on the experience of this respondent, solicitations via RFPs tend to bypass that key aspect of the FlexTech process. The other respondent stated that those who issue the solicitations generally do not understand the entire FlexTech process. Therefore, they tend to ask for things that are not necessary. This contractor noted that he is hesitant to dedicate resources to an RFP unless it is well organized and aligned with FlexTech program requirements.

3.2.2 Project Initiation

As shown in the excerpt of the process flow diagram in Figure 16, the PE Team defines the project initiation phase as the stage during which a project goes from expressing interest in participation to actually being issued a purchase order by NYSERDA. During this stage, the project completes a CFA, a requirement of all applications for state funding, and develops and submits the project scope of work.³¹

Figure 16. Excerpt of FlexTech Program Process Flow Diagram – Project Initiation

Source: Navigant Process Flow Diagram, 2013



³¹ For FlexTech Consultants development of the scope of work is referenced in RFP 1782 as a Task Work Order Plan.

According to interviewees, service providers play the most prominent role in project initiation. They are most likely to introduce a project to the program, and, given their technical expertise, they drive development of the scope of work. The scope of work functions as a central component of the program application materials. Therefore, the service providers ultimately end up playing a key role in the administrative processes that occur during the project initiation phase.

Interviews indicated that NYSERDA might communicate more actively with the end user or the service provider, depending on the end users' preferences and the type of service provider.

- ***Projects using Independent Service Providers.*** Program staff report interacting directly with end users on projects managed by an Independent Service Provider unless otherwise directed. This is consistent with feedback provided by end users; those working with Independent Service Providers tended to report that they managed communications among the entire project team. In a few cases, end users indicated that their direct communication with NYSERDA was helpful in working around a challenging service provider.
- ***Projects using FlexTech Consultants.*** For projects conducted by FlexTech Consultants, NYSERDA often works more directly with the consultant. When discussing a project managed by a FlexTech Consultant, more end users indicated their service provider was most active. This is in contrast to the structure of utility programs, in which the end user maintains primary communication with program staff.

FlexTech project initiation consists of three discrete tasks managed primarily by the service provider with input from the end user. According to interviewees, these three tasks take more time to complete than any other stage of the program and can create the most substantial project delays.³² According to service providers, streamlining and providing clearer expectations related to processes occurring during the Project Initiation phase could help them more effectively manage their experience with their client, and set realistic project milestone dates. Interviewees were particularly interested in gaining greater clarity on expected timelines for progressing through key stages of participation.

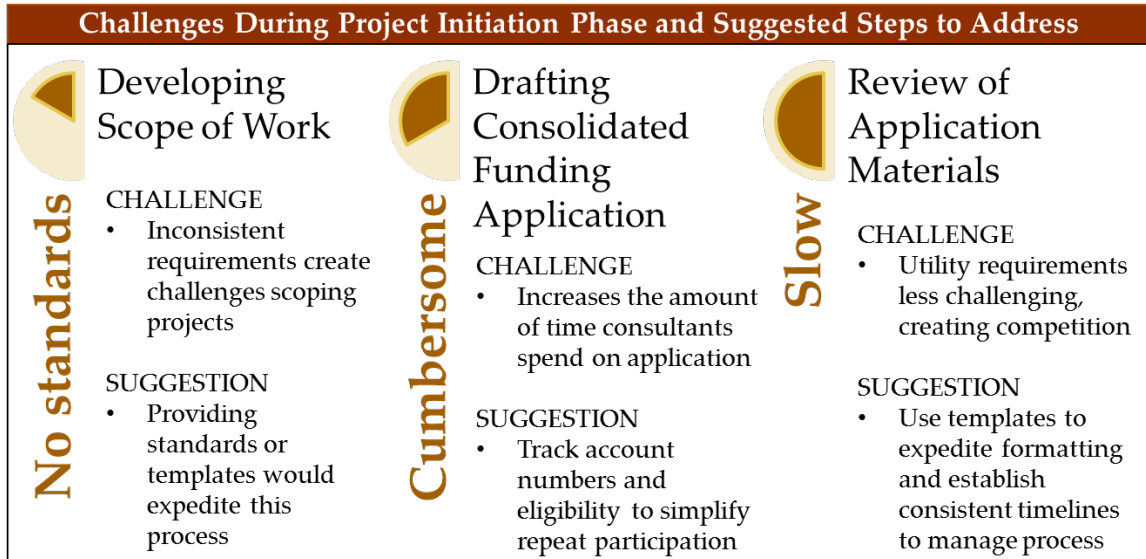
As noted previously, comments from program staff indicate that delays can occur due to the slow pace of program participants in providing information and responding to communications from staff. The PE Team recognizes that delays in the participation process can result from issues related to program staff as well as the participant response times. However, the fact remains that the perception of program participants is that program staff could do more to speed the participation process.

³² Interviewees' perceptions of the timeline may not directly coincide with the discussion pertaining to milestones in Section S.42.3.2. The PE team's data review was based on the milestone dates available in the program data (e.g., Application Received Date and the Signed Date), though the discussion in this section is framed according to broader stages of program participation. The database tracking does not include the amount of time required to *develop* the application, which is one of the activities about which program participants have the most concerns.

The following sections discuss the three tasks required to initiate a project in the program: developing the scope of work, drafting the CFA, and NYSERDA’s review and approval of the application materials. Figure 17 summarizes the challenges reported by interviewees for each subtask, and communicates interviewees’ suggestions for improvements.

Figure 17. Service Provider Suggested Areas for Improvement in Project Initiation Process

Source: Navigant in-depth interviews with service providers and participating and partial-participating end users, 2013



3.2.2.1 Developing Project Scope of Work

According to interviewees, service providers encounter inconsistent requirements when drafting the scope of work for a FlexTech project, which extends project timelines. According to interviews with service providers and end users, the two collaborate to develop a scope of work based on an organization’s needs and owner’s expectations. However, program staff provides little guidance on the prescriptive requirements for a scope of work. This can result in staff requesting substantial edits to the scope of work. Some FlexTech Consultants described spending considerable time developing the scope of work without guidance from NYSERDA, only to attend to significant edits during the approval process. In general, Independent Service Providers did not offer the same feedback.

3.2.2.2 Review of Application Materials

Interviews revealed that participants’ biggest frustrations with the program stem from the length of time required to approve project applications. Interviewee comments indicate that slow project approval timeframes lengthen the overall project lifecycle, which keeps service providers from being able to maintain the steady flow of project activity that they seek. In addition, long timelines for approval may

keep program participation from coinciding with end users' decision-making timelines. Interviewees noted that not only are FlexTech project timelines long, but the program provides little guidance on timeline management – this creates challenges in managing client expectations, budgeting time and costs, and project delivery.

3.2.2.3 Drafting Consolidated Funding Application

Service providers expressed a desire for more assistance with repeat participation in FlexTech, particularly relating to administrative tasks like completing the CFA. Interviewees expressed dissatisfaction with the CFA requirement but acknowledged its requirement in the New York State market. Service providers suggested FlexTech program staff might expedite repeat program participation by tracking customer account numbers and SBC fund payments in order to more rapidly confirm eligibility for FlexTech funds. Although the CFA is a source of frustration for some participants, it is managed at the state level and is outside the scope of FlexTech program staff's control.

3.2.2.4 Service Provider Suggestions for Streamlining and Expediting the Project Initiation Process

Independent Service Providers and FlexTech Consultants agree that project approval could be expedited and that doing so would improve their program experience. Rather than simply demanding faster timelines, service providers suggested specific improvements to program processes and expressed an interest in greater assistance, informed by their repeat participation in the program. Service providers offered several suggestions for improving the process of Project Initiation:

- Publish a process diagram that details the steps involved with conducting a FlexTech study. New service providers can use this to navigate the program when participating for the first time. Service providers can share this with their customers to educate them about the program (n=3 Independent Service Providers).
- Provide standard templates to expedite developing the scope of work and compiling application materials, and reduce time spent on formatting program submittals (n=8 FlexTech Consultants).
- Provide case studies and examples of high quality reports.³³ This would guide new service providers' expectations about deliverables and final work products and train repeat participants to uphold NYSERDA standards (n=3 FlexTech Consultants).
- Facilitate repeat program participation by tracking customer account numbers and SBC fund payments in order to more rapidly confirm eligibility for FlexTech funds (n=2 FlexTech Consultants).
- More clearly communicate the range of time during which program staff will approve and return project materials to service providers and end users. Timeframes are provided in PON and in FTC orientation materials. However, interview feedback indicates that the participants are not familiar with the timeline expectations. Service providers would likely benefit from having more easily

³³ This suggestion could conflict with concerns about the protection of proprietary information voice by both service providers and end users. See Section 3.1.1 for further discussion.

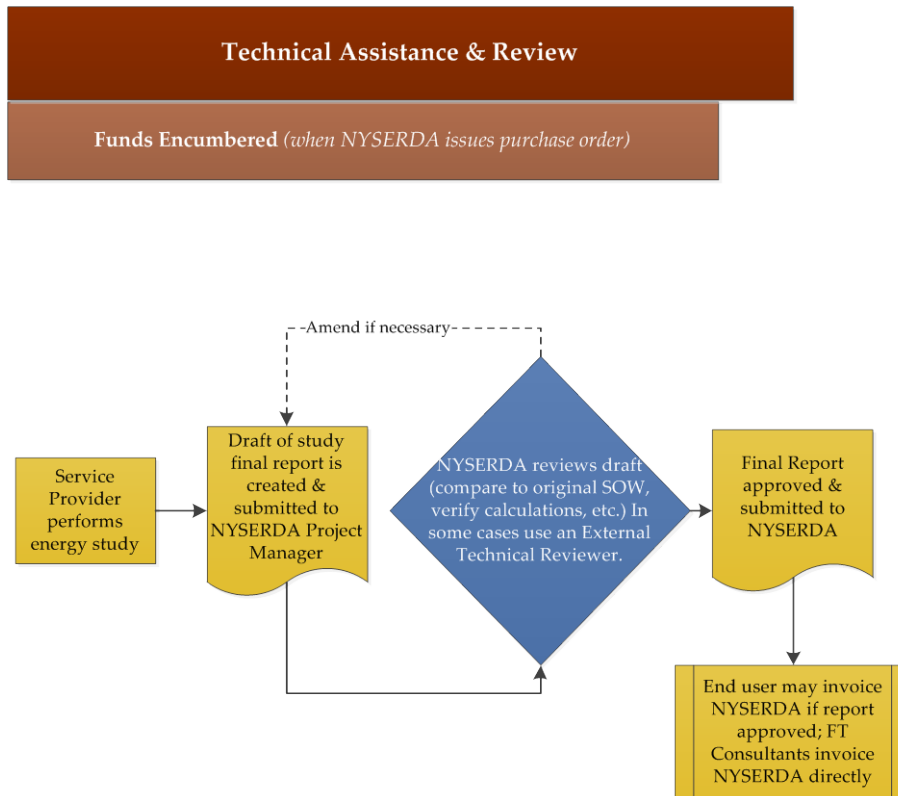
accessible information about expectations for participation timelines. (n=2 FlexTech Consultants). Interviewees did not provide an indication of what they would consider a reasonable timeframe for completing the project initiation phase. However, they expressed frustration that in some cases it can take a few months or more to proceed through the project initiation phase. FlexTech Consultants, who play an integral role in the program, primarily offered the recommendations listed above. Service providers bring a valuable perspective because they are exposed to the experiences and decision making of both participating and non-participating customers. .

3.2.3 Technical Assistance and Review

The Technical Assistance and Review phase includes completion of the study, review by NYSERDA staff and the ETR (as appropriate); revisions to the study, final report approval and project payment. Figure 18 highlights the final segment of program processes that pertain to final report approval.

Figure 18. FlexTech Program Processes – Technical Assistance & Review

Source: Navigant Process Flow Diagram, 2013



In general, interviewees place a high value on this phase of participation, despite the inconsistent experiences they report. Most end users reported that they are sympathetic to the long study timelines

because they believe the effort spent improves the quality and impact of the study outcomes, even though this extra review step adds to the duration of participating

Likewise, service providers and end users find value in the ETRs' contributions to their FlexTech studies. However, interviewees reported that quantity and quality of comments provided by reviewers varies from one project to the next, and that these inconsistent experiences create challenges in managing project timelines and customer expectations.

“It depends on the reviewer. Sometimes they are very difficult and sometimes they are very understanding. I’ve had reviewers that are not familiar with the process and technology we are studying and instead of being helpful we end up teaching them.”- Independent Service Provider

Figure 19 shows that the majority (55%) of service providers report having mixed experiences with the review process. For these respondents the review of some projects goes well, while they encounter issues with

others. All responding Independent Service Providers (n=6) fell into this category, while FlexTech Consultants differed in their opinions about the quality of reviews. A number of FlexTech Consultants (n=6) reported receiving consistently high quality reviews from ETRs; however, a greater number of FlexTech Consultants (n=8) reported either mixed quality or consistently low quality reviews. Analysis of the feedback reviewers provided on FlexTech studies (i.e., the quality of the comments provided by reviewers) was outside the scope of this study, so the PE Team cannot comment on the validity of the service providers' claims about the quality of the study reviews.

In describing their experience with different ETRs, service providers stated that some are open-minded and accepting of different industry methods while others tend to believe there is only a single way of doing things correctly. That unwillingness by some ETRs to accept alternative viable methods can create roadblocks and cause unnecessary project delays.

Inconsistency about expectations from one FlexTech project to the next can cause frustration and delays as service provider's work to sort out what components need to be included. Furthermore, uncertainty about the timeline of the review process for the report can prevent service providers from setting appropriate client deadlines and meeting them. This feedback ties in with a common theme emerging from service provider feedback on program processes in general: inconsistency of expectations.

Ultimately, interviewees desire to see the overall pace of program participation increase and they posit that setting firm expectations for program timelines could achieve that outcome. Interviewees suggested that faster project review times during the review phase of the project and expediting NYSERDA's final approval would improve program experiences and encourage repeat participation. In addition, service

providers suggested that changes to the review process and report format might improve measure adoption rates.

Figure 19. Feedback from Service Providers on Quality of Draft Report Reviews from ETRs

Source: Navigant analysis of interviews with service providers, 2013; n=20



Figure 20 presents illustrative comments offered by service providers regarding their experiences with the external technical review portion of the FlexTech program.

Figure 20. Summary of Feedback Regarding FlexTech External Technical Review Process

Source: Responses to Navigant in-depth interviews with service providers



As noted previously in Section 3.1, an additional concern expressed by service providers related to the proprietary nature of their work, and their hesitance to share this information with potential competitors.

3.3 Overall Program Satisfaction

This section outlines the overall satisfaction of market actors with the FlexTech program. Questions posed by the PE Team prompted the majority of responses presented in the following section, but unsolicited feedback is also included.

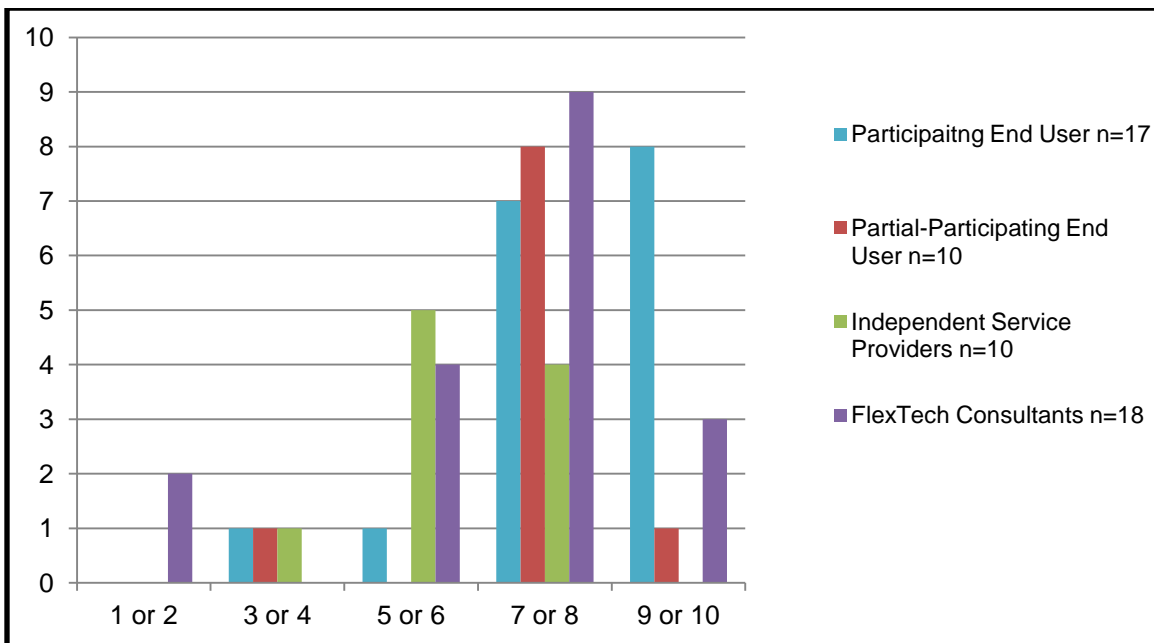
Section 3.3.1 covers overall program satisfaction broken out by market actor type, and includes discussion of specific factors contributing to self-reported satisfaction ratings. Section 3.3.2 presents the perceived alignment between program offerings and the needs of end users, including market actor suggestions for program adaptations to better meet those needs.

3.3.1 Overall Satisfaction with the Program Experience Broken Down by Market Actor

As part of the interview process, individual respondents for each market actor type were asked to rate their overall satisfaction with the FlexTech program on a scale from 1-10, with 1 indicating extreme dissatisfaction, and 10 indicating extreme satisfaction. Figure 21 displays a breakdown of these responses, and reveals overall high levels of satisfaction with the program. Participating end users indicated the highest level of satisfaction, while service providers as a group exhibit greater disparity in experiences with the program. A closer look at factors contributing to these ratings by market actor type follows.

Figure 21. Satisfaction Rating by Market Actor Type; Scale 1-10

Source: Navigant analysis of interviews with participating and partial-participating end users and service providers, 2013.



3.3.1.1 Participating End Users

End User Satisfaction with Program Overall

Overall, participating end users had the highest self-reported satisfaction ratings, with the majority of respondents placing themselves in the seven to ten range. Only two people reported satisfaction ratings below a seven, and no one reported satisfaction below a three. End users applaud the program for its high quality technical assistance. In fact, the majority of end users cited the strong report quality as their topmost reason for giving high ratings of satisfaction. End users cited the overall report quality as a primary reason for this favorable perspective on the quality of technical services provided through the program. Only one respondent indicated that the report fell short of their expectations.³⁴ Satisfaction with the high quality services provided by the program is reinforced by end users' confidence in the credibility of NYSERDA as a whole.

FlexTech Consultants provide an additional perspective supporting end users' self-reported levels of satisfaction. The majority of FlexTech Consultants noted that end users are highly satisfied with the FlexTech program overall, citing high quality technical assistance as the primary reason. FlexTech Consultants attribute this high level of satisfaction with program quality to the program's vetting and competitive selection of FlexTech Consultants, as well as the external technical review process.

Other areas leading to high end user satisfaction appear in Figure 22, and include the cost-share aspect of the program and the program's ability to bring a focus on energy efficiency to their organizations. Several end users noted that the program helps people to refocus their attention on energy efficiency and gives credence to the importance of energy management as a part of overall effective business management. End users see all three of these components as essential to satisfaction with the program.

³⁴ This participant noted that the information they received was not in line with the SOW and was not in the proper format.

Figure 22. Factors Contributing to High Satisfaction Ratings Among End Users

Source: Navigant in-depth interviews with end users and service providers, 2013.



End User Satisfaction with Service Providers

End users expressed mixed opinions regarding satisfaction with service providers. This feedback indicates that certain service providers should work harder to meet client expectations. However, the feedback pertains mostly to isolated negative experiences with certain service providers, and it has not detracted from end users' overall satisfaction with the FlexTech program.

A slight majority of end users described themselves as satisfied with the contractor used for their FlexTech project. In contrast, several others expressed dissatisfaction with a contractor used on at least one project and stated that they would not work with that particular provider again. As shown in Figure 23, these satisfaction ratings distribute evenly across those working with a FlexTech Consultant and those using an Independent Service Provider.

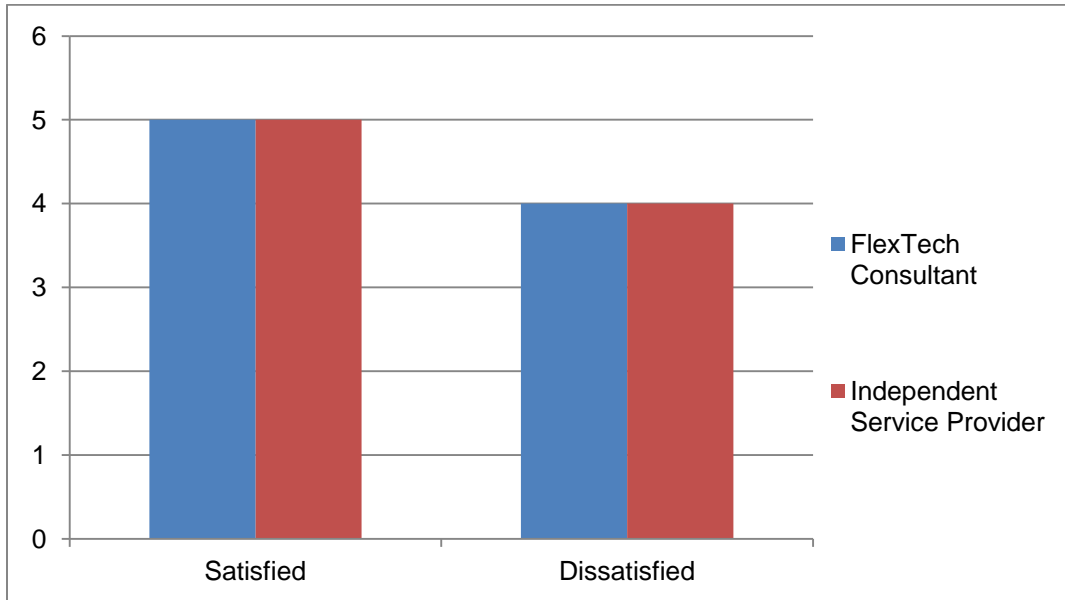
End users provided a variety of reasons for their dissatisfaction with various service providers, though some chose not to comment on the specific circumstances. A common complaint was a lack of follow-through on the scope of work, and one end user stated that the process took too long and they felt as though the contractor did not have sufficient resources to get the job done as agreed upon. Another end user described their experience as "like the guy who went in to get his oil changed but ended up getting his transmission replaced."

Concerns about the lengthy duration of participation that some respondents have ascribed to the poor performance of their service provider may, in some cases, reflect circumstances beyond the control of the service provider. As noted previously, the fact that service providers typically take the lead in completing administrative tasks, and act as the main communicator with NYSERDA means that they often take the brunt of the burden associated with participating.

Of the end users who reported being dissatisfied with an Independent Service Provider, three of the four were engaged in a PLCP project. This indicates that there may be ongoing issues with the ability of these service providers to carry out their responsibilities under the FlexTech program or perhaps a misunderstanding of their responsibilities.

Figure 23. End-User Levels of Satisfaction with Service Provider Broken Down by Type

Source: Navigant analysis of interviews with participating end users, 2013.



3.3.1.2 Partial-Participating End Users

Overall, the partial-participating end users interviewed by the PE Team expressed high levels of satisfaction, as shown in Figure 23. Most provided a satisfaction rating between seven and eight. While these ratings are not as high as those given by the fully participating end users, it still indicates positive experiences with the program. The PE Team identified this sample of partial participants based on records showing the respondent had initiated a FlexTech project but had not seen it through to completion. Despite not completing a given project, partial participants revealed no long-term negative perceptions of the program; in fact, many partial participants indicated that they had completed at least one project through FlexTech either prior to or following the one that failed to reach completion.

All respondents indicated that they would consider participating in the program again, while three indicated that they were currently engaged in another FlexTech project at the time of the interview. Most partial participants listed an inability to procure sufficient capital or a misalignment of timelines as their reason for discontinuing participation on a specific project. All members of this market category indicated that it was internal constraints on their end, not on the part of the program, that resulted in a canceled project. Partial

participants who discontinued participation due to timing did not highlight the issues as a program deficiency. Rather, they viewed it as a misalignment between their internal timing issues and the timeframe for program participation. The fact that most partial participating end users planned to participate again in the future indicates that the misalignment of timing is a concern for specific projects but may not be a systemic issue.

3.3.1.3 Service Providers

Service providers as a group showed the widest range of self-reported satisfaction. Some reported extreme satisfaction, while others fell on the other end of the spectrum. Figure 23 shows the disparity in service provider satisfaction, broken down between FlexTech Consultants and Independent Service Providers.

- **Independent Service Providers.** The majority of Independent Service Providers reported a satisfaction rating between five and six out of ten, indicating that most are neither satisfied nor dissatisfied with their program experience. None reported extreme satisfaction in this market actor group.
- **FlexTech Consultants.** The majority of FlexTech Consultants reported satisfaction ratings between seven and eight out of ten, indicating fairly high levels of satisfaction. Two FlexTech Consultants expressed extreme dissatisfaction, while three reported very high levels of satisfaction.

The disparity between service provider and end user satisfaction ratings are explained in part by service providers' sense that they shield end users from many of the complexities and challenges of participating in the program, as noted previously. The factors contributing to these satisfaction ratings are discussed in Sections 3.1 and 3.2

3.3.2 Alignment between Program Offerings and Needs of the Market

This section summarizes interviewee feedback regarding the extent to which the program serves the needs of the marketplace. The program's structural alignment with the needs of the market is addressed first, followed by discussion of program's market coverage (i.e., whether any gaps exist in the types of customers served and projects completed through the program).

3.3.2.1 Structural Factors

Feedback from service providers, end users and market actors all support a finding that the program serves a much-needed function in the market by helping to link end users possessing untapped energy saving opportunities with the expertise and resources needed to get started on the pathway to extracting that potential. However, the program falls short in its inability to maintain relationships with projects as they progress toward implementation. Nearly all respondents conveyed a view of the market in which energy savings opportunities are first identified and characterized drawing on technical assistance services, and then implemented with additional financial assistance. This reflects the current structure of the market, in

which numerous programs exist to fund the completion of energy efficiency measures. As discussed further in Section 3.4.2, end users' and service providers' understanding of the market is misaligned with that of program staff who would like to see projects identified through FlexTech are implemented with no additional funding from other programs.

Two-thirds of service providers interviewed expressed that the scope of services expected of them by the program (e.g., level of detailed analysis, reporting and administrative tasks) is reasonable, while one-third stated that expectations are unreasonable for the value they receive. Specific feedback supporting this finding is presented in Section 3.2. As discussed in that section, service providers generally find that the level of effort and time required completing work products for the program, particularly the scope of work, is unnecessary. Some FlexTech Consultants specifically note that they anticipated that the program would provide them with a source of project leads when, in fact, the program relies heavily on its FlexTech Consultants for lead generation.

3.3.2.2 Market Coverage

Respondents provided mixed feedback regarding the extent to which untapped market opportunities exist. The same number of respondents indicated that no untapped market segments exist, as those who noted a general presence of opportunities across the market, showing a lack of consensus on this topic. Respondents did frequently identify retro-commissioning projects as the largest untapped opportunity.

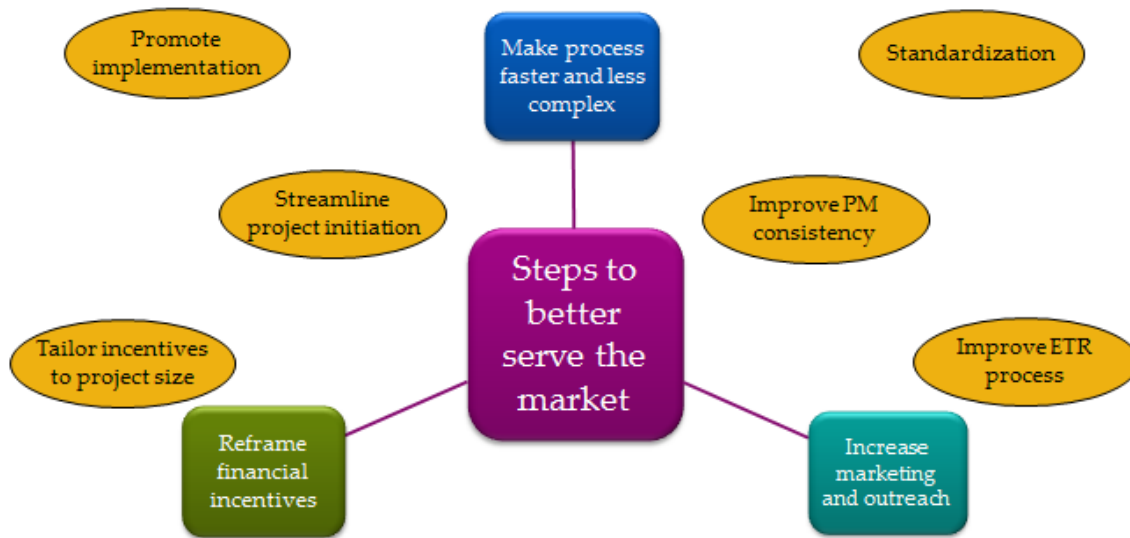
Market actors also identified large industrial users as the most active customer type in the market. Section 2.2 includes a discussion of program data, which found that “manufacturing/industrial” projects was second to “commercial/wholesale” projects in terms of both energy savings and number of projects. Service providers in particular cited industrial users as the most active customer group, indicating a slight misconception among this group.

3.3.2.3 Interviewee Suggestions for Program Improvements

Interviewees offered a number of suggestions for how FlexTech could more effectively serve the market. Figure 24 provides a schematic summary of the primary suggestions provided, showing the most frequently cited recommendations in the three interconnected boxes. These suggestions are described briefly here. More detailed feedback providing additional context around the circumstances leading respondents to make these suggestions is included throughout section 3 of this report.

Figure 24. Interviewee Suggestions for the FlexTech Program to More Effectively Serve the Market

Source: Navigating in-depth interviews with participating end users, service providers, and ETRs, 2013.



Increased marketing and outreach was the most common suggestion provided by market actors, though an equal number of respondents indicated that marketing and outreach is a strong point of the program. The mixed market actor feedback related to marketing and outreach is not surprising considering that the EMA awareness study cited previously found that the FlexTech program experienced fairly moderate increases in awareness and participation relative to other NYSERDA programs. Additional market actor feedback supports the finding that other NYSERDA programs benefit most from NYSERDA’s portfolio-wide coordinated outreach and marketing efforts. Several respondents noted that NYSERDA overall employs strong outreach and marketing strategies, though these activities do not sufficiently emphasize the FlexTech program.

Many other market actors recommended **making the program processes faster and less complex** as a way to better serve the market. Section 3.2 provides detailed discussion of the processes respondents consider most cumbersome. Service providers work in a challenging project environment before FlexTech enters the picture. Convincing end users to consider energy efficiency investments often requires buy-in from many parts of an organization that operate with different timelines and different financial (or other) interests. Service providers must manage these competing demands and still deliver a top-quality technical product. Any complexity added by the FlexTech program must prove worthwhile in the project lifecycle, or else it just adds to the burden of completing the project.

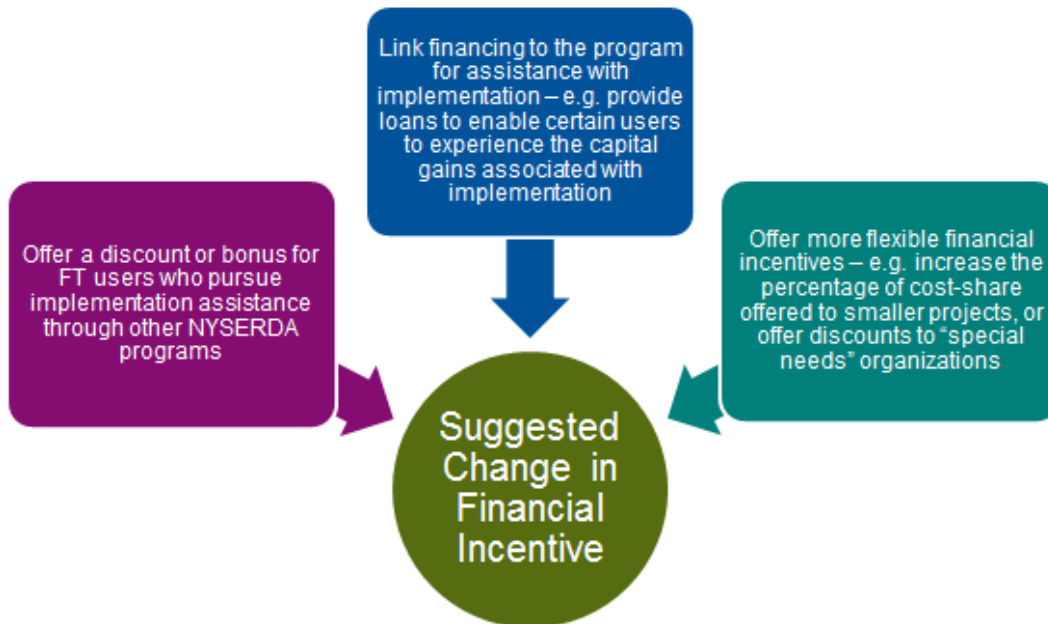
Another theme that emerged was an interest in adjusting **the financial incentives** offered by the program. As shown in Figure 25, respondents offered a wide range of suggestions on the topic of financial incentive structure. There was also a consensus that more funding would enhance efforts to promote behavior change.

- Many respondents expressed a desire for increased **flexibility to match the financial incentive amount to the needs of the project**. Specific suggestions included providing a higher percentage of cost share for smaller projects or offering higher incentives for organizations that have “special needs,” such as not-for-profit hospitals or non-profits as a whole.
- Others suggested that the program **offer a bonus incentive** for participation in multiple NYSERDA programs. Market actors made this suggestion with the goal of supporting implementation and keeping projects under the influence of NYSERDA, as opposed to looking to utility programs for this support. These comments demonstrate the market actors’ misunderstanding of NYSERDA’s goal to offer facilities information, but avoid more than the minimal funding necessary to make a customer install a recommendation.
- An additional suggestion to address capital constraints and increase the likelihood of measure implementation was to **establish linkages with project financing opportunities**. Some end users are unable to gain access to the upfront capital required to implement certain measures, and are therefore unable to realize the savings associated with those measures. It was suggested that the availability of financing would help alleviate this barrier. Though not specifically highlighted by respondents, the recently introduced Green Bank presents a ripe opportunity to establish such a linkage.³⁵

³⁵ Governor Andrew Cuomo’s Green Bank initiative will ultimately make \$1 billion in capital available. The initiative was launched in early 2014 with \$210 million in funding for loans and other financial products, working alongside private financial institutions. Clean energy ratepayer funds comprise the majority of this sum, with the balance of \$45 million coming from the Regional Greenhouse Gas Initiative emissions allowance sales. Source: <http://www.governor.ny.gov/NYGreenBank>. Obtained February 11, 2014.

Figure 25. Suggested Adjustments to Financial Incentive Structure

Source: Navigant in-depth interviews with service providers and participating end users, 2013.



The above-mentioned suggestions were the primary comments made concerning steps the FlexTech program can take to better serve the needs of the market. Respondents also offered a number of other suggestions, summarized in the yellow circles in Figure 24. These include increased promotion of measure implementation overall, streamlined project initiation to reduce project timelines, improvements to the review process, standardization of program requirements, improved consistency among program managers to ensure more consistent program experiences, increased support to demand response projects.

3.4 Role of Program in the Market

Section 2.1 of the report discussed the program’s *intended* role in the market. In this section, the PE Team presents a summary of market actor *perceptions* of the program’s role in the market, focusing first on effects of program on the market, and then the program’s relationship with other programs offering similar services.

3.4.1 Effects of Program on the Market

Feedback from market actors indicates that the FlexTech program helps grow the market for high quality services, leads to deeper energy savings than would occur in the absence of the program, and provides a unique source of assistance for complex projects. Program benefits accrue directly to end-use customers

and service providers, and the positive effects on each of these core market actor groups enhances the market for energy efficiency services in New York as a whole.

The most direct way in which the program benefits the market is by offering a 50 percent cost share to defray the expense of energy studies. The program's financial incentives help both end users and service providers by addressing a market barrier: the high costs of procuring energy efficiency services. It facilitates the completion of more in-depth, comprehensive studies than an end user may be able to afford in the absence of the incentive. These robust studies can tackle challenging topics like CHP feasibility and compressed air system improvements, which present significant savings opportunities that would likely fall outside the scope of smaller-scale studies, or studies limited by low funding caps. These detailed studies also require more time and effort, generating greater revenues for service providers.

The FlexTech program also reduces other market barriers and helps generate market activity that has a high likelihood of leading to deep energy savings. It accomplishes this by providing end users with ready access to high quality energy services, by developing project scopes of work that are tailored to the specific circumstances of a given facility, and by providing well-presented comprehensive studies to inform investment decisions. The flexible nature of the program serves the market as well, reflecting the broad range of potential end user needs. The program's flexibility is evidenced in the numerous categories of participation offered. The "feasibility study" category provides participants the opportunity to design a study scope best suited to the needs of the facility that may encompass elements of other program categories as well.

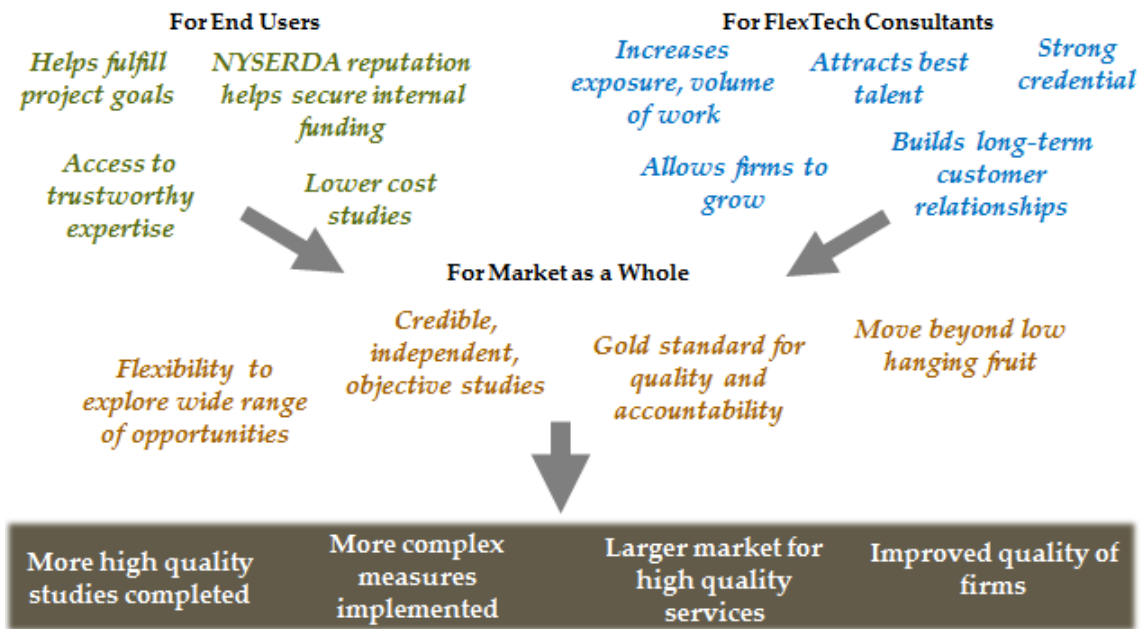
NYSERDA's credibility and longstanding role in the market provide significant symbolic assets. FlexTech Consultants reported that their status as a NYSERDA-selected service provider served as an important credential, yielding more business opportunities that lead to long-term client relationships and helping them attract top engineering talent. Some FlexTech Consultants noted that the NYSERDA affiliation helped them gain a foothold in the market when they were just entering the market and had a less well-established reputation. The NYSERDA reputation also helps project champions at participating facilities gain buy-in from key decision-makers.

Figure 26 presents a summary of the numerous advantages the FlexTech program provides for end users and service providers and the notable effects that result for the market as a whole. As shown, market-wide effects include the completion of more high quality studies, the implementation of more complex measures that result in significant energy savings, a larger market for high quality services, and improved quality of the firms participating in the market.

Respondents indicate that FlexTech increases the number of high quality *studies* completed. The program does so by improving the quality of work completed by existing service providers. Respondents did not report an increase in the *number of high quality firms* active in the market, which was one program objective stated in the program’s logic model report. However, research for this study did not include estimation of a counterfactual number of high quality firms in the marketplace, and therefore, the PE Team cannot comment on whether some of the active firms may have gone out of business in the absence of the program.

Figure 26. Effects of FlexTech Program on the Market for Energy Efficiency Services

Source: Navigant analysis



3.4.2 Relationship with Other Programs in the Market

The FlexTech program fills a unique niche in the market for energy efficiency services in New York. The program serves as an ideal source of funding for larger facilities seeking to conduct complex energy studies that will determine whether a project is financially viable without additional financial assistance. The role of the program in the market relative to other energy efficiency programs can be challenging for market participants to ascertain. The PE Team explored the program’s role within the portfolio of other NYSERDA programs, and in the context of utility programs that offer technical assistance services.³⁶

³⁶ As part of this research effort the PE team explored the offerings of similar programs available in other states to identify features associated with high measure adoption rates. Preliminary research revealed that FlexTech is unique in

3.4.2.1 Relationship with Other NYSERDA Programs

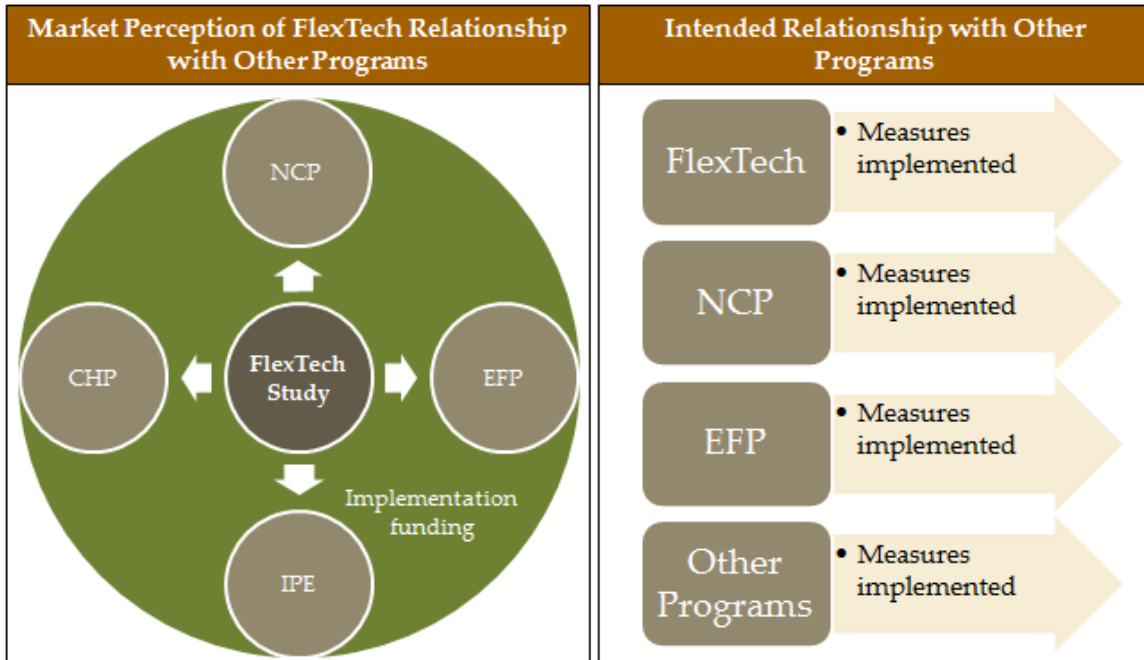
As noted in Section 2.1.3, NYSERDA intends for the FlexTech program to lead directly to the implementation of energy saving measures recommended in the study reports without further financial incentives. However, most program participants do not recognize this program goal and they assume that FlexTech is intended to serve as a feeder to other NYSERDA programs that offer funds for the implementation of measures (e.g., the Existing Facilities program, CHP program, or Industrial Process Efficiency program). Comments from service providers indicate that they assume that they would be doing their clients a disservice if they did not make them aware of other sources of funding for which they are eligible and that could help improve the return on their investment.

Service providers are allowed to connect end users with implementation funding following a study but are limited in how they present such opportunities in their FlexTech report. Program staff indicates that service providers can provide information about additional programs from which the end user may be able to obtain funds to assist with implementation of recommended measures. The program does, however, restrict service providers from including other sources of funding in their financial analysis of recommended measures. This is a source of frustration for service providers. Program staff indicates that one reason not to allow reference to additional implementation funds is that the financial analysis may be done inaccurately.

its effort to function as a stand-alone resource acquisition program (i.e., it does not intend to act as a feeder to other programs that would provide funds for measure implementation. An in-depth comparison between FlexTech and other programs was deemed unnecessary, as the technical assistance components of those programs do not claim savings independently of the broader programs of which they are a part.

Figure 27. Relationship with Other NYSERDA Programs: Market Perception vs. NYSERDA Intent

Source: Navigant in-depth interviews with service providers, 2013.



3.4.2.2 Relationship with Utility Programs

Each of the New York utilities’ C&I energy efficiency incentive programs offers some form of technical assistance support in addition to offering funding for measure implementation. In general, these programs offer the same cost share as the FlexTech program, but provide significantly lower funding caps than are available through the FlexTech program (e.g., \$50,000 in the case of Con Edison’s program; \$10,000 in the case of National Grid’s prescriptive electric and gas program, and \$100,000 in the case of National Grid’s custom gas program).³⁷

Many FlexTech program participants also have experience participating in one or more utility programs. Overall, those who have participated in the utility programs noted favorable experiences. They pointed to the fact that the utility programs have less red tape and provide funds faster than the FlexTech program, and they lead directly to additional implementation funding. A couple of end-use customers noted that their local utility representatives made their participation experience go more smoothly by helping them navigate the application process.

³⁷ A summary of Con Edison’s program details was obtained from the Database of State Incentives for Renewables and Efficiency: http://www.dsireusa.org/incentives/incentive.cfm?Incentive_Code=NY95F&re=0&ee=0. Obtained February 10, 2014. Detailed summaries of National Grid’s programs are available at the utility’s web site: <https://www1.nationalgridus.com/EnergyEfficiencyPrograms>. Obtained February 10, 2014.

The Con Edison program was mentioned most frequently when referencing experiences participating in other programs. A few FlexTech Consultants noted that the Con Edison program “keeps NYSERDA’s FlexTech program on its toes,” and suggested that the introduction of competition for similar technical assistance services had led the FlexTech program to make some program improvements.

One FlexTech Consultant and one Independent Service Provider indicated that they think the FlexTech program is better organized than the utility programs, and they guide their clients to participate in FlexTech over the utility programs. One of the biggest complaints the Independent Service Provider voiced about the utility programs is that they are structured such that all communications go directly through the end-use customer and the service provider is more of an outsider in the process than in the FlexTech program. This service provider prefers to maintain a central role in project communications so he can ensure he understands the details of the funding relationship and can tailor the contract with his client to reflect the details of the funding arrangement (e.g., to reflect the specific amount and timing of cost-share payments) .

Based on participant feedback it is not uncommon for an end-use customer to obtain FlexTech funds to complete a study, then go on to receive implementation funds from a utility program. This presents issues for the appropriate tracking of program savings. The most recent FlexTech impact evaluation study reported on the program’s measure adoption rate without accounting for whether projects have received implementation funds from other NYSERDA or utility programs. NYSERDA completes an “overlap analysis” to examine the extent to which projects receive funds from multiple sources within NYSERDA, and this is applied at the portfolio level.³⁸ As a result, some portion of savings is likely being double counted across FlexTech and other utility programs.

³⁸ The impact evaluation report completed in 2012 includes a brief discussion of the fact that the quality of the data informing the last overlap study was poor because NYSERDA doesn't track premise IDs so it's very hard to identify instances of overlap across programs. The authors explain that overlap within NYSERDA and with other utility programs is difficult to identify and is likely under-reported. In addition to the difficulty tracking premises across databases, there's poor recall by end users re: specific funding sources.

4 End-User Decision-Making

End users are central to the FlexTech program, and to better evaluate their interactions with the program it is important to analyze and understand the manner in which they make energy efficiency investment decisions. The following section describes what prompts end users to implement energy efficiency measures, how energy fits in to their capital planning process, and how the FlexTech program timeline aligns with internal decision-making timelines.

4.1 Characterization of Participating End Users' Decision-Making Practices

This section discusses the context in which end users make decisions to invest in energy efficiency. The end users interviewed as part of this process evaluation came from a diverse set of circumstances, but they do typically consider the same core decision-making factors. Section 4.2 will discuss the factors that affect implementation of recommended measures in FlexTech studies more specifically.

4.1.1 Energy Efficiency in the Capital Budget

The majority of respondents consider energy as part of the capital planning process. A number noted that they use this capital planning process as the avenue to secure funds to implement various measures, including those recommended by FlexTech. Only one respondent commenting on this topic indicated that energy is not part of their capital planning process. Many end users mentioned that gaining approval internally to complete a FlexTech study is similar to the process required for other capital investments, making it easier to incorporate energy efficiency initiatives into the existing structure of their organization.

The experiences of some partial-participating end users provide evidence that misalignment of decision-making timelines exists, and that it can derail projects. Several partial participants indicated that a misalignment of timelines led them to discontinue at least one FlexTech project. In some cases, the misalignment was as simple as needing to complete the project at a rate faster than what the FlexTech process allowed. Other instances involved a misalignment in the flow of capital and end users' inability to mobilize funds on the FlexTech schedule. Three respondents noted that ensuring alignment of the timelines requires considerable advanced planning on the part of the participant. Feedback from interviews with program staff also suggests that it can be a struggle to ensure proper alignment of program and end user timelines.

Partial-participating end users all indicated that they would engage in new FlexTech projects in the future. This suggests that the misalignment of timelines does not present a major barrier to program participation

overall. However, it is an area in which improvements may help the program increase the measure adoption rate (MAR) and improve participant satisfaction.

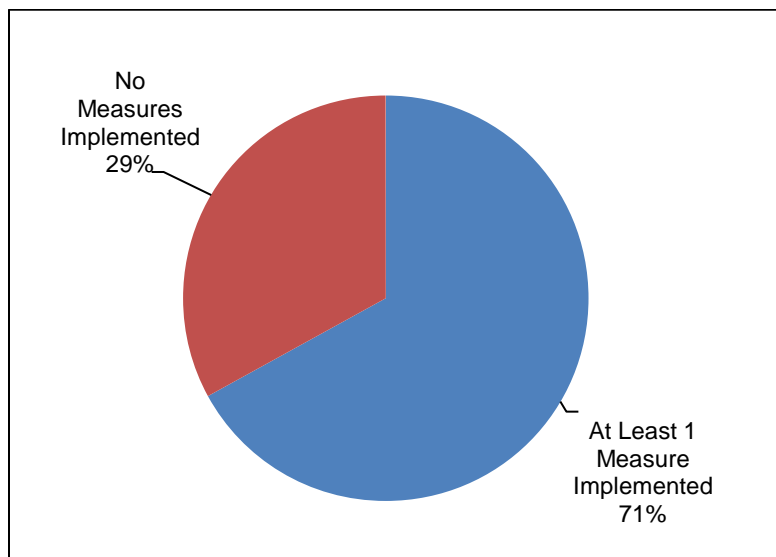
4.1.2 Measure Implementation among FlexTech Participants

Two-thirds of responding end users self-report having implemented at least one measure from their FlexTech project within 2-3 years, as seen in Figure 28. The FlexTech impact report indicates that 34-46% of all potential savings were installed in a 2-3 year timeframe; this is part of the MAR analysis. The comparison between the implementation of “at least one measure” used for the process evaluation and the data collected for the MAR is imperfect, as the MAR captures the percentage of *all* potential identified savings opportunities that were implemented.³⁹ However, it appears that participant reports are somewhat higher than the impact report findings.

For the end users who have not implemented any measures from their FlexTech projects, all but one was a CHP project. This reflects the large scale and complexity of CHP investments that make these measures more difficult to act upon. The respondent for the remaining project cited a long payback period as the reason for not implementing any measures. This respondent noted that the recommended measures would have had an 8-9 year payback, which exceeds the organization’s investment threshold of a 3-year payback.

Figure 28. Implementation of Measures Resulting from FlexTech Projects (Self-Report)

Source: Navigant analysis of interviews with participating end users, 2013; n=17



³⁹ Also, for this question end users were asked only to comment on their implementation activities for a single FlexTech project that they had been identified by for purposes of generating a sample frame. Many of these end users have participated in multiple projects, but the results of this study do not reflect these collective implementation rates.

4.1.3 Investment Criteria Used for Energy Efficiency Investments

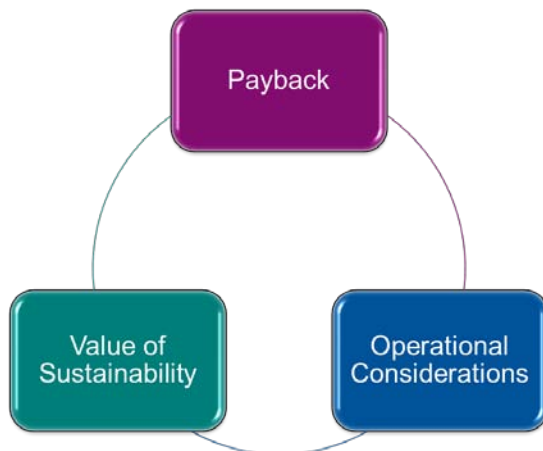
The PE Team also asked end users to comment on the investment criteria that govern their decisions about whether or not they implement energy efficiency measures on behalf of their organization. Figure 29 shows the three primary drivers behind this decision:

- The majority of respondents evaluate potential energy efficiency measures using simple payback as their financial criterion. Most look for a full payback to occur in five years or less, though one respondent referenced a much shorter simple payback threshold of 12-18 months.
- Several respondents stated that in addition to evaluating simple payback, they take operational considerations into account when evaluating potential energy efficiency investments. Operational considerations include non-financial factors that have an influence on implementation decisions, such as complying with changes in building regulations (e.g., Local Law 87), changing infrastructure needs, and the need to upgrade aging equipment.
- Many respondents stated that they also consider the value of sustainability in their implementation decisions. This is considered in addition to simple payback and operational considerations, and no end users cited it as the primary reason for deciding to implement.

Two end users mentioned that they have to consider the special needs of their own facility and the unique circumstances of each investment decision, causing the key investment criteria to vary from one project to the next. Overall, the three considerations shown in Figure 29 are the primary criteria driving investment and measure implementation decisions.

Figure 29. Investment Criteria of End Users for Measure Implementation

Source: Navigant analysis of interviews with participating end users, 2013.



4.2 Drivers for and Barriers to Measure Implementation

Understanding and addressing the barriers to implementing FlexTech-recommended measures will enable program staff to meet their goal of increasing the MAR among program participants. This section diverges

from the previous section in that it focuses on the factors affecting decisions to implement measures recommended in FlexTech studies, rather than energy efficiency investments more generally.

Section 4.2.1 provides a summary of the top barriers to measure adoption emerging from market actor feedback. Section 4.2.2 identifies factors associated with projects that most often proceed with measure implementation. Section 4.2.3 discusses opportunities to further support measure implementation.

4.2.1 Barriers to Measure Implementation

Figure 30 presents a summary of barriers to measure adoption. Dark orange fill indicates a primary barrier, and light orange fill represents a secondary barrier. Discussion of the barriers to measure implementation follows.

Figure 30. Summary of Barriers to Measure Adoption

Source: Navigant analysis of interviews with participating end users, service providers, staff, and other market actors, 2013.

	Summary of Barriers to Measure Adoption			
	Lack of Capital	Return on Investment / Payback	Decision-Making Structure of End User	Operational Challenges
Participating End-users	N=7	N=5	N=2	N=2
FTCs & ISPs about End-users	FTC=14 ISP=3	FTC=6 ISP=1	FTC=3 ISP=1	FTC=1 ISP=3
Staff about End-users	N=1		N=1	
Other Market Actors	N=2			N=1

The majority of market actors cite **a lack of capital** as a major roadblock to measure implementation. A handful of respondents cited the high upfront cost of implementation, and suggested that end users would benefit from an established system that fronts the money for implementation on the condition of repayment. As previously mentioned in Section 3.3.2, the Green Bank initiative spearheaded by Governor Cuomo has the potential to significantly alleviate capital constraints as a barrier to measure implementation.

The **longer-term financial value** of the energy efficient investment, in the form of return on investment or simple payback, was also cited as a strong barrier to implementation. If payback falls short of investment thresholds, in most cases, end users will choose not to implement a measure.

End users and program staff describe the **decision-making structure of end users** as a secondary barrier, though service providers describe it as a primary barrier. This refers to instances in which the FlexTech project champion lacks influence over decision-making, or situations in which miscommunication or lack of communication between the project champion and management prevents an organization from taking action on recommended measures.

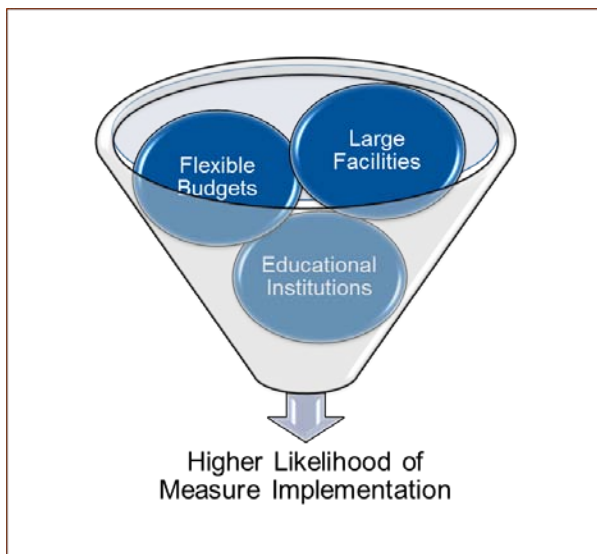
Operational challenges can also be a barrier to measure implementation, as highlighted by market actors and service providers. The PE Team defines operational challenges as the need to shut down production during installation, and issues with employees becoming defensive about changes to the way they do their jobs. Resistance to changes in the status quo can have significant impacts on whether or not an organization decides to move forward with measure implementation.

4.2.2 Drivers for Measure Implementation

Solid themes related to the characteristics of projects that go on to implement recommended measures did not emerge from respondent feedback. However, as shown in Figure 31, the most commonly cited factors that affect whether or not a project results in measure implementation include facility size and the presence of flexible budgets. In addition, several noted that educational institutions often implement recommended measures.

Figure 31. Factors Contributing to High Measure Adoption among FlexTech End Users

Source: Navigant analysis of in-depth interviews with service providers and participating end users, 2013.



It is not surprising that respondents associated these characteristics with measure adoption. Large facilities tend to have greater resources, both in terms of financial and human capital. Such access to resources

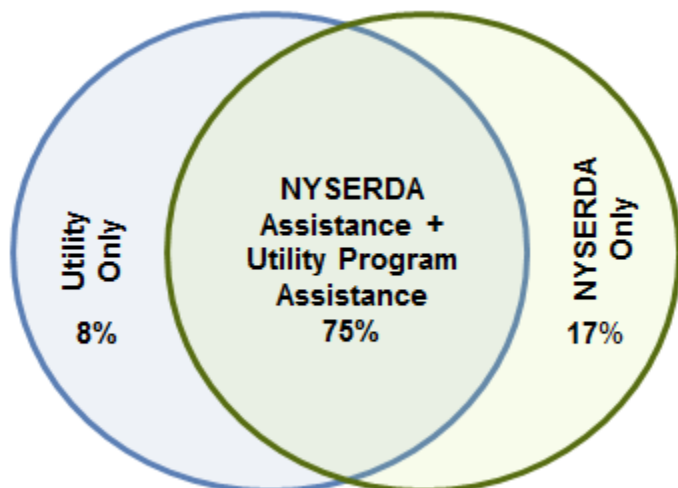
makes it easier for these organizations to evaluate and act on recommendations pertaining to their energy efficiency. Having a flexible budget is also important, as it creates a greater possibility that end users are able to leverage the necessary amounts of capital needed to implement measures. In many instances, being a large institution and having a flexible budget go hand in hand, though this is not always the case. The connection between educational institutions and high measure implementation comes in part from their tendency to be large institutions; however, educational institutions also tend to have sustainability commitments in place, and long investment time horizons, both of which support energy efficiency investments.

Other factors cited as leading to a higher likelihood for implementation were hospitals, customers with greater knowledge of the program, those prepared to implement from the start, and companies where the organizational culture supports energy efficiency.

Availability of implementation funds is clearly a key driver for measure implementation based on general feedback gathered from in-depth interviews. Despite program staff's desire to achieve measure implementation without additional financial assistance, it appears that program participants need, or are willing to invest the effort to secure additional funds to support measure implementation. All twelve of the participating end users who indicated that they had already, or planned to implement FlexTech recommended measures did so or will do so with funding from other programs. As shown in Figure 32, 75% (9) of the participating end users who have sought outside assistance to support implementation of FlexTech recommended measures have used a combination of NYSERDA and utility programs over the years to implement measures from one or more FlexTech projects. Approximately 8% relied solely on utility programs, and approximately 17% relied only on NYSERDA programs for implementation assistance. Interviewees were not asked what portion of the implemented project costs were supported with outside funding versus in-house resources.

Figure 32. Use of Additional Funding to Support Implementation of Recommended Measures

Source: Navigant analysis of in-depth interviews with service providers and participating and partial-participating end users, 2013; n=12 participating end users who implemented FlexTech recommended measures



Based on information provided by the nine partial participating end users who reported implementing energy efficiency measures at their facilities, this group does not rely as heavily on outside implementation funds as do the participating end users. Five of these respondents (55%) report using funds from either utilities or NYSERDA programs to implement efficiency measures at their facilities. The remaining four projects installed efficiency measures with no additional funding.

Feedback from this qualitative interview effort support a finding that availability of additional funding is a strong driver for measure implementation, and that overlap likely exists in the savings being counted by various energy efficiency programs that ultimately fund the installation of efficiency measures. However, a statistically valid study would be needed in order to identify the actual amount of overlap that exists across programs.⁴⁰

End users become aware of the additional sources of funding through economic development and industry groups, or they self-educate themselves using a variety of available resources. Some participating end users report that their contractors or a utility representative led them to utility program options. Overall, it is clear that most end users do not implement without the assistance of additional funding.

⁴⁰ NYSERDA plans to include examination of savings overlap across its portfolio of programs in the scope of the next FlexTech impact evaluation. NYSERDA currently accounts for overlap in savings across its own programs at the portfolio level (not within program-specific impact evaluation reports). The most recent overlap study was completed in 2006. It found that 19% of FlexTech program savings overlap with savings counted by other NYSERDA programs. Osei-Antwi, D., and D. Gowans. 2006. "M&V Evaluation: Cross-Program Overlap in New York Energy SmartSM Program Savings." Prepared by Nexant for NYSERDA.

4.2.3 Opportunities to Further Support Measure Implementation

No consensus emerged from program actors when asked to share ideas about what the FlexTech program can do to increase measure adoption. Respondents gave many different answers, with a number of them indicating that they were unsure what other steps FlexTech could take, or they believed that the program is already doing everything that it can. Several respondents, offering up the same suggestions as detailed in section 3.3.2, called for adjustments to the incentives offered by the program to allow for greater flexibility in how funds are distributed.

Many service providers think the key to higher MARs lies in the way information is presented to end users and the support they receive following delivery of the final report. Some suggested presenting energy audits as capital planning tools, which puts the audits and recommendations into the language of business owners and helps them to better understand the effect of taking action. This would ensure that key decision-makers consider FlexTech study report findings.

Respondents also suggested that connecting end users to key contacts in other NYSERDA programs at the end of the FlexTech project would encourage end users to follow through on implementation. This would show them the resources available to support their investment. However, this does not align with program staff's goal of achieving implementation without further funding assistance.

A final suggestion that emerged from the PE Team's in-depth interviews is that program staff should take steps to understand the barriers of the client up front, allowing them to better address these barriers efficiently and early on in the program process. According to program staff, the project managers and service providers do already spend a great deal of time at the early stages of the project to review and confirm the unique challenges and opportunities associated with each project.

4.3 Effects of Program Participation on Long-Term Decision-Making

When asked about changes to their long-term decision-making, half of responding end users stated that through the FlexTech program their perception of energy efficiency investments had improved. The other half indicated that their participation did not change their decision-making or perceptions of the costs and benefits of energy efficiency improvements.

A handful of end users noted that the high quality data presented in FlexTech reports makes it easier to convince key decision-makers in their organization to take action and that having consistently better data leads to the approval of more energy efficiency projects. Energy efficiency becomes part of an organization's culture and part of its expectations. Some respondents also mentioned that energy efficiency

investments are now built into capital budgets. They cite FlexTech for providing an improved perception of the risks and benefits associated with taking action on energy efficiency.

The fact that the program appears to have had some long-term effect on decision-making at half of organizations interviewed for this study is a strong indicator of program spillover. All responding end users also stated that they plan to invest in future energy efficiency projects with the support of NYSERDA. The plans to continue exploring cost effective energy efficiency opportunities support the finding that FlexTech is helping to integrate energy efficiency into end user decision-making. However, to the extent that future energy efficiency studies take place with additional FlexTech support, they would not comprise spillover.

5 Key Findings, Conclusions, and Recommendations

Overall, much of the feedback gathered for this evaluation indicated that FlexTech is viewed as a valuable and influential program in the New York market for energy efficiency. Participating end users and service providers alike recognize the benefits of the FlexTech program and appreciate the resources to which it provides them access. Even some parts of the process that slow down project completion (e.g., the technical review process) are viewed as improving the result and therefore worth the investment of time and capital.

This section summarizes the PE Team’s key findings and recommendations for NYSERDA FlexTech program staff to consider. These findings and recommendations aim to aid staff in building upon the program’s many strengths to increase participant satisfaction and maximize program impacts. The PE Team recognizes that FlexTech staff is challenged to serve the market effectively with a limited amount of program resources, and that NYSERDA and program staff has the deepest understanding of the needs of the program. The Team anticipates that NYSERDA and program staff will weigh the benefits and costs associated with the recommendations presented here, and will make resource allocation decisions that make sense for the program as a whole.

Figure 33. Summary of Key Findings and Recommendations

Key Findings	Recommendations
<ul style="list-style-type: none">• 1. Frustration with program processes lead to service provider frustration, difficulty planning, and in some cases, an unnecessary expenditure of resources. This is due primarily to:<ul style="list-style-type: none">• Inconsistencies across project managers and external technical reviewers• Cumbersome processes, particularly during the scope of work development phase• 2. Many participants lack access to capital to readily implement recommended measures; they seek more direct linkages with additional funding sources.• 3. Existing outreach efforts do not sufficiently build awareness for FlexTech.• 4. Inconsistencies and gaps exist in some data tracking components, making it difficult to efficiently and effectively track participation within FlexTech and across programs.	<ul style="list-style-type: none">• 1. Provide clearer, more consistent expectations regarding program application materials, report content and timelines.• 2. Streamline program processes to shorten participation timelines and limit necessary investment of staff time by end users and service providers.• 3. Provide clearer guidance regarding next steps following study completion.• 4. Increase targeted marketing and outreach efforts.• 5. Strive to achieve consistent and streamlined approach to data reporting.

5.1 Key Findings

The FlexTech program fills an important niche in New York’s market for energy efficiency services. It provides a source of much-needed funding and high quality technical support to achieve deep savings. The program also engages large facilities that hold much of the state’s remaining energy savings potential. Therefore, it has a unique opportunity to generate significant energy savings while addressing persistent market barriers to energy efficiency (e.g., lack of awareness of energy saving opportunities, credibility of analysis, uncertainty about benefits for energy efficiency measures, and access to quality technical services).

FlexTech sees plenty of interest and activity, and the program’s offerings are, overall, well aligned with the existing program logic and the needs of the market. Yet, opportunity remains for the program to improve participant satisfaction and increase the amount of energy savings realized by end users.

- Participating service providers report that the program’s complexity and lengthy processes currently pose barriers to participation for some projects that stand to benefit from the program’s offerings. Energy efficiency investments compete for scarce capital resources. Careful scoping of projects and review of FlexTech studies are key elements in the program’s efforts to produce high quality studies that lead to implementation of cost effective measures. However, any unnecessary obstacles, real or perceived, can deter investment. Providing clearer expectations about timelines for each stage of the program and about reporting requirements would aid service providers in recruiting and project execution.
- Furthermore, market actor feedback indicates the program could benefit from increased marketing and outreach activity. Additional outreach efforts would help the program recruit those facilities in most need of assistance, and with the potential to yield the greatest energy savings
- Program delivery and participant satisfaction would likely improve if staff would take steps to:
 - Streamline program processes
 - Provide clearer and more consistent expectations regarding participation
 - Offer greater guidance to support implementation of recommended measures
 - Increase targeted recruitment efforts
 - Strive to achieve a consistent and efficient approach to data recording.

The following sections provide additional context to support these high-level findings. Section 5.1.1 provides an overview of what the program intends to offer to the marketplace, as well as a summary of program activity. Section 5.1.2 reflects market actors’ perceptions of the program, including their views of program drivers and barriers, program processes, and overall satisfaction. Section 5.1.3 summarizes findings related to participants’ decision-making regarding the implementation of recommended measures.

5.1.1 Program Context

The program seeks to provide New York facilities with an increased ability to pursue energy efficiency and increase the value of service provided in the market. Unlike technical assistance programs offered in other markets, and by New York's utilities, the FlexTech program is not intended to function as a feeder to other programs that offer implementation funding. Rather, the program seeks to match participants with compelling opportunities to investment in energy efficiency facility improvements.

Program studies most often yield recommendations in the areas of HVAC, controls and lighting, and these measures account for nearly one-third of the program's recommended savings. Generation-related measures are recommended less frequently, but account for over half of recommended kWh savings. In aggregate, it takes FlexTech projects about ten months to proceed from submittal of an application to approval of a final report, though significant differences exist, correlated with the type of project and whether the end user teams with a FlexTech Consultant or Independent Service Provider.

Despite program staff's intentions, many program participants indicate that they look to FlexTech as a first step in the process of ultimately securing implementation funding to support energy efficiency investments. Utility programs and other NYSERDA programs are available to provide financial incentives to support the implementation stage, and a large majority of end users reported receiving assistance from other programs in order to implement the measures outlined in their FlexTech reports. NYSERDA does make efforts to address double counting of savings across NYSERDA programs at the portfolio level, but there is an inability to effectively track participation in utility programs (and to some extent it is challenging within NYSERDA's own portfolio). A new statewide project tracking system envisioned by the DPS will likely minimize double counting issues in the future.^{41 42}

Many programs offering funding for measure implementation are available in New York. Participating end users whose FlexTech studies identified cost effective energy efficiency measures may choose to secure funding one of those programs. This may constitute free ridership. However, service providers believe they have a responsibility to ensure that their clients do not "leave funds on the table," even for measures that may prove financially viable without additional financial support. In order to better align itself with the needs and expectations expressed by market actors, some adjustments to the program's mission and logic, as well as its delivery may be warranted. For example, NYSERDA and DPS may wish to engage in discussions to confirm the appropriateness of the program's identity as a resource program with its own

⁴¹ New York Public Service Commission. Case 07-M-0548, Order Approving EEPS Changes. Issued and Effective December 26, 2013

⁴² NYSERDA also plans to address the issue accurate tracking of savings across NYSERDA programs by updating an 2006 study of overlap of savings across programs. NYSERDA plans to incorporate this into the scope of an upcoming impact evaluation of the FlexTech program.

independent savings targets. However, the PE Team does not take a position on this matter, as the Team views it as a policy decision for consideration by NYSERDA and DPS.

5.1.2 Market Perceptions of Program

Key drivers for program participation that affect both end users and service providers include the program's cost-share incentive and the NYSERDA brand. End users participate in the program because they see it as an opportunity to gain access to high quality technical services at a reduced cost. Service providers seek to become FlexTech Consultants to generate new business, both through leads from the program and because program affiliation serves as a valuable credential. General growth in awareness of and demand for energy efficiency also drive program participation. Local Law 87 plays a strong role in growing the market for energy audit and retro-commissioning services in the downstate region.

Study costs and required investments of staff time present the most significant barriers to participation by end users. Program staff's engagement in ensuring quality study activity from the project scoping stage through to study completion does contribute to the time, and, therefore, cost associated with completing FlexTech studies. However, the tradeoff is recognized by program staff and is considered a core element of the program's success.

A lack of awareness of program benefits appears to limit participation by some end users not previously engaged in the program. Service providers report that they refrain from bringing certain projects to the program because the investment of time and effort required for program participation does not align with their clients' timeline or available resources (e.g., capital and staff time).

End users expressed high levels of satisfaction and noted minimal concern about the program's processes. The program's cost share and high quality technical services were the program characteristics most favored by end users.

Service providers play a central role in all aspects of the program. They generate the majority of project leads, complete the funded analysis and reporting, and often assist their clients in acting on recommended measures. Observations based on feedback provided by this group include the following:

- Service providers exhibited greater disparity in their levels of satisfaction with the program than did end users. Service providers' favorite aspects of the program align with the factors that drive their participation, primarily its ability to help them generate new business.
- Feedback from both FlexTech Consultants and Independent Service Providers yielded significant concerns about the complexity of the program and the resources (e.g., cost and staff time) required for participation. The most critical feedback focused on the earliest stages of program participation, including project scoping and gaining approval of program applications.

- Service providers, mostly FlexTech Consultants, also noted significant inconsistencies in their experiences in the program from one project to the next. This pertained to both project manager expectations, and the value the service providers gain from the external technical review process.
- Many of these service providers recognize the value of the program's careful scoping and review processes. However, they seek to streamline and add more consistency and predictability to those processes.

The program clearly plays an important role both within NYSERDA's portfolio of programs and in the broader market for energy efficiency services in New York. FlexTech studies provide the market with improved access to high quality, comprehensive analysis that informs commercial facilities' investments in energy efficiency measures. Service providers report that utility-sponsored programs offering technical assistance services involve less cumbersome processes (the overall effectiveness of those utility programs was not part of this evaluation scope). However, the FlexTech program's relatively high funding cap (\$1,000,000 per project) far exceeds that of utility programs, making it uniquely suited to serve the needs of large end users seeking complex, in-depth studies.

5.1.3 Decision-Making Processes

Most participating end users consider energy investments as part of their capital planning process, and investments with a simple payback of up to five years typically pass the initial screen. Operational considerations also play a key role in decision-making. These include non-financial factors, such as synergistic benefits to the organization's mission, a need to upgrade facilities, and the logistics and potential downtime that go along with implementing recommended measures.

Barriers to measure implementation include both financial and organizational factors. Challenges associated with securing capital, sometimes from within the organization and sometimes from outside the organization, pose the most substantial barrier to implementation of recommended measures. Market actor feedback indicates that long simple payback periods and operational challenges also stand in the way of measure implementation. The end users' decision-making structure (e.g., a project champion's lack of influence over decision-making) presents a barrier to some projects as well. Alignment of the program's timeline with the end users' decision-making timelines is a factor for some.

Availability of implementation funds is clearly a key driver for measure implementation based on general feedback gathered from in-depth interviews. The most commonly cited factors specifically associated with decisions to act on energy saving opportunities include facility size and the presence of flexible budgets. Facilities with longer investment time horizons (e.g., large educational facilities) are more likely to ultimately act on FlexTech study recommendations.

FlexTech has a long-term impact on end user decision-making. All end users indicate that they will pursue energy efficiency projects in the future. Half of those interviewed reported that their perceptions of energy efficiency investments improved because of program participation. Respondents explained that their improved access to high quality information helps make the case for energy efficiency investments and that the experience of making the decisions once helps build energy efficiency decision-making into their organization's corporate culture.

5.1.4 Data Tracking

NYSERDA is currently limited in its ability to track end user participation across programs.⁴³ The program databases do not contain a system of unique premise and organization IDs used consistently across all NYSERDA programs. A “key identifier” would help monitor participation across multiple NYSERDA programs and minimize double counting of savings within the NYSERDA portfolio.

In addition, establishing data entry protocols for program staff would enhance the ability to analyze project milestones. The team identified inconsistencies in the entry of key milestone dates due to evolving uses and guidance as it relates to the Buildings Portal database. For example, the “draft in” date in the Milestones Report does not capture the iterative nature of this milestone; staff may enter either the date of the first draft or the date of the most recent draft.

Lastly, the program currently does not have a data dictionary for the FlexTech data. The program would benefit from creating a database dictionary to ensure a consistent use of FlexTech data.⁴⁴

5.2 Conclusions and Recommendations

As the program advances to the next stage of maturity, it could benefit from additional efforts to strategically increase participation, nurture relationships with well-performing participating service providers, and minimize key barriers to participation and participant satisfaction. This section presents specific conclusions and recommendations for program staff consideration based on the key findings generated during the evaluation.

Finding 1: Several service providers expressed concerns about inconsistencies in their program experiences, both with project managers and with ETRs. These inconsistencies result in added costs and

⁴³ A new statewide project tracking system envisioned by the DPS should minimize double counting issues in the future. Therefore, at this time the PE Team suggests that NYSERDA start by focusing specifically on tracking participation within the NYSERDA portfolio. New York Public Service Commission. Case 07-M-0548, Order Approving EEPS Changes. Issued and Effective December 26, 2013

⁴⁴ A database dictionary would also assist in addressing the recommendations in the 2013 Audit of the FlexTech program. Mark Mitchell to Brian Platt, September 5, 2013, New York State Energy Research and Development Authority, Audit of the FlexTech Program.

planning risks that can deter participation and result in an inefficient use of end user and program resources. It appears that many of the expectations for participation (e.g., templates for the statements of work and report document) are embedded in RFP and PON appendices, but many service providers miss these resources.

Recommendation 1: Provide clearer, more consistent expectations regarding program application materials, report content, and timelines.

Making guidance related to program participation more accessible and easier to interpret would enable participants to operate more efficiently and would likely increase program satisfaction. Examples of steps that would make participation expectations more transparent include: 1) make links to document templates (e.g., scope of work and final report) readily accessible from the program website; 2) more clearly communicate timeframe expectations for various stages of participation. Service providers indicated that a process flow diagram, similar to the one developed for this evaluation, would prove valuable in planning for and communicating to end users about timelines at various stages of participation.

Finding 2: The most common complaints about the program pertained to the cumbersome processes involved with participation, particularly during the early stages of participation (i.e., project scoping through acceptance of program application materials and approval for funding). A certain level of complexity in program processes is unavoidable given the statewide requirement to complete the CFA, and a general need for due diligence in developing projects most likely to result in value to the participants and implementation of measures. Some service providers report that staff has already taken steps to streamline program processes, which are appreciated. Also, according to program staff, some delays in the participation process result from slow response times on the part of program participants.

Recommendation 2: Streamline program processes to shorten the participation timelines and limit necessary investment of end users' staff time.

The program would benefit from identifying additional opportunities to streamline processes. Some potential changes that may help to expedite program participation include the following: 1) hold the program's project managers and External Technical Review contractors accountable for adhering to timelines for document review; 2) consider having project managers consistently work with the same types of projects, and/or the same service providers (e.g., projects addressing compressed air efficiency improvements would always be assigned to a specific project manager).

Finding 3: The program's involvement with a participant often ends once a study is completed and approved. However, market actor feedback indicates that both service providers and end users seek more direct linkages to additional funding sources and could benefit from further guidance in their efforts to carry recommended measures through to completion. End users and service providers will naturally take steps to ensure they do not pass up opportunities to obtain funds for which they are eligible. As long as large quantities of implementation funds are available through other programs offered in New York, FlexTech staff can expect that program participants will seek to make use of those funds to support implementation of FlexTech-recommended measures. The program's current goal to drive implementation

of cost-effective measures without additional outside funding is poorly aligned with these market conditions.⁴⁵ In addition, program participants lack both knowledge of the program’s expectations for the actions they should take following study completion, and peer examples of energy efficiency projects being implemented without tapping into outside funding sources.

Recommendation 3. Provide clearer guidance regarding recommended actions following study completion.

Specifically, the PE Team recommends that program staff provide participants with a list of actions they can take and informational resources they can access to help them proceed toward successful implementation of recommended measures. The purpose of this recommendation is two-fold.

- First, it would address program participants’ lack of knowledge of the program’s intended role as a stand-alone source of support. Providing participants with a clear set of recommended actions following study completion presents an opportunity to communicate the program’s intent: the implementation of cost effective energy efficiency measures without additional outside funding. The PE Team does not take a position on whether FlexTech should revisit its program logic to confirm its role as a stand-alone program; the team views that as a policy decision for NYSERDA and DPS to address.
- Second, communications with participants following study completion would provide valuable information and guidance that may increase the adoption of recommended measures. Program communications following study completion could include case studies of projects that have been implemented without additional funding sources, highlighting this as a viable potential option. Communications could also include information about the availability of other funding and financing options, including the new Green Bank.

Finding 4: NYSERDA’s outreach activities may prove effective at the portfolio level. However, market actor feedback indicates that those efforts provide insufficient support for the FlexTech program specifically. Staff efforts to more proactively and more strategically leverage the program’s existing market and outreach resources would likely increase the volume of prospective program participants. Examples would include increased portfolio-level marketing and outreach resources as well as marketing through FlexTech Consultants.

The FlexTech program already relies heavily on service providers as a source of project leads. These technical experts are well positioned to deliver program messaging to potential clients given their perceived role as experts in the market. However, service providers are resource constrained, which limits their ability to play a proactive recruitment role.

⁴⁵ Market conditions are expected to change in New York as a result of Case 14-M-0101: “Proceeding on Motion of the Commission in Regard to Reforming the Energy Vision.” See Order instituting the proceeding, issued and effective April 25, 2014. The Order states that under the new energy market framework envisioned for the state, NYSERDA programs would specifically focus on, “market and technology transformative strategies designed to provide temporary intervention and support to overcome specific barriers and produce self-sustaining markets.” (p. 21) It is not clear what role the FlexTech program would play in the fully implemented new market context.

Recommendation 4: Increase targeted marketing and outreach efforts.

The program would benefit from an increase in targeted marketing and outreach activity. This may include requesting more resources and attention from the portfolio-level marketing and outreach system, NYSERDA's Customer Relationship Management (CRM) system. It may also include establishing a collaborative relationship between FlexTech Consultants and the CRM system to ensure that Consultants have access to the informational resources (e.g., client leads) necessary to act as an effective channel for targeted recruitment.

Finding 5: The Team identified opportunities to improve the consistency of data entry procedures and to streamline data tracking. The Team also found that the program could improve the clarity of the data tracking system through the creation of a database dictionary. Findings from the process evaluation indicate likely double counting of savings across programs both within and outside NYSERDA's portfolio of programs. NYSERDA is currently limited in its ability to track end user participation in non-NYSERDA programs.⁴⁶ Challenges exist related to addressing the issue of overlap within NYSERDA's portfolio as well. The program databases do not contain a system of unique premise and organization IDs used consistently across all NYSERDA programs. NYSERDA's use of a "key identifier" would help monitor participation across multiple NYSERDA programs and minimize double counting of savings within the NYSERDA portfolio.⁴⁷

Recommendation 5: Strive to achieve a consistent and efficient approach to data tracking.

The program would benefit from a review of the data tracking approach and a consideration of streamlining data activities to the extent possible. The existence of multiple program administrators offering similar programs makes it inherently difficult for NYSERDA to independently address potential overlap in the tracking of savings outside of NYSERDA's portfolio. However, establishing a system for consistently tracking end users' participation across NYSERDA's programs (e.g., through use of unique identifiers) would increase the accuracy of reported energy savings. The PE Team also recommends that program staff develop a database dictionary.

⁴⁶ As noted in the Public Service Commission's Order Approving EEPS Changes, a statewide project tracking system is envisioned for the state. Therefore, at this time the PE Team suggests that NYSERDA start by focusing specifically on tracking participation within the NYSERDA portfolio. [New York Public Service Commission. Case 07-M-0548, Order Approving EEPS Changes. Issued and Effective December 26, 2013.]

⁴⁷ NYSERDA also plans to address the issue of accurate tracking of savings across NYSERDA programs by updating a 2006 study of overlap of savings across programs. NYSERDA plans to incorporate this into the scope of an upcoming impact evaluation of the FlexTech program.

Appendix A Data Review Memo



1375 Walnut Street
Suite 200
Boulder, CO 80302
303.728.2500

Memorandum

To: NYSERDA Program Staff

From: Beth Davis, Brittany Gibson, and Jane Pater Salmon, Navigant

Cc: Brent Barkett, Navigant; Jane Peters, Research Into Action

Date: January 13, 2014

Re: Composition of Program Participation and Timelines for Major Steps (Milestone analysis)

The evaluation team conducted a review of the NYSERDA FlexTech program data as part of the process evaluation. This memo contains the findings from the data review. The data review detailed in this memo focuses on completed projects in the FlexTech program in 2011 and 2012. The evaluation team split the data review into two components: (1) the composition of program participation and (2) the timelines for major steps. The data review outlines opportunities related to the market and program processes. The data review also informs other process evaluation efforts for the FlexTech program. Notably, this data review informed the upcoming in-depth interviews through which the evaluation team will clarify trends and further examine priority topics.

The team has organized the memo into five main sections.

- **Evaluation Objectives** outlines the key objectives addressed by the data review.
- **Methods** discusses the data used for the review.
- **Composition of Program Participation** presents different perspectives on the composition of the program's participation by market sector, measure category, project type, consultant, electric utility, and geography.
- **Timelines for Major Steps** details the amount of time projects take to complete the major milestones in a FlexTech study.
- **Key Findings** discusses the main findings from the data review.

Evaluation Objectives

As stated in the New York State Process Evaluation Protocols, "The goal of a process evaluation is to review how program activities and customers interact, and to recommend ways to improve program

processes and to increase effectiveness.”⁴⁸ The process evaluation team initiated the evaluation by documenting the program as it currently stands. This included a review of the existing program materials and engaging with program staff to ensure this evaluation accurately reflects the current program.

This memo addresses two specific research objectives outlined for this evaluation:

- Examine the level of participation across participating consultants, study types, sectors served and geography (i.e., which study types account for the greatest / least amount of participation and funding, how is this activity distributed across end-use sectors and upstate and downstate regions, and which consultants are most / least active in the program) (Objective 2g)
- Assess program process flow and identify opportunities for streamlining (Objective 2a)

Methods

NYSERDA staff provided the program data from the Buildings Portal Database in a Measure Details Report and a Milestones Report. The Measure Details Report included projects that were completed⁴⁹ between 2011 and June 2013, and it detailed all measures included in those projects. The Milestones Report included projects that were active⁵⁰ between 2011 and June 2013; this report provided data at the project level only. The evaluation team used Microsoft Excel and Tableau to review and analyze the data. Additionally, the evaluation team integrated input from FlexTech program staff to inform the evaluation team’s understanding of the data, program process flow, and project context.

- **Project count methodology:** The evaluation team counted unique projects by using unique project IDs. The unique project ID represents individual projects that evaluated different facilities and/or measures.⁵¹ The team did not split projects by funding source even if the program funded the project through multiple sources.
- **Project savings methodology:** The evaluation team reported recommended measure savings (kWh, kW and MMBTU) directly from the program data. All of the savings values are for recommended measures in FlexTech studies. FlexTech Impact evaluation MAR, SRR, and NTG values were not applied.
- **Project scope** (see Figure 1): The evaluation team included FlexTech projects that were completed in 2011 and 2012 (n=414). The Measure Details Report and Milestones Report included an additional 38 projects with a report approved in 2013; the team excluded these projects from the scope.

⁴⁸ Katherine Johnson and Gregg Eisenberg, 2012, *New York State Process Evaluation Protocols, A Supplement to the New York State Evaluation Guidelines Updated 2012*, [http://www3.dps.ny.gov/W/PSCWeb.nsf/96f0fec0b45a3c6485257688006a701a/766a83dce56eca35852576da006d79a7/\\$FILE/Proc%20Eval%20Protocols-final-1-06-2012%20revised%204-5-2013.pdf](http://www3.dps.ny.gov/W/PSCWeb.nsf/96f0fec0b45a3c6485257688006a701a/766a83dce56eca35852576da006d79a7/$FILE/Proc%20Eval%20Protocols-final-1-06-2012%20revised%204-5-2013.pdf).

⁴⁹ Completed projects have a “current status” of “report approved” in the Measure Details Report.

⁵⁰ Active projects either are in process or completed during the date range.

⁵¹ Based on discussions with program staff, some project IDs may encompass multiple projects, such as “farm audits.” Therefore, staff may calculate a different number of total projects than are calculated using the unique project IDs. The difference between staff methodologies and the methodology used in this evaluation may result in different reported values, but the trends are consistent with program staff analysis.

- *Composition of program participation note:* Of the 414 projects completed in 2011 and 2012, Navigant conducted the review for 405 projects with measures that were implemented (I), recommended (R), recommended mutually exclusive (RME), or Null⁵². Navigant excluded nine projects that only contained measures with the following statuses: not recommended (NR), recommended non-energy (RNE), and recommended for further study (RS). In addition, when summarizing recommended savings, Navigant only included measures within the 405 projects with the following statuses: implemented (I), recommended (R), recommended mutually exclusive (RME), or Null. Therefore, measures with a status of mutually exclusive (ME) were not included in the recommended savings summaries.⁵³

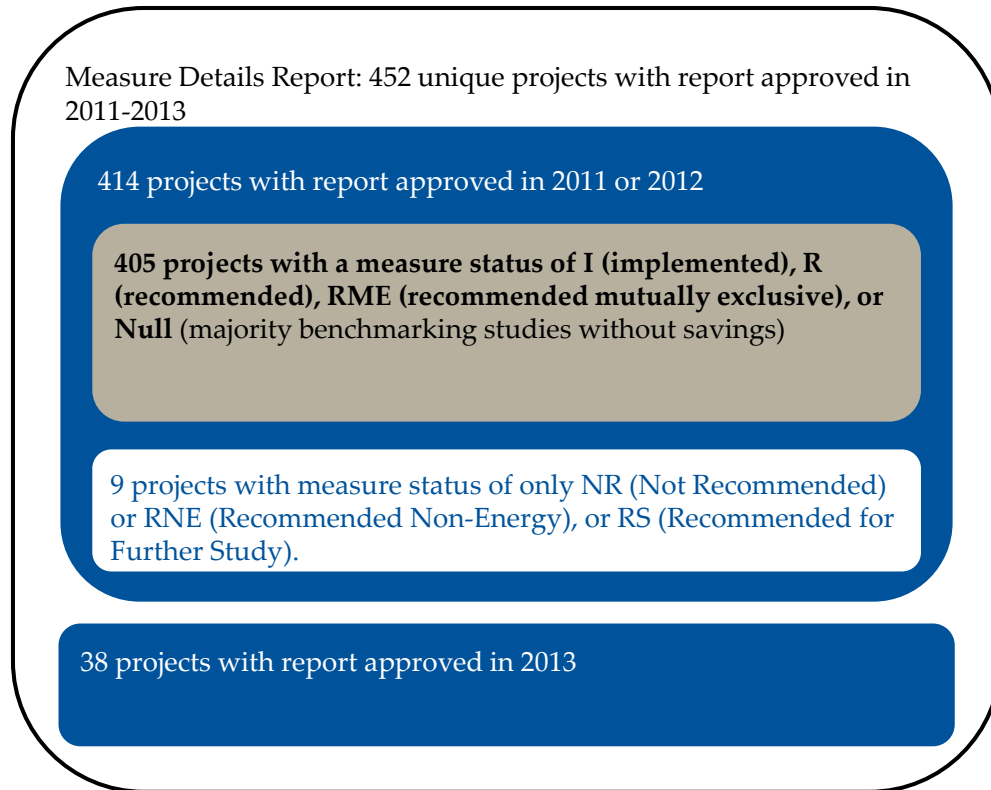
- *Milestones analysis note:* The milestones analysis included all 414 projects.⁵⁴ However, the database did not include the application received date for three FlexTech consultant projects; therefore, the evaluation team excluded those three projects in the application received to report approved summary analysis.

⁵² The majority of measures with a null status were benchmarking studies without associated savings.

⁵³ FlexTech studies may include multiple options for the same measure, and the multiple options may be mutually exclusive in that the facility can only implement one option or the other but not both. The consultant would review all options but would recommend only one option for the facility to implement. Program staff data enters the recommended option with a status of recommended mutually exclusive (RME) and would assign the other options with a status of mutually exclusive (ME). A new chiller plant is an example of this situation. In this example, the consultant may review a 300-ton chiller and two 150-ton chillers. The two chiller options are mutually exclusive because the facility can only install one chiller configuration. The study would include information on both configurations but would recommend only one option. The recommended option would have a status of recommended mutually exclusive (RME), while the other option (or chiller configuration in this example) would have a status of mutually exclusive (ME).

⁵⁴ The evaluation team only included projects in the Milestones Report that were associated with a consultant type. The team added the consultant type field to the Milestones Report from the Measure Details Report. The team used the “PS_PO_ID” as the link between the two reports. The “ProgramYearDesc” field in the Measure Details Report indicated the consultant type: RFP indicated a FlexTech Consultant and PON indicated an Independent Service Provider.

Figure 1. FlexTech Data Scope



Source: Program data from July 25, 2013.

Composition of Program Participation

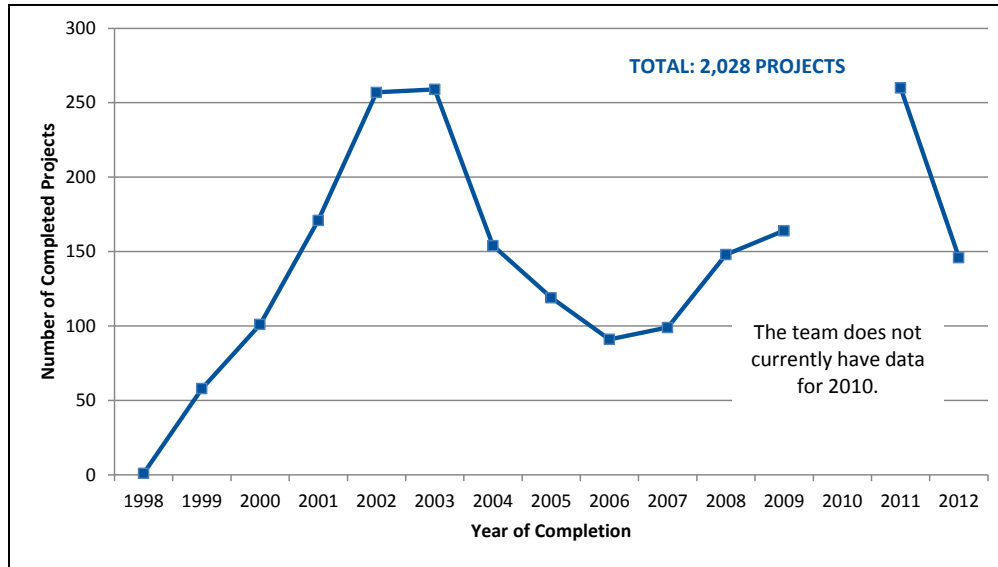
This section characterizes the program across multiple dimensions in order to summarize program participation. The team’s goal of reviewing the data was to understand the market sectors that are participating in the program, the measure types that consultants recommend through the program studies, the project types that receive incentives through the program, the consultants that participate in the program, and the geographic location of projects.⁵⁵ Looking at the data by these dimensions allows the team to better understand the program and provide key findings about the program.

Consultants completed 414 FlexTech projects⁵⁶ in 2011 and 2012. Consultants completed fewer projects in 2012 than in 2011, but the number of projects completed in 2011 was significantly higher than the annual count in each of the past six years, not including 2010 (see Figure 2).

⁵⁵ Throughout the document the term “project” refers to FlexTech studies.

⁵⁶ Navigant identified unique projects based on unique project ID numbers.

Figure 2. Annual Number of Completed FlexTech Projects



Sources:

(1) Navigant Consulting, "FlexTech Program Market Characterization and Assessment: Final Report" (August 31, 2011), Prepared for New York State Energy Research and Development Authority.

(2) Program data from July 25, 2013.

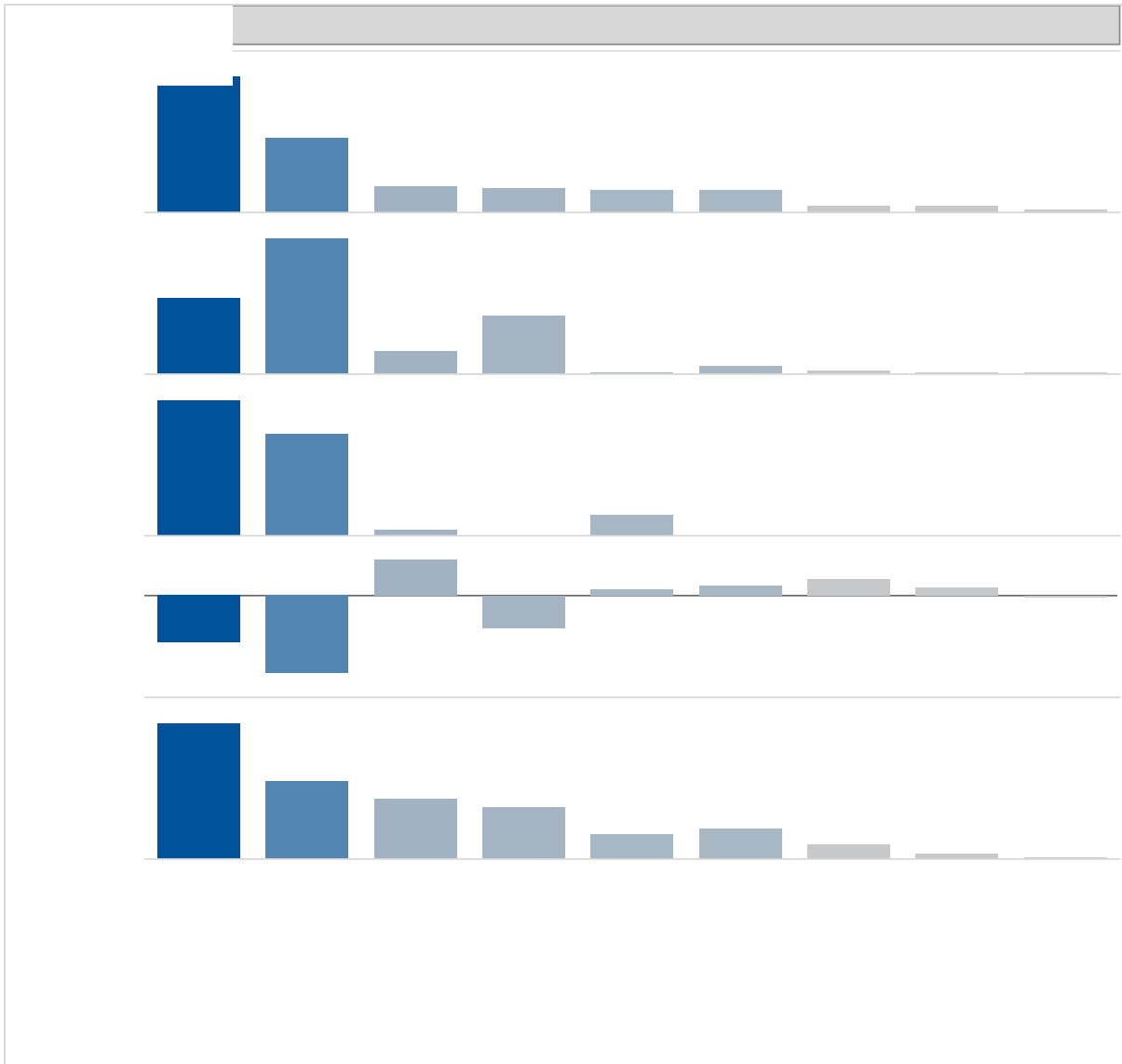
The following sub-sections present different perspectives on the composition of the program's participation in 2011 and 2012. The evaluation team reviewed the program participation with a focus on the following key areas:

- Aggregate project count, recommended savings, and incentives by **market sector**
- Aggregate project count and recommended savings by **measure category**
- Aggregate project count, recommended savings, and incentives by **project type**
- **Consultant** performance by project count and recommended savings
- Aggregate project count, recommended savings, and incentives by **electric utility**
- Completed projects by **geography**

Market Sector Summary

Figure 3 details the project count, recommended savings, and incentives by market sector. In 2011 and 2012, the commercial-wholesale/retail and industrial/manufacturing sectors completed a large percentage of FlexTech studies. These two sectors accounted for 65% of the completed projects – 42% in the commercial-wholesale/retail sector and 23% in the industrial/manufacturing sector. Healthcare, education, and local government accounted for the next highest project counts. The FlexTech program conducted a small percentage of studies in the federal and state government, not for profit, multifamily, services, or agriculture/forestry sectors.

Figure 3. Project Count, Recommended Savings, and Incentives Spent by Market Sector



Source: Navigant analysis of the FlexTech database.

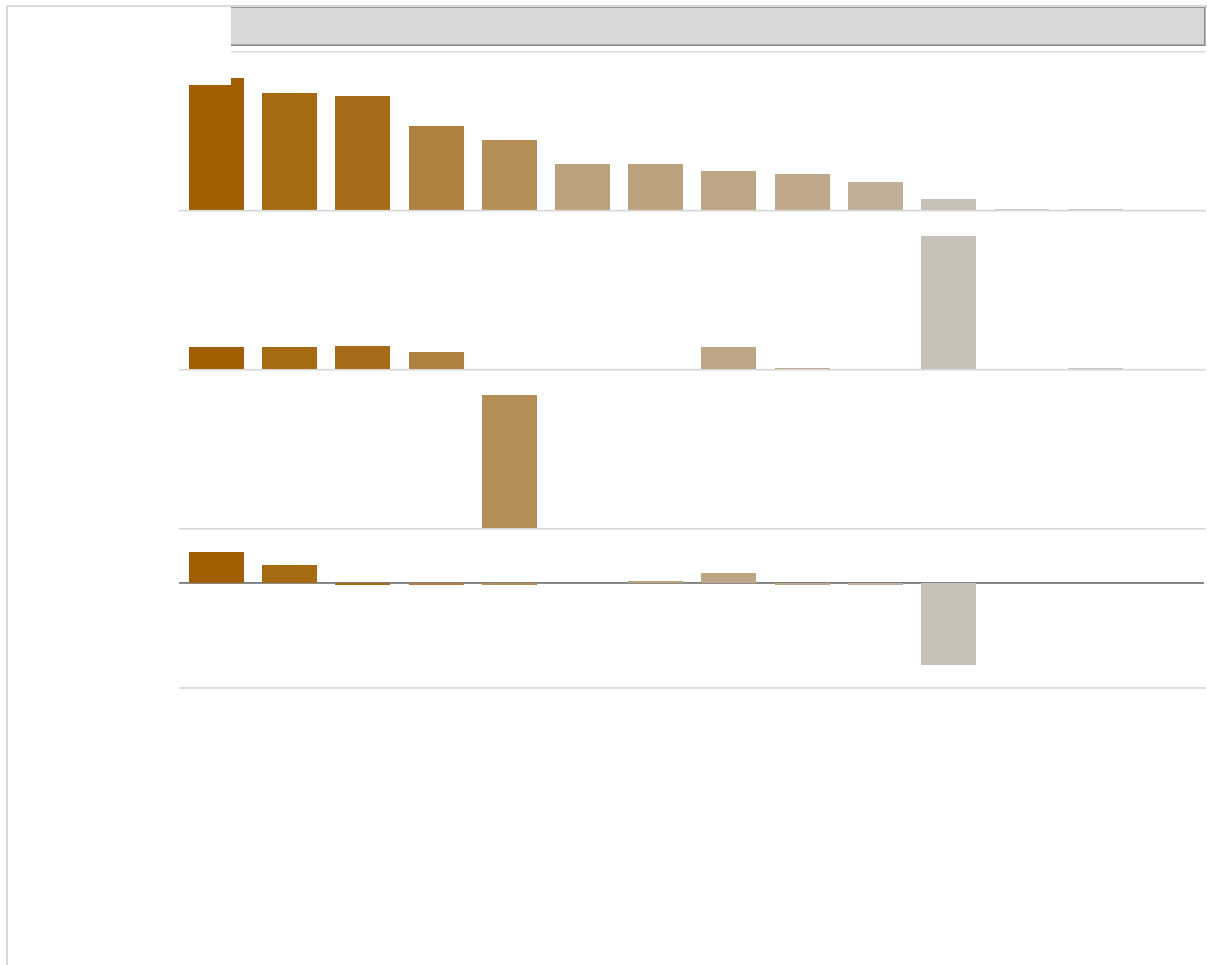
Note: The total MMBTU savings is negative. Therefore, a negative percentage represents positive MMBTU savings, and a positive percentage represents negative MMBTU savings.

Commercial-wholesale/retail and industrial/manufacturing also generated the highest number of recommended kWh savings (69% of total) while receiving the most incentives (53% of total). Education-colleges & universities contained 19% of the 659 million recommended kWh savings while representing only 8% of the project count. Projects in the other sectors contained roughly 12% of the total recommended kWh savings. The healthcare sector contained the most recommended MMBTU savings (248,680 MMBTU). PLCPs conducted in the commercial-wholesale/retail and industrial/manufacturing sectors produced the most recommended demand savings. In addition, the FlexTech program distributed 81% of the incentives to four market sectors – commercial-wholesale/retail, industrial/manufacturing, healthcare, and education-colleges & universities.

Measure Category Summary

The FlexTech studies' recommendations include a range of measure categories including (but not limited to) lighting, HVAC, motors, and generation. Figure 4 shows the project count and recommended savings for all measure categories recommended in the 2011 and 2012 FlexTech studies. It is important to note that one project may contain more than one measure and thus the total project count on the chart is greater than 405 and the count percentages do not equal 100%.

Figure 4. Project Count and Savings by ECM Category



Source: Navigant analysis of the FlexTech database.

Note: The total MMBTU savings is negative. Therefore, a negative percentage represents positive MMBTU savings, and a positive percentage represents negative MMBTU savings.. The MMBTU savings include all non-electric fuels.

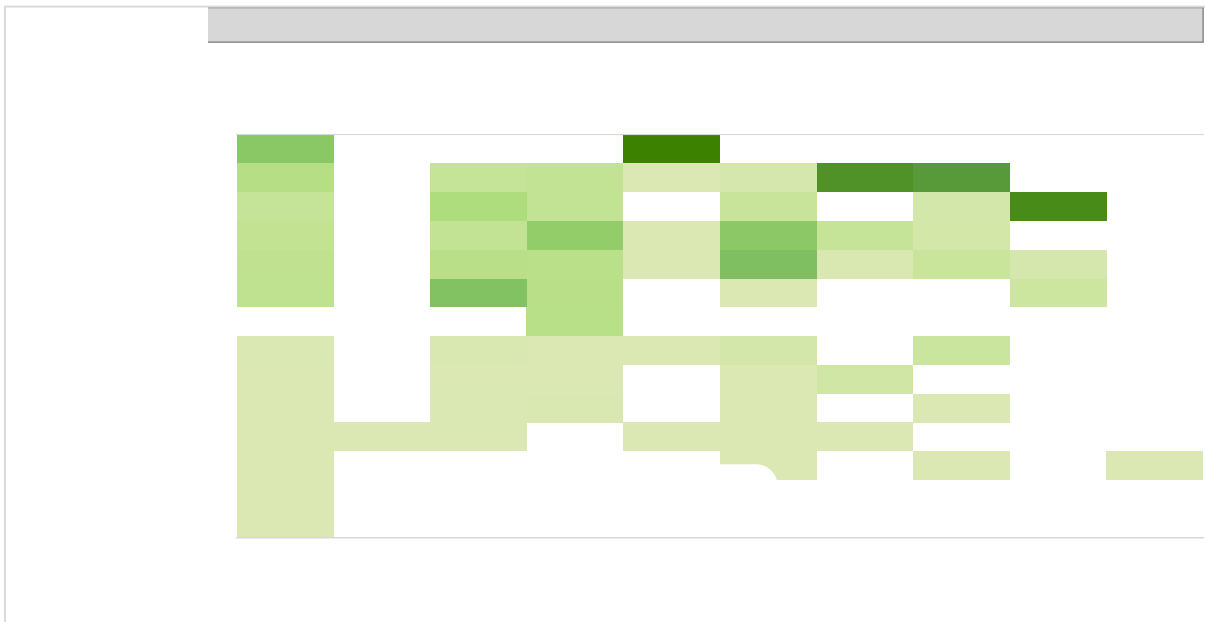
More than a third of all projects included HVAC, controls, and lighting measures. These three measure categories combined contributed to 28% of the recommended kWh savings. Generation was the major contributor to kWh savings, at 55% of recommended savings, even though consultants recommended generation in only 3% of the 2011 and 2012 projects. The generation measure included a variety of technology types including CHP systems, microturbine CHP upgrades, and a hydropower system. Studies that included the generation measure were classified as either CHP studies or Feasibility Studies (see Figure 5). Therefore, the recommended savings percentages in this

memo will not match directly between the CHP study project type and the generation measure category.

HVAC measures led in terms of positive recommended MMBTU savings. Controls and industrial process measures also contributed to the positive recommended MMBTU savings. As expected, recommended generation measures created a large negative MMBTU savings (negative 2,523,447 MMBTU savings) primarily due to the use of natural gas as the primary fuel for combined heat and power projects. As discussed earlier, Figure 4 shows kW savings for PLCPs only; thus 100% of the kW savings is for recommended load management measures.

Figure 5 shows the composition of project types by energy conservation measure (ECM) category. Generation comprised nearly 100% of the recommended kWh savings in CHP studies. In addition, generation was a key measure category in feasibility studies, accounting for 40% of the recommended kWh savings. HVAC measures provided 85% of recommended savings in energy audits and 78% of recommended savings in energy advisors studies. Motors measures represented the majority of wastewater studies' recommended kWh savings.

Figure 5. Project Types and Measures by Recommended kWh Savings



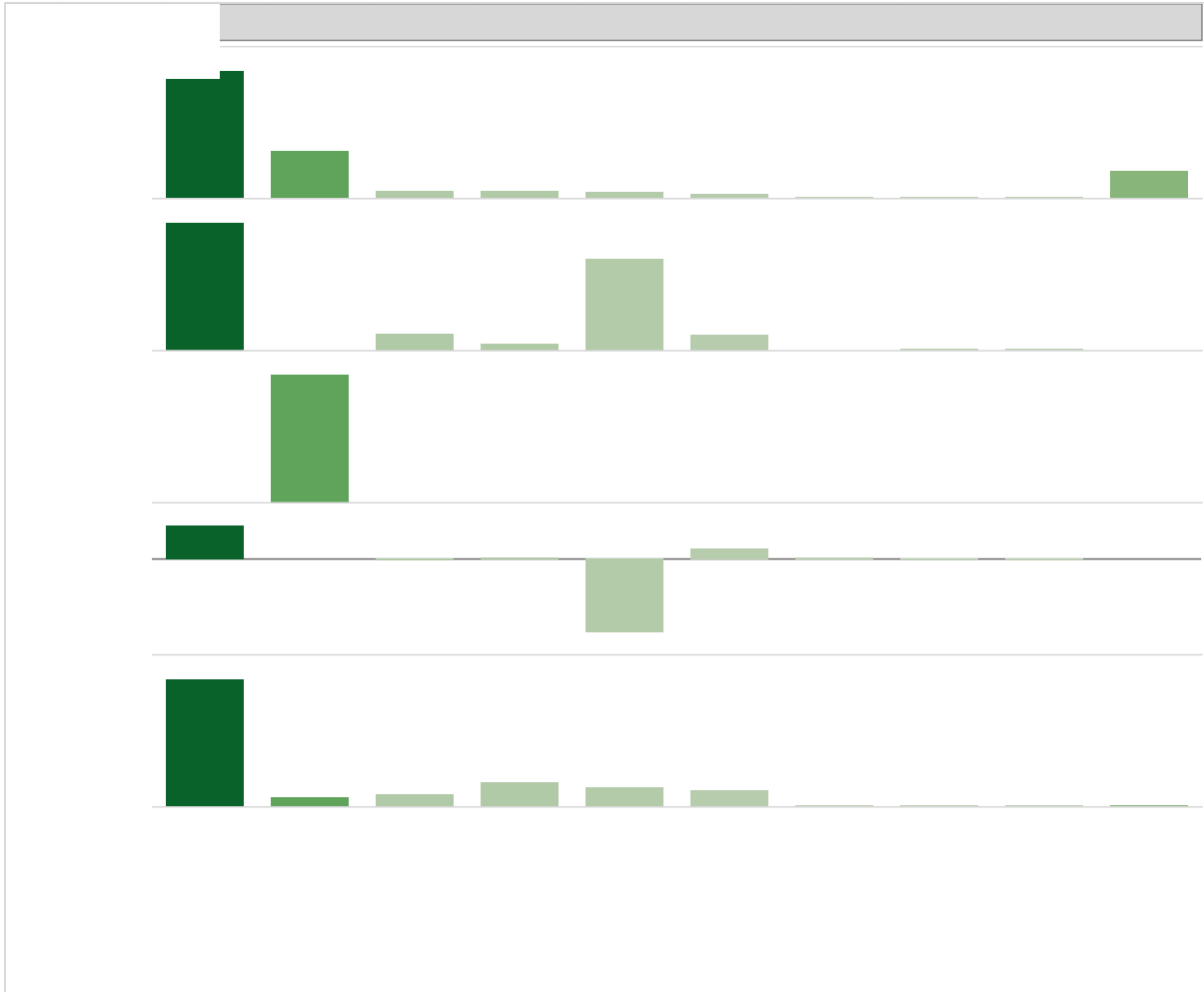
Source: Navigant analysis of the FlexTech database.

Project Type Summary

The FlexTech program provides cost-sharing incentives a range of project types including feasibility studies, peak load curtailment plans, data centers, retro-commissioning (RCX), and combined heat and power (CHP) studies. It is important to note that a single study may include multiple measure types as shown in Figure 5. Feasibility studies, peak load curtailment plans (PLCPs), and combined heat and power (CHP) studies had the greatest presence in 2011 and 2012. Combined, these three project types accounted for 77% of the project count, 84% of the recommended kWh savings, and 72%

of the NYSERDA incentives. Figure 6 shows the project count, recommended savings, and incentives by project type.

Figure 6. Project Count, Recommended Savings, and Incentives Spent by Project Type



Source: Navigant analysis of the FlexTech database.

Note: The total MMBTU savings is negative. Therefore, a negative percentage represents positive MMBTU savings, and a positive percentage represents negative MMBTU savings.

Feasibility studies represented the largest number of projects completed, contained the most recommended savings (kWh and MMBTU), and received the most incentive dollars from the FlexTech program. Feasibility studies comprised 55% of the project count and received 59% of the incentive dollars spent in 2011 and 2012. Similarly, feasibility studies contained the highest percentage of the recommended electric energy savings – 49% of 659 million kWh.

The CHP project type contained significant recommended energy savings. CHP projects contained 35% of the recommended kWh savings while receiving only 9% of the incentives in 2011 and 2012. CHP projects also contributed to a large negative MMBTU savings due to their use of natural gas to generate electricity. These projects led to the overall recommended negative MMBTU savings in this analysis. It should be noted that the Process Evaluation team did not convert all fuels to a single unit to consider the net overall energy benefits. NYSERDA designed the FlexTech program to be able to

serve individual customer needs and as such tries to evaluate all relevant energy sources while providing objective analysis of energy source trade-offs and switching options.

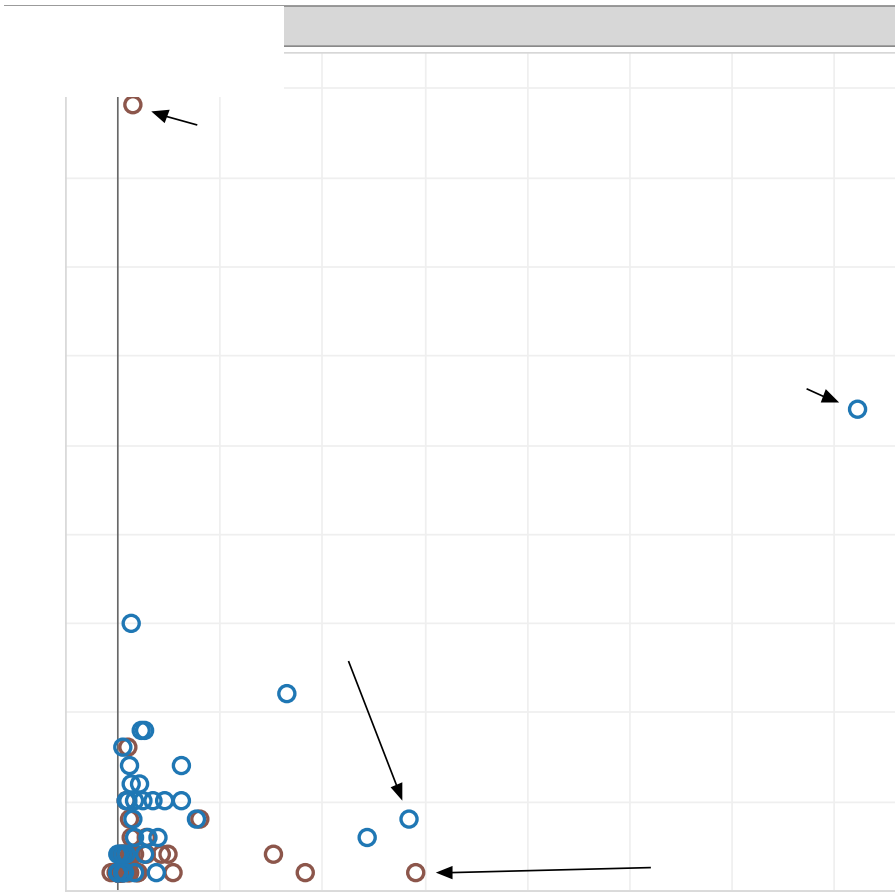
PLCPs received 4% of the incentives but represent 20% of the project count. PLCPs included measures with a recommended demand savings of 36,000 kW. Figure 6 shows 100% of the demand savings attributable to PLCPs. The FlexTech program identifies demand savings for PLCPs directly while it assigns demand savings to the other project types by applying a ratio calculated during the impact evaluations. Therefore, NYSERDA only uses the demand savings in the program data for PLCPs. The evaluation team only included the demand savings from PLCPs to be consistent with the FlexTech program in this area.

Consultant Summary

Consultants can participate in the FlexTech program either as FlexTech consultants or as independent service providers. Consultants can become FlexTech consultants by participating in a program opportunity notice (PON), completing three feasibility studies through the PON, and responding to a FlexTech Consultant Selection Request for Proposal (RFP).

Figure 7 shows the consultants by number of projects and recommended kWh savings. Each circle on the chart represents one consultant. The blue-colored circles represent FlexTech consultants, and the rust-colored circles represent the independent service providers. Five consultants contributed 50% of the recommended kWh savings in 2011 and 2012. Of these five consultants, three were FlexTech consultants and two were independent service providers. The three FlexTech consultants each had multiple projects leading to the high savings (27, 4, and 3), while the independent service providers each had one large project leading to the high-recommended savings. One independent service provider, Code Green Solutions, had a large number of projects; however, the majority of the projects were benchmarking projects and thus had no savings attributed to them.

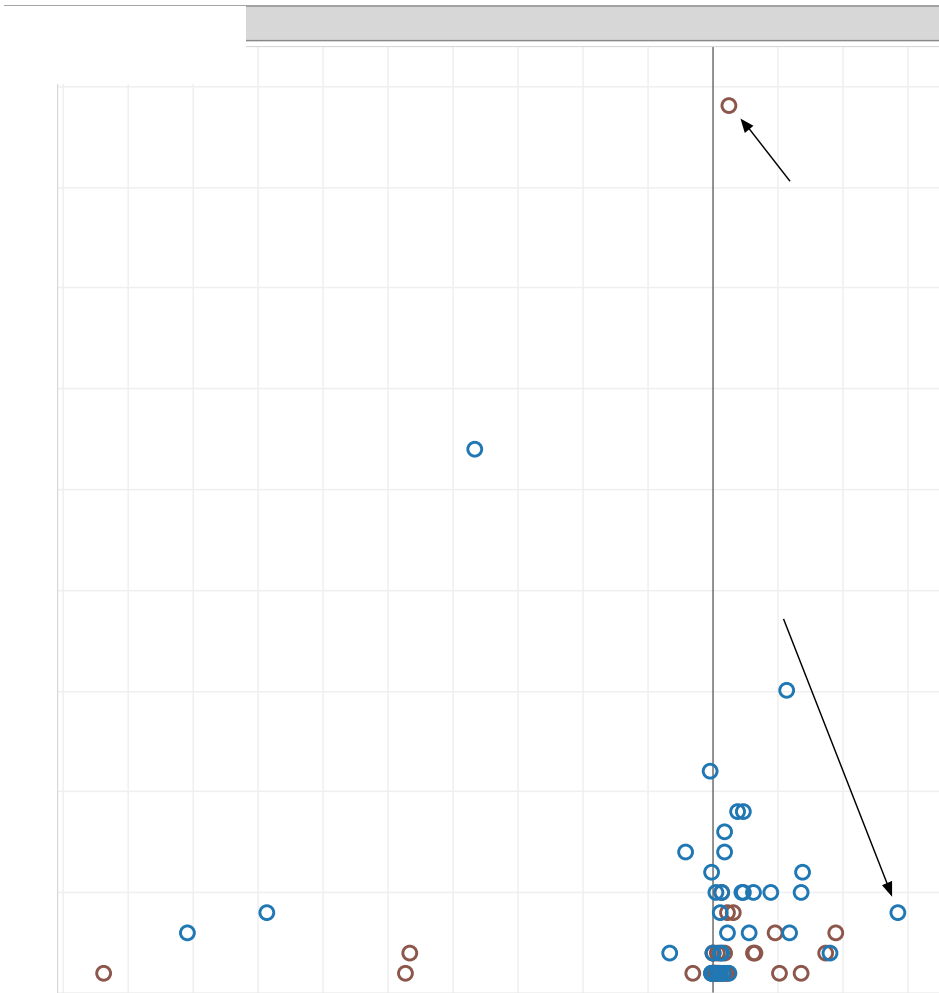
Figure 7. Consultant by Number of Projects and Recommended kWh Savings



Source: Navigant analysis of the FlexTech database.

Figure 8 shows the consultants by number of projects and recommended MMBTU savings. Similar to the previous figure, each circle on the chart represents one consultant. The blue-colored circles represent FlexTech consultants, and the rust-colored circles represent the independent service providers. Three consultants contributed 33% of the positive MMBTU savings. The consultant with the greatest recommended MMBTU savings was a FlexTech consultant with four projects in 2011 and 2012.

Figure 8. Consultant by Number of Projects and Recommended MMBTU Savings



Source: Navigant analysis of the FlexTech database.

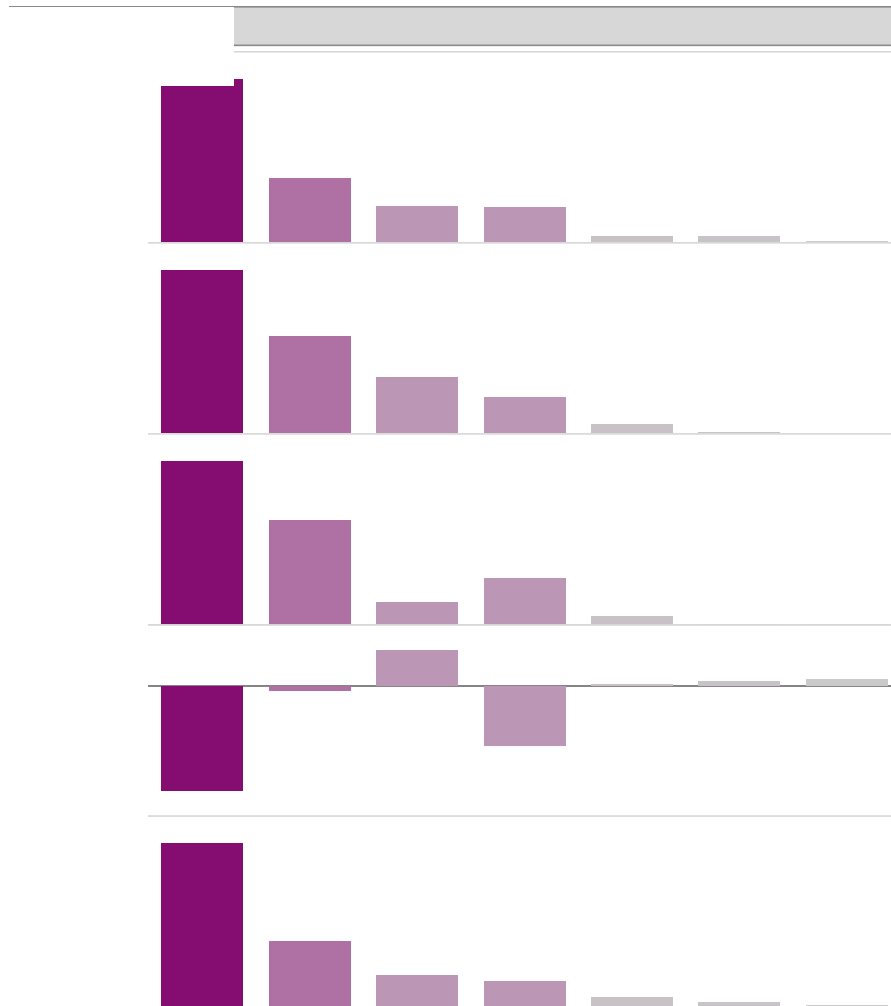
NYSERDA may want to consider working with some independent service providers to discuss the option of becoming a FlexTech consultant. These discussions may strengthen NYSERDA’s relationship with contractors and bring additional program participants and marketing benefits (via an expanded trade ally network) to NYSERDA. The majority of independent service providers completed less than five projects in 2011 and 2012. Therefore, there is likely room for these consultants to complete additional FlexTech projects, and they may be more involved with the FlexTech program as FlexTech consultants.

Electric Utility Summary

Consultants completed studies within six electric utility service areas: Con Edison, National Grid, Rochester Gas & Electric (RG&E), NYSEG, Orange & Rockland (O&R), and Central Hudson Gas & Electric (Central Hudson). In addition, two projects did not have the electric utility identified; Figure 9 shows the utility for these projects as “Null” with a percent of total projects less than 1% (shown as 0%). The majority of the project count (72%), recommended kWh savings (72%), and NYSERDA

incentives (76%) were from studies in the Con Edison and National Grid service areas, with Con Edison comprising over half of the project count (52%) and the incentives (54%). Within the Con Edison service area, benchmarking studies comprised 23% of the project count and 1% of the incentives. Feasibility studies, retrocommissioning studies, and CHP studies together comprised 64% of the project count and received 78% of the incentives in the Con Edison service area. The majority of the positive MMBTU savings were from studies in the RG&E service area.

Figure 9. Project Count and Savings by Electric Utility

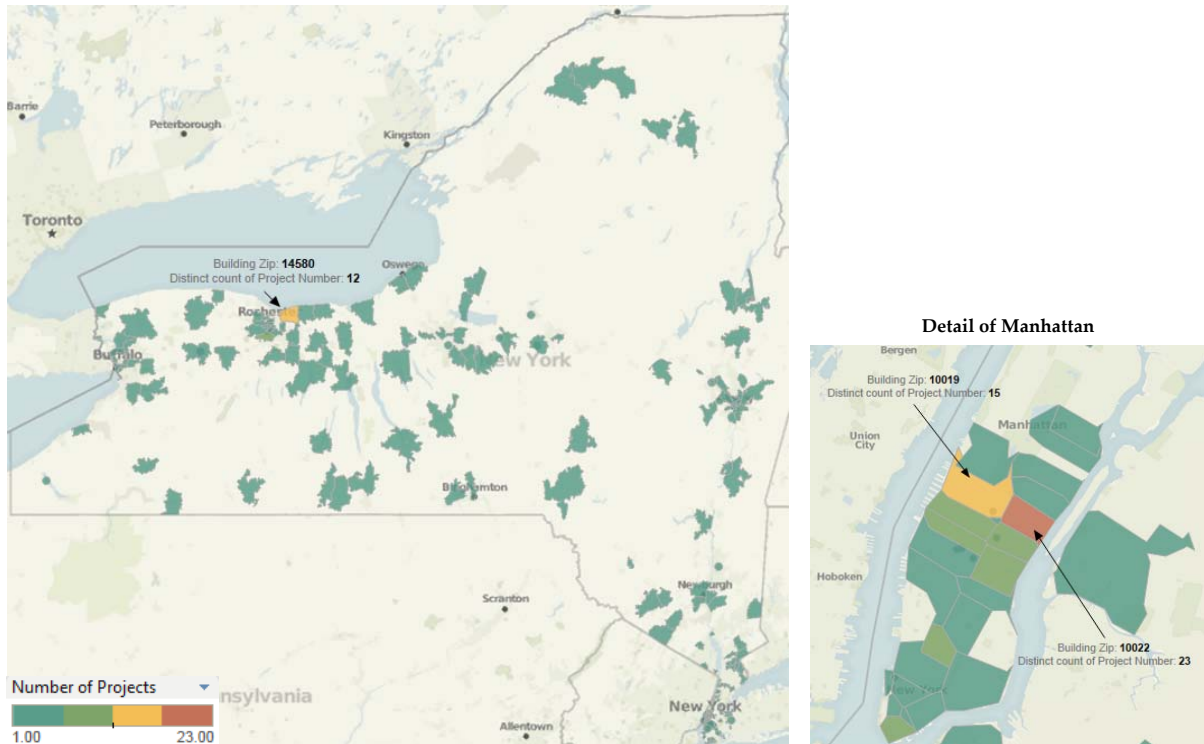


Source: Navigant analysis of the FlexTech database.

Geographic Summary

The maps in Figure 10, Figure 11, and Figure 12 show the completed project count by ZIP code area. The scale for all maps ranges from one project to 23 projects. Figure 10 includes all completed projects in 2011 and 2012. Completed projects were spread throughout the state with hot spots in Rochester⁵⁷ and Manhattan. One ZIP code in Rochester had 12 completed projects, while two neighboring ZIP codes in Manhattan completed 38 projects.

Figure 10. Project Count by Zip Code: All Projects



Source: Navigant analysis of the FlexTech database.

Figure 11 shows the completed project locations for only benchmarking projects performed by Independent Service Providers.⁵⁸ All of these Independent Service Provider benchmarking projects in 2011 and 2012 were located in the downstate region. Forty-one of the benchmarking projects (84% of total benchmarking projects) were located in Manhattan with a concentration in Midtown. Benchmarking studies were concentrated in this region due to the Greener, Greater Buildings Plan and Local Law 84, which requires owners of public buildings over 10,000 square feet and private buildings over 50,000 square feet in New York City to benchmark their energy use each year.⁵⁹ Figure

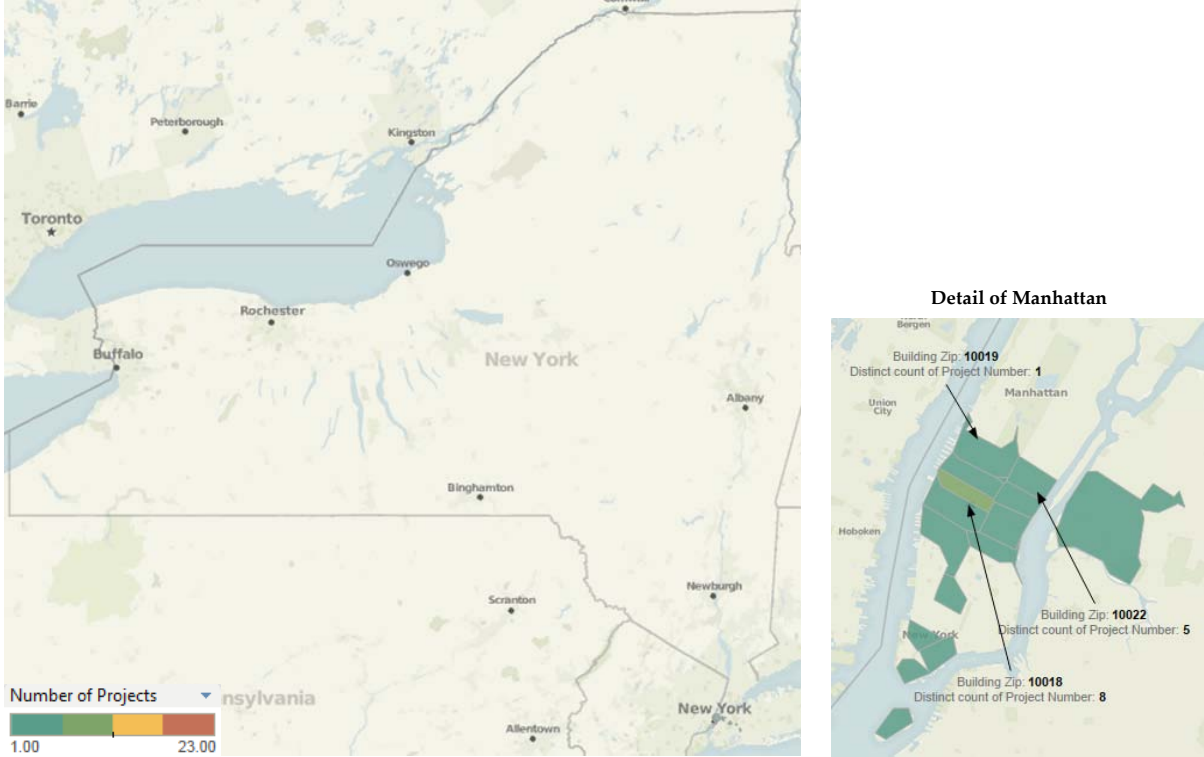
⁵⁷ There is a hot spot in a single Rochester zip code. However, there are many more project spread throughout the state in other utility service areas. Therefore, it is not surprising that Con Edison and National Grid have the majority of projects by count.

⁵⁸ NYSERDA also ran a pilot program for benchmarking studies. The pilot program allowed customers to receive a benchmarking study free of charge. FlexTech consultants completed these benchmarking studies, and these benchmarking studies are not included in the data in this memo.

⁵⁹ Local Laws of The City of New York for the Year 2009, No. 84, http://www.nyc.gov/html/planyc2030/downloads/pdf/l184of2009_benchmarking.pdf

12 shows the completed project locations for all projects except benchmarking projects. Even with the removal of benchmarking projects, which are concentrated in Manhattan, project hot spots remained in Rochester and Manhattan.

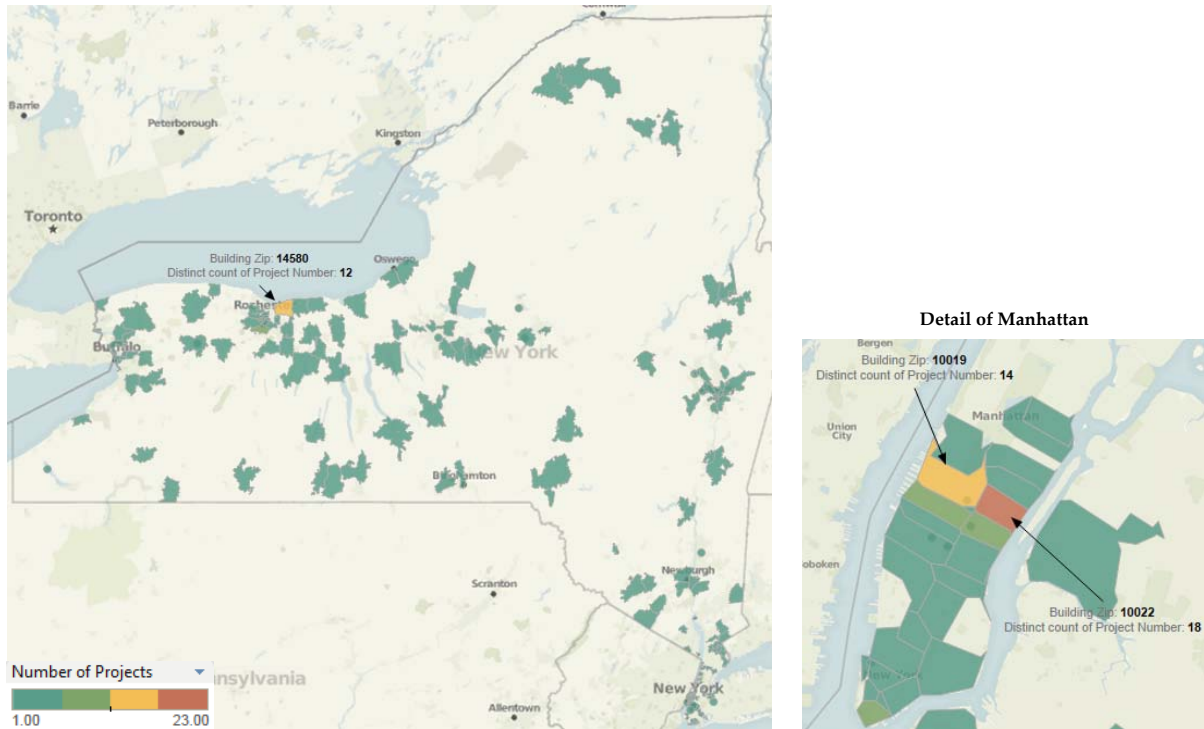
Figure 11. Project Count by Zip Code: Benchmarking Projects Only



Source: Navigant analysis of the FlexTech database.

Note: Benchmarking studies were offered as a temporary stand-alone offering to those clients in New York City who were required to benchmark their buildings as part of the Greener, Greater Buildings Plan and Local Law 84, which requires facility owners of public buildings over 10,000 square feet and private buildings over 50,000 square feet to benchmark their energy use each year. NYSERDA still cost-shares benchmarking as part of a larger energy feasibility study. Buildings are eligible for the cost-share once every three years.

Figure 12. Project County by Zip Code: All Non-Benchmarking Projects



Source: Navigant analysis of the FlexTech database.

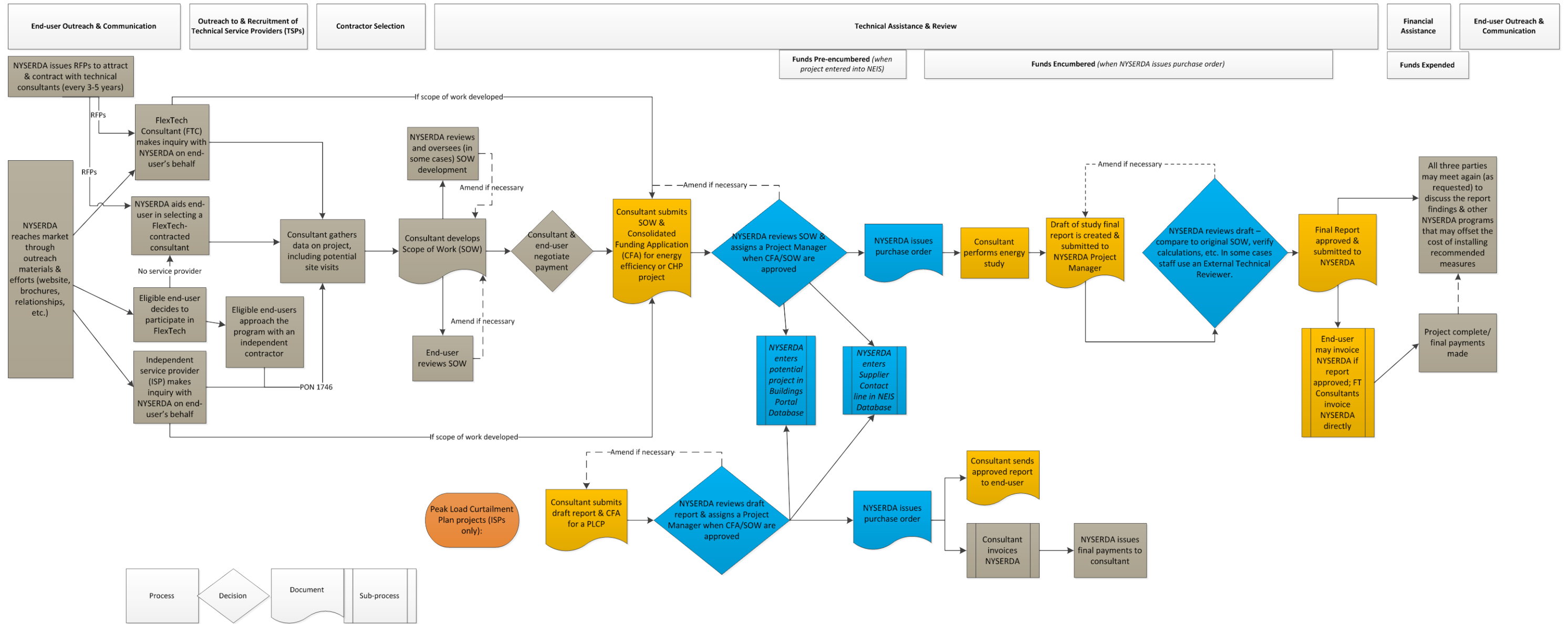
Timelines for Major Steps (Milestone analysis)

In addition to the composition of program participation, the team also reviewed the FlexTech data to understand the flow of projects through the program and the time it takes projects to complete major steps (or milestones) in the process. The goal of this review was to understand if steps take longer than anticipated, steps take longer for some project types, or steps take longer for FlexTech consultants versus independent service providers.

The Milestones Report included four key dates that represent a project lifecycle in the FlexTech program. Figure 13 highlights these dates with the process steps highlighted in blue and yellow and provides context for the review of timelines for major steps.⁶⁰ The evaluation team only focused on these steps in the milestones analysis.

⁶⁰ As a part of this process evaluation, Navigant created a process flow diagram that details every step involved with conducting a study through the FlexTech program. Navigant only analyzed milestones for which FlexTech program staff record data. It is important to note that each FlexTech program manager reports data differently and data is not always consistent across projects.

Figure 13. NYSERDA FlexTech Process Flow Diagram



Navigant analysis

Source:

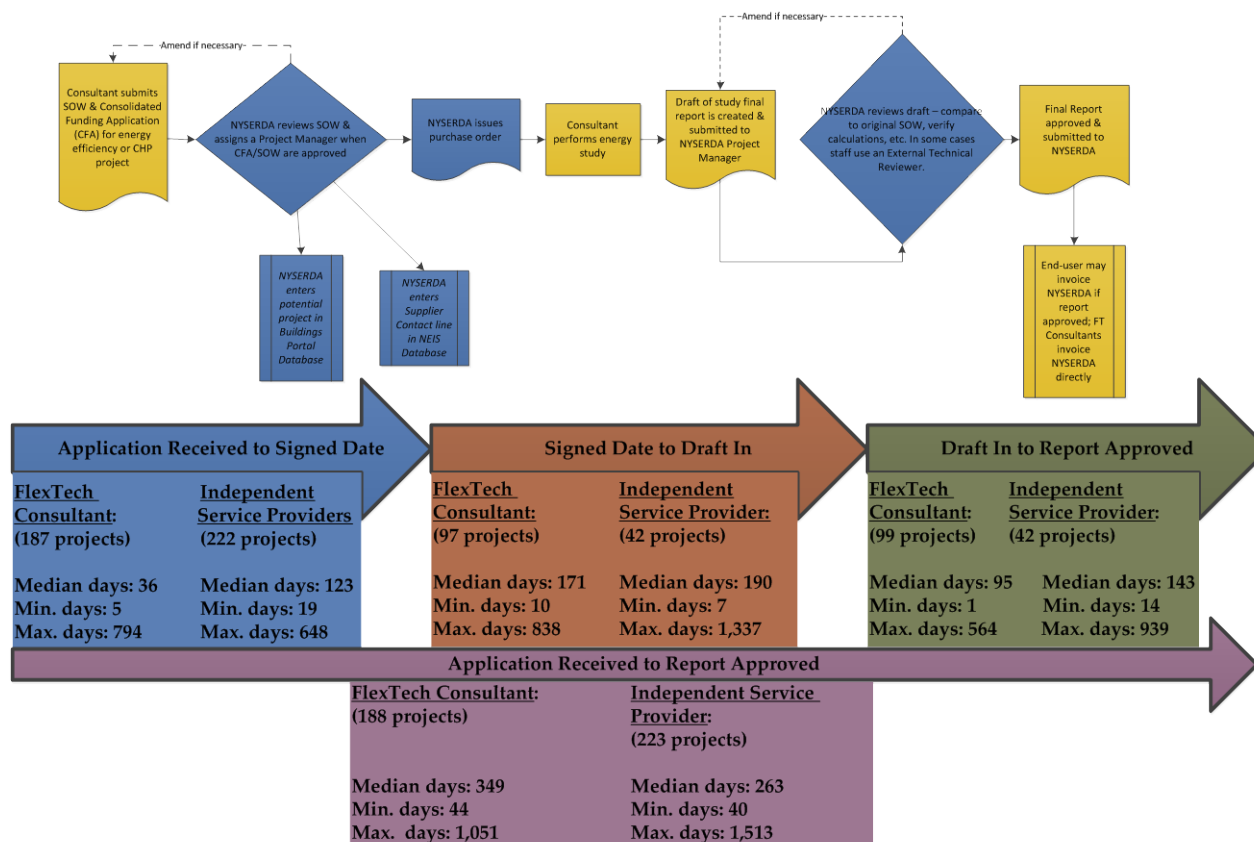
The evaluation team analyzed major milestones in completing a FlexTech study using data pulled from the Milestones Report on all 414 projects that completed a study in 2011 and 2012. Navigant analyzed the minimum, maximum, and median number of days between milestones required to complete a FlexTech study by consultant type and project type. The following periods exist in the life of projects completed in 2011 and 2012:

- **Application received to signed date:** Consultants develop scope of work, and FlexTech program staff review scope of work.
- **Signed date⁶¹ to report draft in:** Consultants conduct studies and draft the report.
- **Draft in to report approved:** FlexTech program staff review draft reports and work with consultants to draft changes to the report.
- **Application received to report approved:** The application received to report approved stage represents the entire lifetime of a project in the FlexTech program for the purposes of this analysis.

When considering all FlexTech projects together, FlexTech projects required about 10 months from the time NYSERDA received the application to when NYSERDA approved the report. Typically, these projects completed the actual study in roughly six months, while the program's approval of the study report took three to five months. For all projects, the period between the signed date and the draft in date took the longest amount of time. That period represents the time when a FlexTech consultant or independent service provider conducted the actual study. Figure 14 shows the milestone analysis for all active projects by consultant type.

⁶¹ Signed date refers to the date when FlexTech issues a purchase order and encumbers incentive funds.

Figure 14. Key Milestones Analysis by Consultant Type: All Projects



Note:
Project totals are included below each consultant type for each segment of the process. The project count indicates the number of data points used to calculate the number of days between project milestones. This may shed light on some data discrepancies.

Source: Navigant analysis of the FlexTech database.

Note: The project count included below each consultant type in parentheses indicates the number of data points used to calculate the number of days between project milestones. The days between each project milestone are dependent on this project count. Not all projects included dates for every project milestone. Therefore, the total days from the application received to report approved (the purple box) does not equal the sum of the days for each stage (the blue, orange, and green boxes).

Figure 15 shows the milestones analysis for common studies completed by project count: feasibility studies, PLCPs, CHP studies, and benchmarking studies. Feasibility studies took the most time to complete, roughly 15 months from application received to report approval. The PLCPs took the least amount of time to complete at four months. Figure 15 highlights the length of a project by project type and consultant type. When looking at the data by project type, independent service providers took longer to conduct CHP and feasibility studies than their FlexTech consultant counterparts.

Figure 15. Project Life from Application Received to Report Approved: Select Project Types⁶²

Benchmarking	Combined Heat & Power		Feasibility Studies		Peak Load Curtailment Plans
Application Received to Report Approved					
Independent Service Providers (49 projects) Median Days: 230 Minimum Days: 106 Maximum Days: 308	FlexTech Consultant (5 projects) Median Days: 287 Minimum Days: 239 Maximum Days: 412	Independent Service Provider (7 projects) Median Days: 460 Minimum Days: 215 Maximum Days: 747	FlexTech Consultant (138 projects) Median Days: 349 Minimum Days: 44 Maximum Days: 1046	Independent Service Provider (64 projects) Median Days: 470 Minimum Days: 168 Maximum Days: 1355	Independent Service Providers (82 projects) Median Days: 127 Minimum Days: 40 Maximum Days: 127

Source: Navigant analysis of the FlexTech database.

The longer timeframes shown for FlexTech consultants in Figure 14 result from the types of projects that FlexTech consultants complete when compared to the types of projects that independent service providers complete. Analysis of all active projects (Figure 14) makes it appear that FlexTech consultants took more time than independent service providers to complete projects (from application received to report approved). As shown in Figure 15, FlexTech consultants did not conduct any benchmarking studies under umbrella task work orders⁶³ or PLCPs, both of which have shorter turnaround times than CHP and feasibility studies. The prevalence of the quicker benchmarking studies and PLCPs (131 projects combined) brought down the average length of projects for independent service providers, which completed a total of only 71 of the longer-lived CHP and feasibility studies.

FlexTech consultants operate on a faster timeline than independent service providers when comparing time required to complete the same types of studies. As shown in Figure 15, FlexTech consultants conducted feasibility studies roughly six months faster and CHP studies four months faster than independent service providers did.

The evaluation team further segmented the milestone analysis by milestone period for each of the four study types analyzed in Figure 15. Key findings include the following:

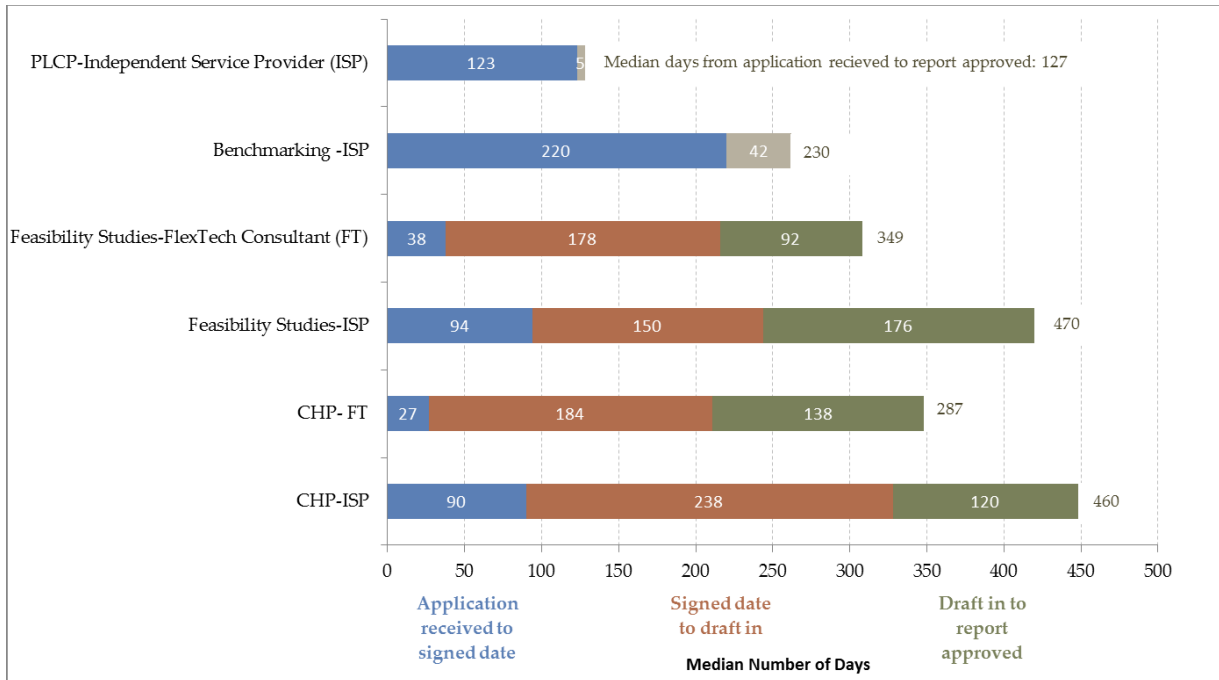
- Independent service providers spent more time developing the scope of work for CHP studies and PLCPs and conducting those studies than other types of studies. In general, independent service providers spent nearly two months longer in the application received to signed date period, the time during which NYSERDA approves the scope of work.

⁶² FlexTech consultants did not complete benchmarking studies or PLCPs.

⁶³ NYSERDA ran a separate pilot program for benchmarking studies. The pilot program allowed customers to receive a benchmarking study free of charge. FlexTech consultants completed these benchmarking studies, and these benchmarking studies are not included in the data in this memo.

- Figure 16 shows also demonstrates the different NYSERDA process for PLCPs. PLCPs do not have a comparable dedicated “study period” because the nature of the program offering requires a completed plan at application submittal. The plan is considered the final report for these types of projects.

Figure 16. Median Days for Key Project Milestones by Project Type and Consultant Type



Source: Navigant analysis of the FlexTech database.

Note: For PLCPs and benchmarking studies, the Buildings Milestones Report does not capture a “Draft In” date. Therefore, the gray boxes in Figure 16 reflect the time between the Signed Date and Report Approved date.

For each project type, FlexTech program staff spent between five days and nearly six months approving reports. FlexTech program staff spent the most time approving reports for feasibility studies conducted by independent service providers. The evaluation team will investigate discrepancies such as these during the in-depth interviews.

Key Findings

The evaluation team identified the following key findings regarding the composition of FlexTech program participation and timelines for major steps in the project lifecycle:

- In 2011 and 2012, the commercial-wholesale/retail and industrial/manufacturing sectors completed a large percentage of FlexTech studies. To better assess market opportunities, staff could collect market sector information at a more detailed level (e.g., offices, stores, restaurants) than the broad commercial-wholesale/retail and industrial/manufacturing level.
- Program staff discussed inconsistencies in the entry of key milestone dates in the Milestones Report due to evolving uses and guidance as it relates to the Buildings Portal database. Program staff could increase the ability to analyze such milestones by setting

up data entry protocols for staff. For example, the “draft in” date in the Milestones Report does not capture the iterative nature of this milestone; staff may enter either the date of the first draft or the date of the most recent draft. Program staff could consider whether population of all the milestone dates is necessary.

- Program staff could work to develop a data field dictionary for all fields in the Buildings Portal to ensure staff and evaluation firms use the data fields appropriately and consistently.

Appendix B Process Flow Diagram Memo



Memorandum

Tracey DeSimone

1375 Walnut Street
Suite 200
Boulder, CO 80305
303.728.2522

To:

From: Jane Pater Salmon, Nicole Wobus, Brittany Gibson, Brent Barkett

Cc: Jane Peters, Rohit Vaidya

Date: September 17, 2013

Re: NYSERDA FlexTech Process Flow Diagram

This memo presents an updated process flow diagram developed by the process evaluation team based on staff input and edits. The process flow diagram is used to document program processes and the steps a project goes through as it proceeds through the FlexTech program. This diagram is based on the process evaluation team's review of program documents and conversations with program staff.^{64,65,66} This document is intended to provide a brief overview of the process evaluation team's updated understanding of the program process flow.

The process evaluation team mapped the processes of the FlexTech program to the five high-level **activities** detailed in program logic. While the program activities don't necessarily occur in a sequential manner, they are presented that way in this memo for discussion purposes. Figure 1 provides specific details about the processes of the FlexTech program, in which a study would move through the program sequentially from left to right. The broad categories of program activity encompass the specific steps shown below them in the diagram.

The five program **activities** are:

1. **End-user Outreach & Communications**
2. **Outreach to & Recruitment of Technical Service Providers**
3. **Contractor Selection**
4. **Technical Assistance & Review**
5. **Financial Assistance**

Eligible participants, including both end users and technical consultants, may learn about the program through a variety of sources: NYSERDA-initiated marketing and outreach activity, through technical service providers (those contracted with NYSERDA as FlexTech Consultants or those that

⁶⁴ Other program documents reviewed include: NYSERDA 2007-2009 FlexTech program Impact Evaluation (March 2012), FlexTech Program Market Characterization & Assessment (August 2011), NYSERDA Technical Assistance (TA) Program Process Evaluation Final Report (June 2004), and the high-level process flow diagram developed by NYSERDA's internal audit team in 2013.

⁶⁵ Navigant. FlexTech Kick-off Meeting Notes Memo. May 29, 2013.

⁶⁶ Navigant. Call with FlexTech program staff to discuss draft process flow diagram. August 20, 2013.

are independent), or through word of mouth. NYSERDA's **end user outreach and communications** activity occurs continuously, leveraging the results of completed studies as well as existing FlexTech outreach resources. Marketing and outreach for the program are conducted as part of a statewide marketing and outreach campaign aimed at identifying and recruiting end users to participate in the programs that best suit their needs; marketing is not carried out by FlexTech program staff, although FlexTech staff do engage in outreach activities.

Next, eligible end users⁶⁷ respond to FlexTech program opportunity notices (PONs) in order to develop an application for a technical study. The end users either apply with a self-selected independent consultant or work with FlexTech staff to select a FlexTech Consultant that is already under contract to NYSERDA.

NYSERDA conducts on-going **outreach and recruitment of technical service providers** through annual requests for proposals (RFP 1782) to competitively select new FlexTech consultants.⁶⁸ Independent service providers (those not under contract with NYSERDA as FlexTech Consultants) that have relationships with end users interested in participating in the program respond to PON 1746.⁶⁹

Once a **technical consultant has been selected** to complete a study on behalf of an end user, the contractor engages with the end user to develop a detailed scope of work. This is an iterative process, involving site visits to the customer premises, data collection, and review by NYSERDA staff. Ultimately, the technical consultant, end user, and FlexTech staff will review an entire study application (including the detailed scope of work and Consolidated Funding Application [CFA]); the end user and consultant have opportunities to make amendments. This marks the beginning of the **Technical Assistance** activities of the FlexTech program.

Once a SOW has been agreed upon by the technical consultant and end user, the two parties negotiate cost for the upcoming study. The cost-sharing component is a crucial feature of the FlexTech program. After agreement is reached, the technical consultant submits the SOW to NYSERDA. There are three tracks for submitting a study SOW, depending on the type of technology or strategy presented in the SOW; the technical consultant submits a SOW and CFA designating the project as (1) an energy efficiency, (2) a combined heat and power (CHP) technical assistance study, or (3) a peak load curtailment planning study (PLCP). Upon receipt of these application materials, NYSERDA will review the application materials for program eligibility and assign a Project Manager. If sufficient information is provided, two database entries are made:

- The potential project is entered in the Buildings Portal Database
- A "Supplier Contact" line is created in NEIS (the NYSERDA financial database system); NYSERDA considers its cost-sharing funds to be pre-encumbered once the application is entered into NEIS.

⁶⁷ Eligible end users include: NYS industrial and commercial facilities, state and local governments, not-for-profit and private institutions, public and private K-12 schools, colleges and universities, and health care facilities. Facilities must pay into the electric or gas System Benefits Charge (SBC).

⁶⁸ NYSERDA FlexTech "Becoming a NYSERDA FlexTech Consultant": <http://www.nysERDA.ny.gov/Energy-Efficiency-and-Renewable-Programs/Commercial-and-Industrial/CI-Programs/FlexTech-Program/Becoming-a-NYSERDA-FlexTech-Consultant.aspx?p=1>

⁶⁹ NYSERDA FlexTech Program Opportunity Notice (PON) 1746. <http://www.nysERDA.ny.gov/Funding-Opportunities/Current-Funding-Opportunities/PON-1746-FlexTech-Program.aspx>.

Upon approval of the CFA and SOW, NYSERDA issues a purchase order. The technical consultant may proceed with the energy study. Henceforth, NYSERDA cost-share funds are encumbered. This is when NYSERDA's financial commitment commences.⁷⁰

Upon completion of the study, a draft report is submitted to the NYSERDA project manager. The project manager may utilize an external technical reviewer if needed. Program staff review the initial draft final report in detail to compare the initial study scope against measures evaluated to make sure the report complies with program requirements and to review assumptions and calculations. This is an iterative process that may require amendments.

Once the final report is approved by NYSERDA, the participating end user can invoice NYSERDA for study reimbursement if the study was completed by an independent service provider. If a customer utilizes a NYSERDA FlexTech Consultant, the FlexTech Consultant invoices NYSERDA and the customer simultaneously.

Final payments are made at the end of the study when customers and technical consultants have fulfilled their obligations. Implementation of the measures recommended in the technical studies is not required. Program staff provides additional support to encourage participating end users to act upon recommendations and pursue participation in other NYSERDA programs, as needed.

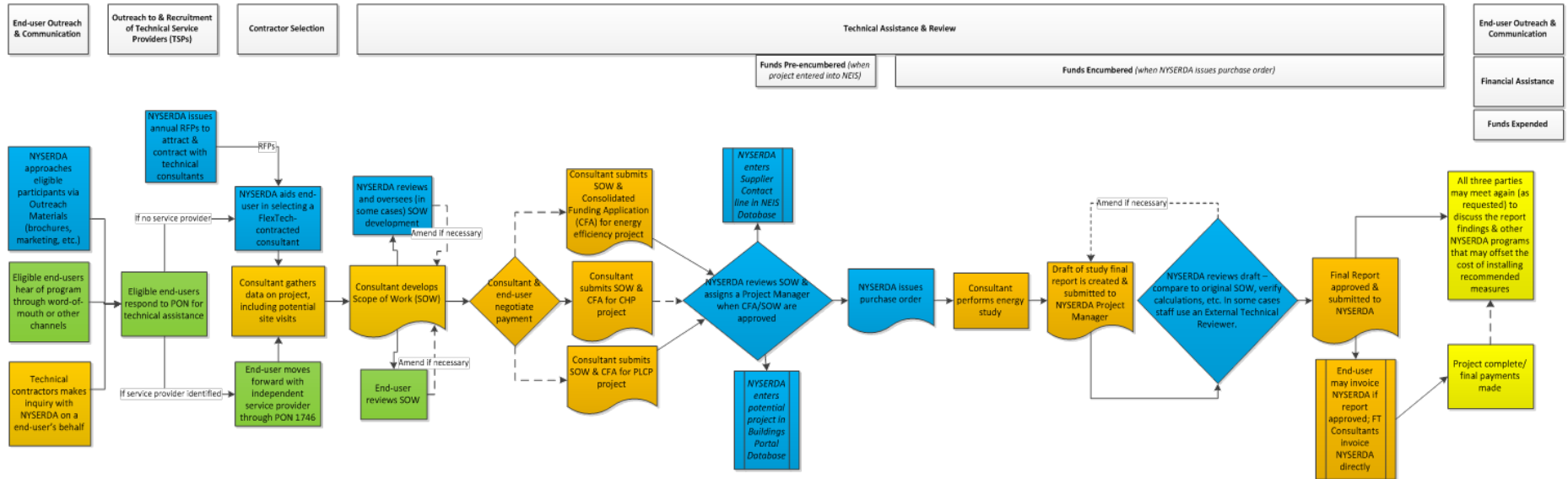
Table 1 documents the resources that were used to draft this version of the FlexTech process flow diagram. Figure 1 includes the process flow diagram itself.

⁷⁰ NYSERDA FlexTech Process "Using FlexTech Consultants": <http://www.nyserda.ny.gov/Energy-Efficiency-and-Renewable-Programs/Commercial-and-Industrial/CI-Programs/FlexTech-Program/FlexTech-Process.aspx>

Table 1: Sources Reviewed for 2013 Process Evaluation – FlexTech Process Flow Diagram

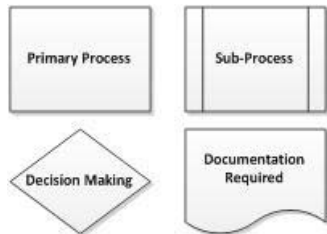
Program Documents
NYSERDA 2007-2009 FlexTech program Impact Evaluation (March 2012), NYSERDA FlexTech Program Market Characterization & Assessment (August 2011) NYSERDA FlexTech Program Opportunity Notice (PON) 1746. http://www.nyserda.ny.gov/Funding-Opportunities/Current-Funding-Opportunities/PON-1746-FlexTech-Program.aspx . NYSERDA Technical Assistance (TA) Program Process Evaluation Final Report (June 2004).
FlexTech Website
NYSERDA FlexTech “Becoming a NYSERDA FlexTech Consultant”: http://www.nyserda.ny.gov/Energy-Efficiency-and-Renewable-Programs/Commercial-and-Industrial/CI-Programs/FlexTech-Program/Becoming-a-NYSERDA-FlexTech-Consultant.aspx?p=1 NYSERDA FlexTech Process “Using FlexTech Consultants”: http://www.nyserda.ny.gov/Energy-Efficiency-and-Renewable-Programs/Commercial-and-Industrial/CI-Programs/FlexTech-Program/FlexTech-Process.aspx
Additional Resources
Kick-off meeting with FlexTech Program staff: Navigant Consulting. FlexTech Kick-off Meeting Notes Memo. May 29, 2013. High-level process flow diagram developed by NYSERDA’s internal audit team in 2013

Figure 1: NYSERDA FlexTech Process Flow Diagram



Color key:

- Blue indicates action taken by NYSERDA program staff
- Yellow indicates action taken by Service Providers
- Green indicates action taken by the End User
- Brown indicates action taken jointly by the End User and Service Provider



Appendix C Logic Model Memo



Memorandum

1375 Walnut St.
Suite 200
Boulder, CO 80302

To: Tracey DeSimone

From: Jane Pater Salmon, Nicole Wobus, Brittany Gibson, Brent Barkett

Cc: Jane Peters, Rohit Vaidya

Date: September 19, 2013

Re: FlexTech Logic Model: High-Level Summary and Points of Clarification

This memo documents the process evaluation team's findings related to the interpretation of the most recent⁷¹ FlexTech Program logic model. This memo is an update to a July 2013 memo that the process evaluation team drafted to summarize key elements of the FlexTech Program's Logic Model Report and to identify areas where the report's content did not appear to fully align with the program's implementation approach. The process evaluation team revised that July 2013 memo based on a discussion with FlexTech Program staff that took place on August 20, 2013.⁷²

Each section of this memo summarizes a different topic addressed in the logic model report. At the end of each section, the memo presents findings related to that topic.

Context and Program Description

The FlexTech Program operates within the large and diverse non-residential market for existing buildings in New York State. Within this diverse environment, the FlexTech Program primarily aims to provide objective and customized information to end users to aid in their decisions about investing in energy efficiency measures. The program supports the development of technical energy studies that are pertinent to participants' needs. The FlexTech Program has evolved to meet the diverse demands of participants of varying sizes and different geographic regions in New York State. Likewise, on the supply side, the FlexTech Program leverages a diverse service provider/consultant pool that exists in the market. Customers can either rely on NYSERDA-contracted service providers or use their own independent consultant to develop detailed reports documenting energy and cost savings potential.

Cost sharing is a key component of the FlexTech Program design. The cost-share requirement screens for customers that are unlikely to act on the recommendations included in FlexTech energy studies. By sharing the cost of the study rather than covering the full cost, the FlexTech Program hopes to

⁷¹ GDS Associates, Inc. March 2010. FlexTech Program Logic Model Report: Final Report. Prepared for NYSERDA.

⁷² Navigant phone conversation with Brian Platt, Jaime Ritchey, Joanna Moore, and Tracey DeSimone. August 20, 2013.

encourage customer buy in at an early stage. For those participants that struggle with the costs of full study implementation, the FlexTech Program keeps customers informed of other funding opportunities available through New York Energy Smart programs as appropriate.

Process evaluation team findings related to context and program description:

- No substantive changes required for this section.

Barriers

The FlexTech Program explicitly aims to reduce the barriers to the adoption of energy efficiency measures and services affecting the supply side, mid-market/infrastructure, and the demand side of the market. The barriers cited as impeding the adoption of these energy-saving technologies and strategies include the following:

- Lack of time and competing priorities
- Volatility and risk related to energy prices and business environment
- Lack of information to support energy efficiency investment in the commercial and industrial sector
- A diverse set of targeted customers that include different sizes and types of customer facilities and systems, with a wide range of needs for technical information
- Lack of funding to support analysis; competing needs for capital
- Lack of awareness, knowledge and understanding of energy efficiency features
- Uncertainty about savings
- High incremental or first costs⁷³

Process evaluation team findings related to program barriers:

- A key objective of the FlexTech Program is to find alignment between its offerings and the mission or objectives of its prospective participants. This approach enables program staff to address the difficulty that facility managers face in their efforts to package and sell energy efficiency opportunities to decision makers; this is an additional barrier addressed beyond those listed. The program invests significant effort into developing an appropriate scope of work at the outset of each project. Program staff has found that when the program offers services that are well suited to the needs of the participant, the findings presented in the study will stand on their own; this makes a compelling case for investment in the recommended measures without further investment by NYSERDA.
- The Logic Model Report cites “confusion caused by overlapping programs” as a barrier (Barrier D9). Program staff explained that this barrier was largely eliminated following NYSERDA’s shift in 2010 to a portfolio-level approach to participant recruitment for C&I programs. In an effort to eliminate confusion and guess work on the part of the participant, NYSERDA now uses “vertical outreach contractors” to manage leads. These contractors carefully determine which NYSERDA program is best suited to the needs of a prospective participant and guide them toward participation in that program.

Program staff noted that limited overlap exists between its offerings and those of utility programs. However, when FlexTech staff determines that a utility program is the best option

⁷³ GDS Associates, Inc. March 2010. *NYSERDA FlexTech Program Logic Model Report*. Prepared for NYSERDA.

for a prospective or current participant; staff directs the potential participant toward that program.

Activities

The Program **activities** aim to provide objective information and expertise needed to aid end users in making decisions about energy-saving measures. These decisions may include adopting new technologies, upgrading existing infrastructure, or implementing new energy-saving strategies. To bolster the market for energy efficiency measures, the FlexTech Program views its coordination with other NYSEDA incentive programs as critical. In addition, FlexTech executes the following targeted **activities** to support different components of the market:

- **Outreach and Education targeting End-Use Customers** → *Demand-Side & Mid-Market/Infrastructure*
- **Outreach and Consultant Recruitment** → *Mid-Market/Infrastructure*
- **Financial Assistance** → *Demand-Side/Mid-Market/Infrastructure*
- **Technical Assistance and Review** → *Demand-Side*
- **Consultant Selection and Approval** → *Mid-Market/Infrastructure and Demand-Side*

In an ongoing effort to evolve with the New York market, the FlexTech Program committed to program enhancements associated with being one of five EEPS Fast Track programs, which may augment program activities. Through the deployment of additional funds, the FlexTech Program committed to increase the number of consultants, introduce new initiatives, and expand ongoing activities. As a part of these efforts the FlexTech Program outlined the following supplemental activities:⁷⁴

- Issue a request for proposals (RFPs) to select qualified firms in specific geographic areas or technological fields
- Include new or expanded initiatives, including the following: retro-commissioning, energy master planning, long-term energy management, combined heat and power (CHP), sector-based emphasis, carbon footprint analysis, carbon reduction analysis, and sustainability planning and practices
- Improve coordination with utilities to share customer leads and referrals on a more systematic basis and coordinate marketing and outreach

Each of these enhancements falls under an existing category of program activities and appears to fall in line with existing program practices.⁷⁵ The process evaluation team was not fully aware of how the EEPS Fast Track changes had been integrated into program activities, and sought clarification on how program staff has incorporated these funds and initiatives into program operations.

Process evaluation team findings related to program activities:

- The program has implemented elements of its EEPS Fast Track plan. One of the most substantial actions the program has taken is to create an annual solicitation process through which non-FlexTech consultants already working on some projects through the program are invited to apply to become FlexTech consultants.

⁷⁴ System Benefits Charge Supplemental Revision for New York Energy Smart Program 2008-2011 (as amended August 22, 2008 and revised March 12, 2009) Section 3.2.2 – FlexTech – Program Enhancements for EEPS Fast Track.

⁷⁵ This is an initial judgment based on review of program documents and limited discussion with program staff.

- FlexTech staff indicates that two of the new or expanded initiatives originally envisioned for the EEPS funding were not appropriate for implementation by FlexTech. First, expanding the number of CHP projects became the purview of the Technology and Market Development (T&MD) program when Governor Cuomo authorized additional spending in May 2013.⁷⁶ Second, FlexTech staff has found that carbon reduction and management became lower priorities for potential participants following the economic downturn. As a result, FlexTech staff has not pushed these types of projects because they do not align with the program’s objective (stated earlier) to find alignment between its offerings and the mission or objectives of its prospective participants.
- FlexTech staff indicates that they refer potential participants to utility programs when appropriate. This occurs most often with small businesses because FlexTech does not have an offering to fit their needs. In general, by the time a participant reaches FlexTech, FlexTech can best serve them because they have received guidance from the portfolio-level outreach contractors or other NYSERDA staff; in these cases, FlexTech staff finds minimal need to redirect participants to utility or other programs.

Increased formal coordination with utilities has occurred at the portfolio level, rather than at the program level. NYSERDA staff work with utility staff to offer complementary rather than competing programs where possible. Examples of these collaborative efforts include a data center program offered in collaboration with Con Ed and a healthcare program offered in collaboration with National Grid.⁷⁷

Expected Outcomes

The Flex Tech program logic model outlines the following expected program **outcomes**:

- Short-Term (1-3 years)
 - Valuable studies completed with reliable estimates
 - End-users aware of program opportunity
 - Technical service providers aware of program opportunity
 - End-users have confidence in FlexTech study recommendations
 - End-users are finally committed to the project
 - Study recommendations implemented
 - kW and kWh savings with subsequent cost and emission savings
 - Increased investment in energy efficiency by participants
- Intermediate-Term (3-5 years)
 - End-users are satisfied
 - End-user confidence in energy efficiency projects improves
 - Consultants gain knowledge and experience with energy efficiency and demand response solutions
- Long-Term (5+ years)
 - Lower transaction costs
 - Increasing numbers of and expertise in technical consultants
 - Increase in perceived value of energy efficiency

⁷⁶ Cuomo, Andrew M. May 2, 2013. “Governor Cuomo Announces \$40 Million for Large-Scale, Clean-Energy Power Systems to Guard Against Outages.” Available: <https://www.governor.ny.gov/press/05022013cleanenergy>

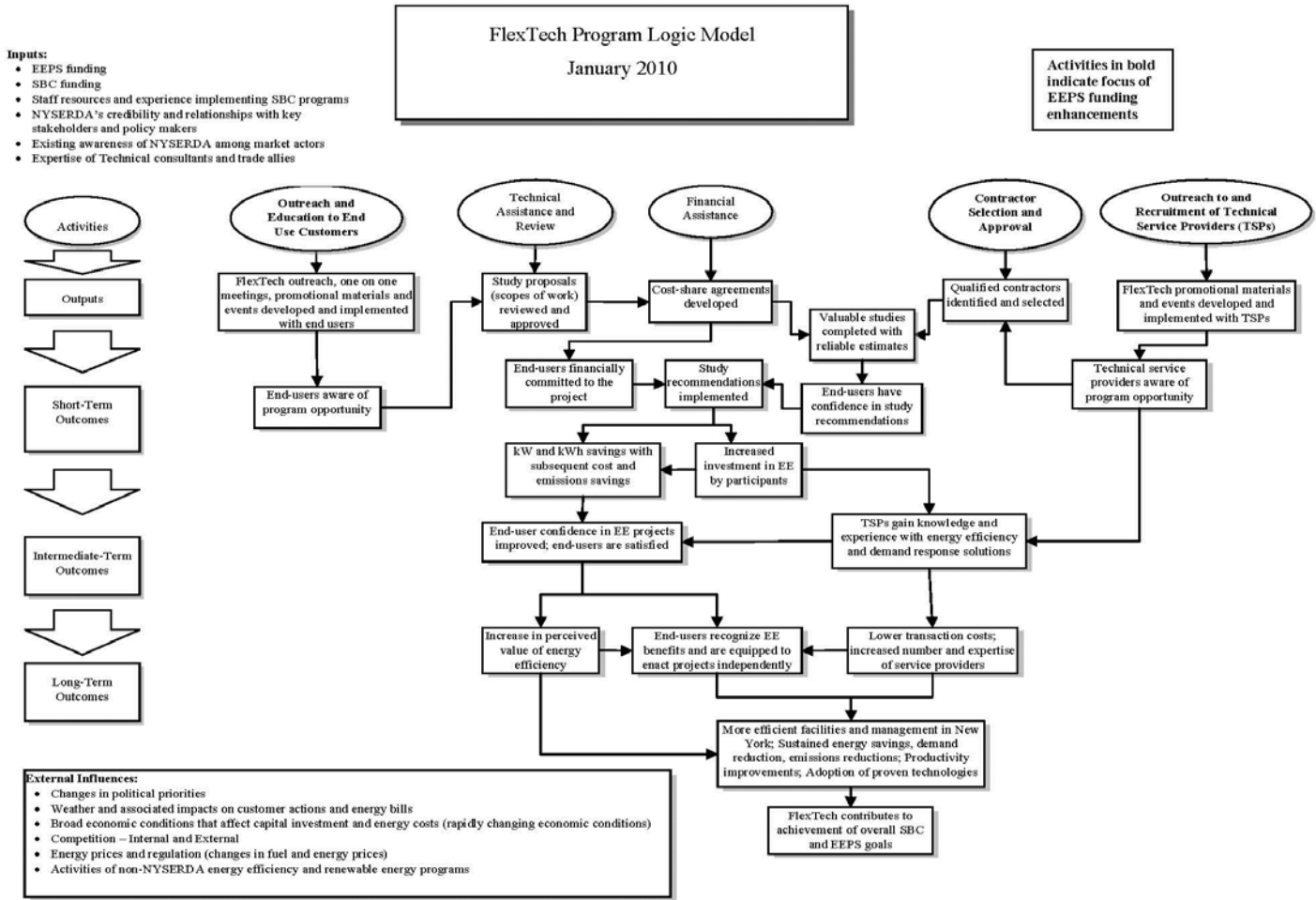
⁷⁷ See a description of NYSERDA’s “Con Ed and NYSERDA Datacenter Initiative,” and its “Energy Efficiency for Health” partnership with National Grid.

- End-users recognize energy efficiency benefits and are equipped to enact projects independently
- More efficient facilities and facility management in New York
- Sustained energy savings, emissions reductions, and demand reduction
- Productivity improvements
- Adoption of proven technologies

Process evaluation team findings related to expected outcomes:

- FlexTech staff clarified two of the outcomes described in the current Logic Model Report and provided recommendations for re-wording them:
 - Current logic model report outcome: “increasing numbers of and expertise in technical consultants.”
 - Suggested re-wording: “Stronger service provider market available to complete program/non-program studies.”
 - Clarification: Program staff explains that plenty of service providers already exist in the market; the program seeks to improve the *quality*, not just the quantity, of service providers active in the market.
 - Current logic model report outcome: “growth of the market for energy efficient equipment.”
 - Suggested re-wording: “Growth of installation of EE systems.”
 - Clarification: Program staff recognizes that limited opportunities remain to improve the efficiency of specific pieces of equipment within buildings (i.e., replacing inefficient units with more efficient units). Instead, significant potential exists to implement more comprehensive solutions that improve the efficiency of building systems as a whole.
- An additional expected long-term outcome of the program is to increase reports of participants’ ability to complete “mission-central projects.” This reflects the theory that more efficient use of energy frees up capital, enabling the company to make investments that are central to the company’s mission.
- FlexTech staff confirmed that the FlexTech Program is not intended to function as a feeder to other programs in the portfolio of NYSERDA offerings. This is different from technical assistance programs offered in other markets. Instead, FlexTech seeks to match participants with compelling investment opportunities that require no additional financial support to justify investment.
- Program staff envisions the program as a gateway to bigger thinking about energy efficiency on the part of participants. They hope that program participants will go on to pursue new, different energy-saving projects in addition to implementing the measures recommended in the FlexTech study.

Figure 1: FlexTech Program Logic Model – January 2010



Source: GDS Associates, Inc. March 2010. FlexTech Program Logic Model Report. Prepared for NYSERDA

Appendix D Sampling Approach Memo



1375 Walnut St.
Suite 200
Boulder, CO 80302
303.728.2500 phone

- Memorandum

To: Tracey DeSimone

From: Nicole Wobus, Jane Pater Salmon, Beth Davis, Brittany Gibson, Brent Barkett

Cc: Jane Peters, Rohit Vaidya, Rick Ridge, Ralph Prah

Date: October 1, 2013

Re: FlexTech Process Evaluation Sampling Plan

This memo documents the proposed sampling plan for in-depth interviews conducted for the FlexTech process evaluation. The sampling plan draws on a review of program tracking data, secondary research, and discussions with program staff about program logic and the program process flow. The plan outlined in this memo seeks to capture a range of program experiences in sufficient depth to provide meaningful feedback to FlexTech staff.

This memo first summarizes the purpose of the in-depth interviews and provides a description of the categories of market actors that the process team will interview. The third section describes the recommended sampling methodology; including the process team's sampling objectives. The next section provides a high-level summary of the proposed sample. The memo concludes with a brief description of interview coordination and logistical elements.

Purpose of In-Depth Interviews

The evaluation team will conduct in-depth interviews with a broad sample of market actors with connection to the FlexTech program. These interviews are intended to draw on a diverse range of perspectives in an effort to inform the evaluation team's understanding of key research topics. This qualitative data collection approach provides for a two-way dialogue in which key stakeholders can report on those aspects of the program and decision-making processes that are most critical to them. This format enables the evaluation team to glean insights that help the program build on past successes, and identify emerging opportunities.

The process evaluation team will explore the following high-level research objectives, which are included in the final process evaluation work plan, through the in-depth interviews:

- Examine program processes and market opportunities.
- Identify and assess drivers for and barriers to participation in the program.

- Identify and assess the program’s position within NYSERDA’s portfolio of programs and within the market for energy-efficiency services.⁷⁸
- Identify and assess decision-making processes regarding measure implementation.
- Document program progress and participant satisfaction, and make recommendations for program improvements.

Categories of Market Actors to Interview

Table 1 outlines the categories of market actors that the process evaluation team will interview. It also includes the reasons for targeting each of these categories of market actors in this effort. It also identifies the sources from which the process evaluation team will draw the sample and includes notes to clarify any nuances in the sampling approach.

⁷⁸ As outlined in Protocol D (p. 27): Johnson Consulting Group. 2012. *New York State Process Evaluation Protocols: A Supplement to the New York State Evaluation Guidelines Updated 2012*.

Table 1. Categories of Market Actors to Interview

Category of Market Actors	Reasons for Targeting	Sample Frame	Notes/Rationale for Sample Frame
FlexTech Program Staff	Solicit market and program context and insight into program processes, implementation experiences, and challenges.	Program manager, staff listed in the program database as project managers	Twenty staff people are listed as project managers. Interviews will take place with staff that plays the most central roles in the program.
External Technical Review Contractors	Gather insight into program processes and quality of studies, as these contractors review all program-funded studies.	Two contractors under contract with NYSERDA FlexTech program	Census
FlexTech Consultants Independent Service Providers Participating End-Use Customers	Gain insight into participating contractor and end user experiences, barriers to participation and measure implementation, and program strengths and potential areas for improvement.	Projects with reports completed during 2011 and 2012 that have contact information on record	Focus on participants who have had more time to implement recommended measures (studies completed in 2011 or 2012) and are able to provide insight on the decision making that followed receipt of the study report findings.
Partial Participating End-Use Customers	Learn about potential program challenges and limitations, market barriers that prevent full participation in the program.	Projects canceled or rejected from the program during 2011 or 2012.	Include records in a timeframe parallel to participating end-use customers to assess differences in drivers and barriers to participation and how they were addressed.
Other Market Actors	Gather perspectives on how well the program is serving the needs of the target market.	Contact lists for trade associations, other organizations relevant to markets served by program	List to be informed by early interview respondents. Potential trade associations: IES, ASHRAE, Heat is Power. Other potential organizations NYISO, PlaNYC.
Peer Program Administrators	Assess reasons for FlexTech’s high measure adoption rate (MAR) relative to similar programs in other jurisdictions.	Program staff recommendations, literature review	Focus on programs of similar size and scope.

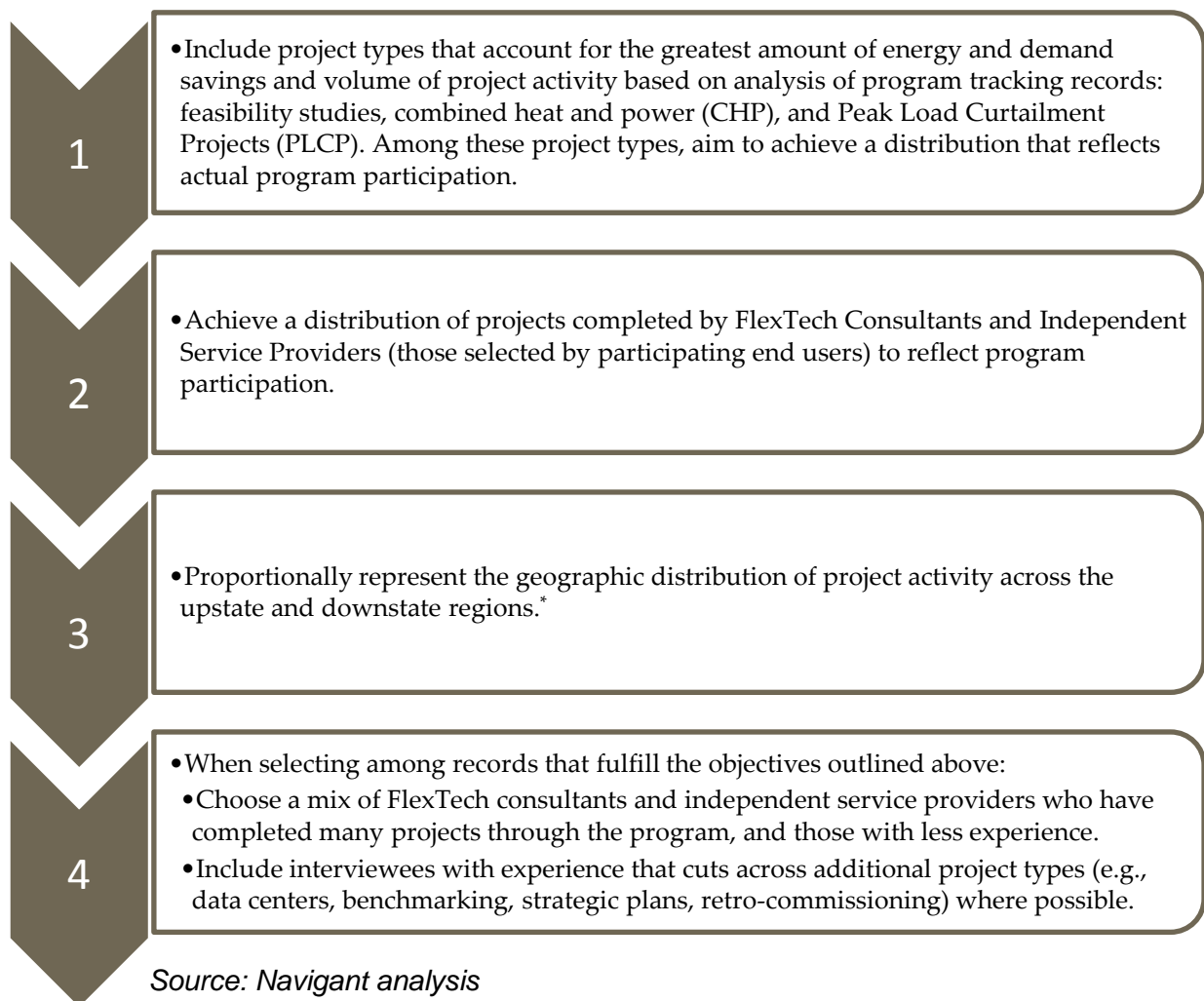
Source: Navigant analysis

Recommended Sampling Methodology

The proposed purposive sample is designed to tap into the knowledge and experience of individuals engaged in multiple aspects of the program. Targeted respondents include those involved in program design and delivery, those who make use of program services, and those with valuable perspectives on the market context within which the program operates.

The process evaluation team sought to achieve the objectives outlined in Figure 1 when selecting a sample for each category of market actors based on the FlexTech program database. These objectives are listed in the order in which they were applied during the sample selection process.

Figure 1. Sampling Objectives



* Geographic distribution is represented by utility territory, which the program database captured. Fifty-two percent of relevant 2011-2012 projects were in ConEd's service territory.

As noted in Figure 1, the team designed the sample to include a mix of project types that reflects program activity, both in terms of savings and in terms of number of projects. The team focused only on feasibility studies, CHP projects and Peak Load Curtailment Projects (PLCPs); this allowed the sample to represent the importance of different forms of savings (i.e., kWh, kW, and MMBtu savings) and the number of projects represented by each of these project types. To establish the distribution by project type to apply to each interview target group, the team calculated an average of the share of (a) kWh savings, (b) kW savings, and (c) total number of projects for each project type.⁷⁹ The resulting values were normalized to sum to 100%. MMBtu savings were excluded for these purposes; they are not as meaningful an indicator of project savings as are kW and kWh savings due to the net negative MMBtu savings associated with CHP projects.

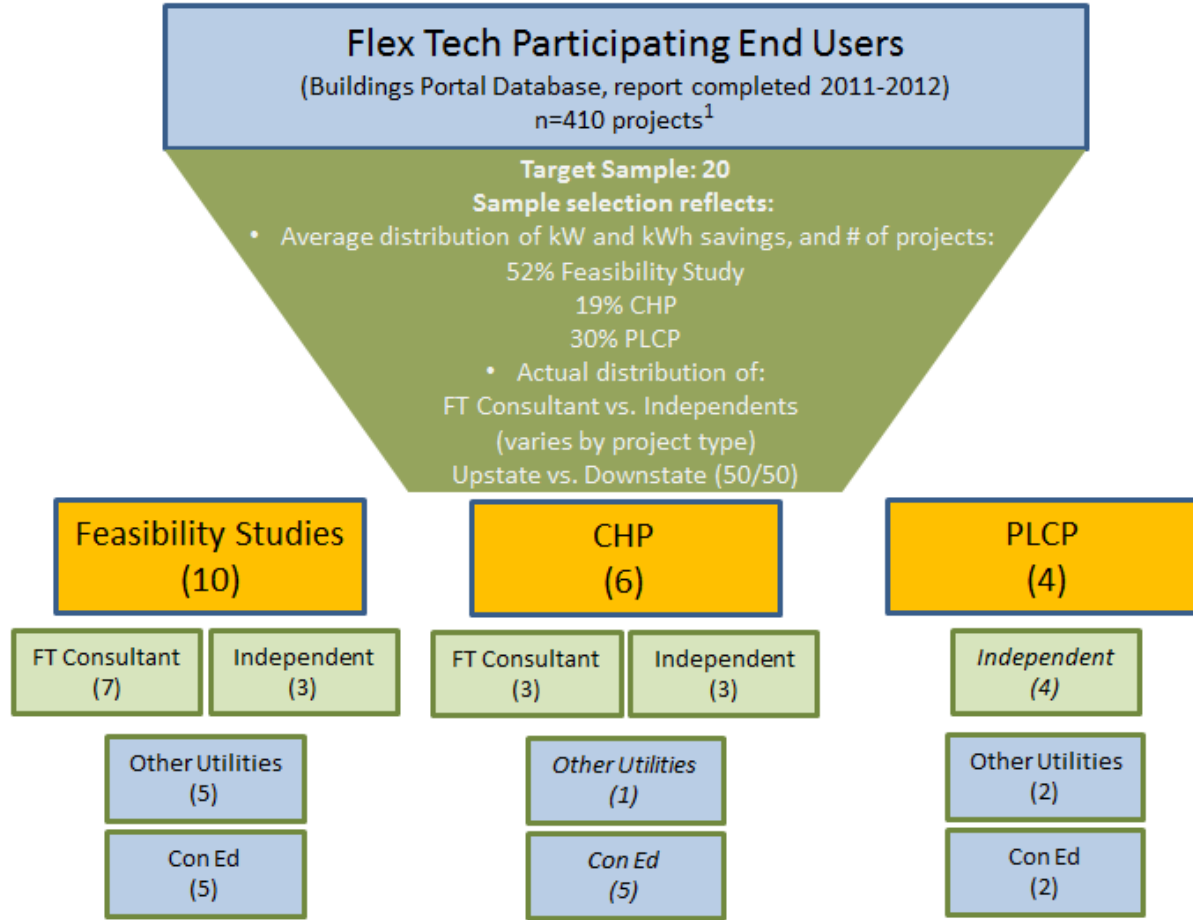
Figure 2 presents a summary of the sample selection process, applying the objectives outlined above, with participating end users shown as an example. As shown, it is not possible to fulfill the sampling objectives at every level of the sample design due to some data limitations. Selections that needed to be adjusted to accommodate data limitations are shown in italics. Key factors contributing to these data limitations include the following:

- ***Peak Load Curtailment Projects (PLCP)***. As noted in Table 1, all PLCPs with sufficient project information on record were completed by the same company (L&S Services).⁸⁰ Therefore, only one firm can be interviewed for this project type, which accounts for a relatively large portion of overall program demand savings. To fill out the desired sample of approximately 15 FlexTech Consultants and 15 Independent Service Providers, the evaluation team included engineering firms associated with additional feasibility study and CHP projects. To the extent possible, these included engineering firms that have experience conducting a range of study types.
- ***CHP projects***. A relatively small number of projects account for a large percentage of program kWh and kW savings. Furthermore, several firms have completed multiple projects. Therefore, in the case of CHP projects completed by FlexTech Consultants, there are fewer firms available than called for in the sampling objectives. For purposes of filling out the desired sample of FlexTech Consultants, the team included additional firms that have completed feasibility studies, focusing on firms with experience across a range of project types. In the example shown in Figure 2, when prioritizing a split of CHP projects across FlexTech consultants and independent service providers, it is not possible to achieve a 50/50 split across ConEd (downstate) and upstate (other utilities).

⁷⁹ Benchmarking projects are excluded from the sample. When considering the combination of volume of savings (0%) and number of projects (12%), benchmarking projects fall short of feasibility studies, CHP projects and PLCPs. In addition, program staff suggested in early planning meetings that benchmarking projects were not an appropriate area of focus for the evaluation due to market dynamics.

⁸⁰ L&S Services was not a FlexTech Consultant at the time the PLCP projects were completed, though they later signed on with the program. Therefore, all PLCP projects are recorded in the database as “PON” projects (i.e., completed by an independent service provider) and are being counted as such for purposes of sampling.

Figure 2. Sample Development Example: Participating End Users



Source: Navigant analysis

¹ The team will pull from the 377 projects for which contact information (email and phone) is available.

Text in italics denotes selections which were unable to adhere to sample design intent due to data limitations. See discussion on previous page for the underlying reasons.

Recommended Sample Selection

The process evaluation team developed a sample for the interviews based on the objectives and process outlined in the previous section. The proposed sample selection is summarized in Table 2.

Table 2. Summary of Sample Selection

Target Group	Estimated Population Size	Target Number of Completes	Project Type	FT Consultant vs. Independent Service Provider	Utility
NYSERDA Program Staff	20 ^a	3	N/A	N/A	N/A
			N/A	N/A	N/A
			N/A	N/A	N/A
External Review Contractors	2	2	N/A	N/A	N/A
FlexTech Consultants	37	10 to 15	Feasibility Study: 12	All FT Consultants	Downstate: 7
			CHP: 3		Upstate: 8
Independent Service Providers (Customer-selected)	70	10 to 15	Feasibility Study: 9	All Independent Service Providers	Downstate: 8
			CHP: 5		Upstate: 7
			Peak Load Curtailment Plan: 1		
Participating Customers	365	15 to 20	Feasibility Study: 10	Independent Service Provider: 10	Downstate: 10
			CHP: 6	FT Consultant: 10	Upstate: 10
			Peak Load Curtailment Project(PLCP): 4		
Partial-Participating End-Use Customers	TK ^b	10 to 15	Not yet categorized	Independent Service Provider: 8 FT Consultant: 7	Not yet categorized
Peer Program Staff	3	2 to 3	N/A	N/A	N/A
Other Market Actors	N/A	5 to 10	N/A	N/A	N/A

Source: Navigant analysis

^a Includes all staff listed in the database as project managers.

^b TK: The population of partial-participating customers is not yet known because the project team needs to formally request this part of the dataset from FlexTech program staff.

Selection of interviewees in the categories of peer program staff and other market actors will be informed by interviews with program staff and participants as well as additional secondary research. In the category of other market actors, the evaluation team intends to interview a

representative of the NYISO for insights into the PLCP projects, as well as trade association representatives. Analysis of program tracking data indicates that HVAC, controls, lighting and motors-related measures account for the largest volume of savings associated with FlexTech study recommendations. As such, the process evaluation team will seek to interview representatives from trade associations serving these markets.

Interview Coordination and Logistics

In-depth interviews will be overseen and conducted by experienced Navigant staff skilled at conducting this type of data collection. This will facilitate a broader conversation during the interviews which, our experience has shown, often yields richer insights into specific interview topics.

Program staff and external review contractor interviews will be conducted first, as information gathered through those early interviews will help to provide background and context for the participant and partial participant interviews. Interviews with peer program staff and other market actors will be conducted last, as identification of these interviewees will be informed by interviews with program staff and participants.

Interview activity will begin in early November and continue through early December. The process evaluation team will coordinate with FlexTech program staff to provide prospective interviewees with notification (either advance letter or call) that they will be contacted with a request for an interview.

The process evaluation team is coordinating with the impact evaluation team to address the anticipated duplication of contacts across the two evaluation efforts. The impact evaluation team's survey effort will sample program participants that span a longer time period, which may reduce some potential for overlap in sampling across the two evaluation efforts.⁸¹ However, the impact team will seek a census sample in key categories. Considering that and the fact that a small number of firms are responsible for a large number of top energy saving projects, it will be difficult to avoid duplication of contacts across the two evaluation efforts. The teams will take steps to minimize the burden on respondents by avoiding duplication of question topics, and notifying respondents that they can expect to be contacted for a separate evaluation effort within the next six months.

⁸¹ The impact evaluation team will conduct interviews with 2010 – 2012 participating end users and their respective service providers during Q1 2014.

Appendix E Interview Guides

NYSERDA Flex Tech Process Evaluation: FlexTech Consultant and Independent Service Provider Interview Guide

Final: 11/14/13

[Context: This guide will be used with consultants who have been competitively selected by NYSERDA as “FlexTech Consultants” as well as those selected by customers who are not officially affiliated with the program.]

Contact Name:	
Contact Title:	
Company Name:	
Contact Phone:	
Contact Email:	
Company City:	
Interviewer:	
Communication Record: (dates, times of interviewee contacts)	
Completion Date:	
Notes:	

INTRODUCTION

Hello, my name is [INSERT NAME] and I’m calling from Navigant Consulting. We are part of the team hired to evaluate NYSERDA’s FlexTech program. May I please speak with [TITLE/NAME]?

[IF NO, OBTAIN CONTACT INFORMATION FOR APPROPRIATE CONTACT AND CONTINUE WITH APPROPRIATE CONTACT.]

Our evaluation research is aimed at understanding what the program is doing particularly well, and steps the program could take to better serve the needs of the market in the future. I understand that you [“ARE UNDER CONTRACT WITH NYSERDA AS A FT CONSULTANT” OR “HAVE WORKED AS A CONSULTANT TO END USE CUSTOMER WHO PARTICIPATE IN NYSERDA’S FLEXTech PROGRAM”] and I’d like to speak with you to learn from your experience with the program. All information that you provide will be aggregated with data provided by other participants in the program, and your comments will remain anonymous. Your input will help guide the future of NYSERDA’s FlexTech program, so they can do a better job of serving the needs of the market. The questions should take about [45 minutes to an hour]. I’d like to suggest [SPECIFIC TIMES] as possible

times to schedule our discussion. Do any of those times work well for you, or would you like to suggest a different time?

[SEND PROGRAM PROCESS FLOW DIAGRAM IN ADVANCE OF INTERVIEW. PRIOR TO INTERVIEW, CONFIRM MEETING TIME, AND OBTAIN APPROVAL TO RECORD INTERVIEW.]

REMINDERS

I have some prepared questions and also invite you to ask questions or raise topics during our interview. Just a few logistics to note:

- I want to reiterate that your responses throughout this process will be kept confidential by the study team and your comments will not be directly attributed to you without your prior consent.
- [IF RESPONDENT HAS APPROVED RECORDING OF INTERVIEW] As discussed, I am recording this interview to assist with my note-taking. It's difficult to take thorough notes and listen to your answers at the same time.
- I expect that the interview will take about 45 minutes to an hour. That said, do you have a certain time when we need to impose a hard-stop on our conversation?

Before we begin, do you have any questions about the study or the interview process?

INTERVIEW

Background

1. What is your technical background (e.g., training, years in the field)?
2. [IF FT CONSULTANT] For how many years have you been under contract with NYSERDA as a FlexTech Consultant?

[IF NOT A FT CONSULTANT] How many times have you participated in the FlexTech program, and over how many years?
3. [IF FIRM HAS WORKED ON MULTIPLE PROJECT TYPES.] I understand that your firm works on [LIST SPECIFIC PROJECT TYPES, E.G., CHP, FEASIBILITY STUDIES, ETC.]. Is that correct? As we proceed, please let me know whether your experience in the program has differed across the projects you've worked on.
4. Do you participate in any other NYSERDA programs? [IF SO, PROBE FOR WHICH ONES]
[Objective 4]

Program Marketing, Outreach, and Participation

5. How did you first learn about the NYSERDA FlexTech program? [Objective 2e]

6. [FT CONSULTANTS ONLY] How did you learn about the opportunity to participate as a FlexTech Consultant? [Objective 2e]
7. [FT CONSULTANTS ONLY] After learning about the program, did you determine right away that you wanted to participate as a FlexTech Consultant, or did you initially have reservations? [IF YES] What were those reservations, and how were they resolved? [Objectives 3c]
8. [FT CONSULTANTS ONLY] What were the main reasons you chose to participate as a FlexTech Consultant? [Objective 3a]
 - a. Are there benefits to participation that you hadn't anticipated when you first became involved?
[IF NOT A FT CONSULTANT] Did you apply to the program to become an official, program-affiliated FlexTech Consultant, or consider applying? [NOTE: THE PROGRAM FIRST OFFERED THIS OPTION IN 2010. HOWEVER, SERVICE PROVIDERS WOULD NOT HAVE BEEN ABLE TO APPLY UNTIL 2011.]
 - b. [IF NO] Why not?
9. How often are you the one to introduce end use customers to the program versus customers approaching you?
 - a. [FOR FT CONSULTANTS] How often does the program introduce end use customer to you? [Objective 2e]
10. Have you seen an increase in customers soliciting services via an RFP/RFQ? If so:
 - a. Do you find there are inconsistencies in what they are requesting versus what the Program can support? Could you provide some examples?
 - i. How do you overcome these barriers while still producing a responsive proposal?
 - ii. Are there opportunities for Program to assist with these inconsistencies/barriers?
11. How effective do you think NYSERDA is in recruiting and informing potential program participants (both consultants and end users) about the opportunity to participate in the program? Specifically, for those who do not participate in the program, do you think it's due more to a lack of awareness or lack of interest? [Objectives 2e, 2f]
12. Do you think there's a significant untapped opportunity for certain types of studies? Are there certain segments of the market that are underserved by this program? [PROBE FOR SPECIFIC SEGMENTS: TYPES OF CUSTOMERS, GEOGRAPHIC DIVERSITY.] [Objective 2g]
13. What else could the program do to increase awareness among potential participants in the market (both consultants and end users)? [PROBE FOR SPECIFIC STEPS.] [Objective 2e]

Program Drivers and Barriers, and Program's Role in the Market

14. What do you think are the main reasons end-use customers choose to participate in the program? [Objective 3a]
 - a. [PROBE IF NOT MENTIONED]: Do you think program funding is the primary motivator, or is the program viewed as a source of superior technical services, or an easy

way to gain access to quality services?

15. What do you think are the main barriers to participating in the program, both for potential participating consultants, and end-use customers? [Objective 3b]
 - a. What steps do you think the program could take to address those barriers and encourage greater participation in the program? [Objective 3b]
16. To what extent do you think the program serves a critical function in the marketplace? [Objective 4]
 - a. The program will continue running, but, theoretically, if the program were to be discontinued, do you think that the market would naturally fill in any gap left?
17. [FT CONSULTANTS ONLY] Have you observed an increase or decrease in the number of FlexTech studies in recent years? If so, what do you think has driven those changes? [Objective 3a, 3b]

Structural and Operational Issues

I sent you a program process flow diagram for your review prior to this call. [HAVE THEM OPEN THE DIAGRAM, AND THEN PROVIDE A HIGH-LEVEL OVERVIEW OF THE STRUCTURE OF THE DIAGRAM.]

18. How well do you think that the diagram depicts how projects proceed through the program? Should any changes be made to better reflect actual program processes? [Objectives 2a]
19. Are there any components of the program process flow that you think the program could *improve upon*, or aspects of the program processes that either you or others find cumbersome or challenging? [IF NECESSARY, PROBE FOR WHETHER REPORTING PROJECTED SAVINGS BY FUEL TYPE AND IN DIFFERENT FORMS FOR DIFFERENT FUNDING SOURCES IS PROBLEMMATIC.] [Objectives 2a, 2d]
20. How extensive is the feedback you typically receive from External Technical Review contractors, and how readily are you able to address the comments? [Objectives 2a]
 - a. Do you think the process of addressing draft report comments improves the quality of the projects you work on? [Objective 6b]

Study Quality and Outcomes

21. What steps do you take to stay current on developments within the building energy efficiency space, and to ensure the recommendations you include in the studies you complete reflect the state of the industry? [Objective 6b]
 - b. Has the program ever provided you with any form of training? If so, please describe. [Objective 6a]
22. Do you think the program does a good job of ensuring that participating end-use customers receive high-quality technical assistance? [Objective 6b] [IF QUESTION 20 WAS SKIPPED, BE

SURE TO ADDRESS ROLE OF EXTERNAL TECHNICAL REVIEW CONTRACTOR HERE.]

23. How common is it for you to go on to implement the recommendations presented in the studies you've completed? Do you use the program as a tool to market the other services you provide? [Objective 3a]

Decision-Making Regarding Measure Implementation

24. Please describe the steps that you take to encourage implementation of recommended energy-efficiency measures. This may include using either the customers' own funding or funding from other energy-efficiency incentive programs. [PROBE FOR EXTENT TO WHICH GREATER SUPPORT IS PROVIDED TO THOSE LESS FAMILIAR WITH OTHER NYSERDA PROGRAM OPPORTUNITIES, OR LESS CAPABLE OF FUNDING IMPLEMENTATION OF MEASURES WITHOUT OUTSIDE FUNDING.] [Objectives 5d, 5e, 5f]
- a. For those measures that you do implement, how often do you apply for and receive funding from other NYSERDA programs?
25. Are you aware of any steps program staff take to encourage implementation of recommended energy-efficiency measures? This may include using either the customers' own funding or funding from other energy-efficiency incentive programs.
26. What are the most substantial barriers to implementation of program-recommended measures?
- a. What additional steps do you think the program could take to align with end-use customers' decision-making processes to increase the adoption of recommended measures? [Objectives 5a, 5b]
27. Do you find that some types of end-use participants are more likely to implement recommendations than others?
- a. [IF YES] Why do you think that is? What characteristics do those customers share in common?
28. Previous evaluations of this program have found that the rate of adoption of measures recommended in the studies is higher than in peer programs (i.e., more participants go on to implement recommendations than in peer programs). Why do you think that is the case? [Objective 5f]

Program Impacts and Satisfaction

29. To what extent do you think the program is contributing to growth in the energy efficiency markets as a whole? To what extent is the program responsible for an increase in the number and quality of energy services companies active in the market? [Objective 6a]
30. On a scale of 1 – 10 (with 1 being highly unsatisfied, and 10 being highly satisfied), how satisfied are you with your overall experience participating in the program? [Objective 6c]
- a. What did you like most about the program?
- b. [IF APPROPRIATE] Do you think the scope of services you are expected to provide is reasonable?

31. Are the end-use customers you work with generally satisfied with the program? Why or why not? [Objective 6c]

Wrap-Up / Recommendations

32. What steps do you think the program could take to more effectively serve the market, or to improve the efficiency of program implementation? [Objective 6d]

33. Are there any other comments you'd like to share to help us better understand the program?

NYSERDA Flex Tech Process Evaluation: FlexTech Participating End-User Interview Guide

Final: 11/13/13

Contact Name:	
Contact Title:	
Company Name:	
Contact Phone:	
Contact Email:	
Company City:	
Interviewer:	
Communication Record: (dates, times of interviewee contacts)	
Completion Date:	
Notes:	

INTRODUCTION

Hello, my name is [INSERT NAME] and I'm calling from Navigant Consulting. We are part of the team hired to evaluate NYSERDA's FlexTech program. May I please speak with [TITLE/NAME]?

[IF TARGET RESPONDENT HAS LEFT THE COMPANY ASK] May I speak with someone who was involved with [PROJECT NAME OR PROJECT TYPE]?"

Our evaluation research is aimed at understanding what the program is doing particularly well, and steps the program could take to better serve the needs of the market in the future. I understand that your company participated in this program and I'd like to speak with you to learn from your experience. All information that you provide will be aggregated with data provided by other participants in the program, and your comments will remain anonymous. Your input will help guide the future of NYSERDA's FlexTech program, so they can do a better job of serving the needs of the market. The questions should take about [45 minutes to an hour]. I'd like to suggest [specific times] as possible times to schedule our discussion. Do any of those times work well for you, or would you like to suggest a different time?

[CONFIRM MEETING TIME, AND OBTAIN APPROVAL TO RECORD INTERVIEW. WHEN CONFIRMING MEETING, ALSO CONFIRM OUR RECORDS OF PROJECT TYPE AND DATES ARE ACCURATE.]

PROJECT DETAILS

[POPULATED AND PROVIDED TO INTERVIEWER PRIOR TO INTERVIEW]

Project ID & Project Name	
---------------------------	--

Number of projects completed	
Types of projects completed	
RFP (FT Consultant completed study) or PON (independent service provider completed study)	
Project start date(s) (“PDB Signed Date”)	
Date(s) report approved (“Project Status Date”)	
Measure(s) recommended (“ECM Category”)	
Utility	
Engineering Firm	

INTERVIEW

Reminders

I have some prepared questions and also invite you to ask questions or raise topics during our interview. Just a few logistics to note:

- I want to reiterate that your responses throughout this process will be kept confidential by the study team and your comments will not be directly attributed to you without your prior consent.
- [\[ASSUMING RESPONDENT HAS APPROVED RECORDING THE INTERVIEW\]](#) As discussed, I am recording this interview to assist with my note-taking. It’s difficult to take thorough notes and listen to your answers at the same time.
- I expect that the interview will take about 45 minutes to an hour. That said, do you have a certain time when we need to impose a hard-stop on our conversation?

Before we begin, do you have any questions about the study or the interview process?

Background

1. My understanding is that you successfully completed participation in the FlexTech Program, specifically, [\[REFER TO PROJECT DETAILS SUMMARY TABLE\]](#) a [\[TYPE OF PROJECT\]](#) in

[YEAR] working with [CONSULTANT NAME] [REFERENCE ADDITIONAL DETAILS IF COMPLETED MULTIPLE PROJECTS.] Is that correct?

[IF COMPANY HAS COMPLETED MULTIPLE PROJECTS] We selected you to participate in this evaluation primarily due to your experience working on the [FIRST PROJECT NOTED IN QUESTION 1] because our goal is to hear from representatives of a variety of different project types. However, as we move forward with our discussion, please feel free to comment on any of your company's FlexTech project experiences.

First, I'd like to learn about your role in your company and your background with energy efficiency.

2. Could you tell me your title and whether energy efficiency is something you deal with on a regular basis as part of that role?
3. Is/was that the first time your company has/had participated in a NYSERDA program?
 - a. [IF NO] What other NYSERDA programs have you participated in?

Program Marketing, Outreach, and Participation

4. How did you first learn about the NYSERDA FlexTech program? [Objective 2e]
 - a. Have you come across information about the program from other sources as well?
5. [IF NOT DISCUSSED YET] Did [CONSULTANT] approach you about doing this work or is the project something that your company initiated? [Objective 2e]
6. Do you think there's a high level of awareness about the program among your peers in similar companies? [Objective 2f]
7. What else do you think the program could do to increase awareness among potential participants? [Objective 2e, 2f]

Program Drivers and Barriers, and Program's Role in the Market

8. After learning about the program, did you determine right away that you wanted to participate, or did you initially have reservations? [IF RESERVATIONS] What were those reservations, and how were they resolved? [Objectives 3c]
9. What were the main reasons you chose to participate? [PROBE FOR POTENTIAL ADDITIONAL BENEFITS DISCOVERED.] [Objective 3a]
10. Given the benefits of participating in the program you just discussed, why do you think other companies choose not to participate? What do you think are the main barriers to participating in the program? [Objective 3b]

- a. What steps do you think the program could take to address those barriers and encourage greater participation in the program? [Objective 3b]
11. If the program had not been available, do you think you still would have explored the [SPECIFY PROJECT TYPE] at your facility? [IF YES, PROBE FOR WHO WOULD HAVE DONE THE WORK – INTERNAL STAFF OR A SPECIFIC EXTERNAL PROVIDER IF AVAILABLE.] [Objective 4]

Structural and Operational Issues

12. My records show that your company applied to participate in the program in [SPECIFY MONTH & YEAR] and that your study was completed and approved by NYSERDA in [MONTH & YEAR]. Do you think that was a reasonable length of time to complete the study? To what extent do you think there were opportunities to make the process more efficient? [Objective 2a]
13. How active a role did you, your contractor and NYSERDA staff play at various points in the study?
- a. Specifically, what role did you play, and what role did NYSERDA staff play in determining the scope of the study? [Objective 2a]
 - b. How about when application materials were prepared?
 - c. What about during the review of the draft report?
14. Is there anything about the process of participating in the program that you found particularly challenging, or that you think could be *improved upon*? [PROBE FOR EASE OF COMPLETING APPLICATION, LEVEL OF AND TIMING OF FINANCIAL COMMITMENT] [Objectives 2a]

Study Quality and Outcomes

15. Did the quality and the format of the study report meet your expectations? [PROBE FOR WHETHER THEY THINK THE FINDINGS WERE PRESENTED IN AN ACTIONABLE FORMAT.] [Objective 6b]

Decision-Making Regarding Measure Implementation

16. Please describe the decision-making process your company went through as you considered whether to implement the recommendations from the study. [PROBE FOR WHEN AND BY WHOM THE STUDY FINDINGS WERE CONSIDERED] [Objective 5a]
- a. How did this process compare to those that your company goes through for other capital investments?
 - b. What was the outcome of your decision-making? [PROBE FOR WHETHER AND WHEN IMPLEMENTATION WILL TAKE PLACE.]
17. What criteria does your company use when deciding on potential capital investments?
- a. For example, are specific ROI or payback thresholds applied? [Objective 5a]

- b. How heavily are those financial metrics considered relative to other decision-making factors? [PROBE FOR ROLE OF LOGISTICAL FACTORS (E.G., STAGING OF CAPITAL IMPROVEMENTS) AND PERCEIVED BENEFITS OF THE INVESTMENT (E.G., PRODUCTIVITY, COMFORT, AESTHETICS)]
18. Did the timeline of the study align well with your company’s timeline for planning and making decisions about this type of investment? [Objective 5a]
 19. What were the biggest barriers to implementing the recommendations from the study? [Objective 5b]
 20. [IF PURSUING STUDY RECOMMENDATIONS] [DO YOU PLAN TO RECIEVE / HAVE YOU RECEIVED] support from any other NYSERDA program or any utility programs to facilitate implementation of the recommendations from the study? [Objective 5a]
 21. Were you aware of any technical and financial resources that might help you implement the study recommendations? [IF YES] Who informed you of this?
 22. How has your experience with the FlexTech program and the outcomes of your study affected your company’s consideration of energy-efficiency factors when making decisions about capital improvements? [Objective 5c]
 - a. Specifically, has your company changed its perception of the risk or benefits associated with investments in energy-efficiency?
 - b. Are you considering investing in other EE projects with NYSERDA support as a result of this experience? [why/why not]

Program Impacts and Satisfaction

23. On a scale of 1 – 10 (with 1 being highly unsatisfied, and 10 being highly satisfied), how satisfied are you with your overall experience participating in the program? [Objective 6c]
 - a. What did you like most about the program?
24. [IF NOT DISCUSSED PREVIOUSLY] Would you choose to work with the consultant who completed your study again in the future? [Objective 6c]
 - a. [IF NO] Why not

Wrap-Up / Recommendations

25. What steps do you think the program could take to more effectively serve the market or to improve the efficiency of program implementation? [Objective 6d]
26. Are there any other comments you’d like to share to help us better understand the program?

NYSERDA Flex Tech Process Evaluation: FlexTech Partial Participating End-User Interview Guide

Final: 11/13/13

Contact Name:	
Contact Title:	
Company Name:	
Contact Phone:	
Contact Email:	
Company City:	
Interviewer:	
Communication Record: (dates, times of interviewee contacts)	
Completion Date:	
Notes:	

INTRODUCTION

Hello, my name is [INSERT NAME] and I'm calling from Navigant Consulting. We are part of the team hired to evaluate NYSERDA's FlexTech program. May I please speak with [TITLE/NAME]?

[IF NO, OBTAIN CONTACT INFORMATION FOR APPROPRIATE CONTACT AND CONTINUE WITH APPROPRIATE CONTACT.]

Our evaluation research is aimed at understanding what the program is doing particularly well, and steps the program could take to better serve the needs of the market in the future. I understand that your company started to participate in this program but did not complete a project. I'd like to speak with you to learn from your experience. All information that you provide will be aggregated with data provided by other participants in the program, and your comments will remain anonymous. Your input will help guide the future of NYSERDA's FlexTech program, so they can do a better job of serving the needs of the market. The questions should take about [30 minutes]. I'd like to suggest [specific times] as possible times to schedule our discussion. Do any of those times work well for you, or would you like to suggest a different time?

[CONFIRM MEETING TIME, AND OBTAIN APPROVAL TO RECORD INTERVIEW. WHEN CONFIRMING MEETING, ALSO CONFIRM OUR RECORDS OF PROJECT TYPE AND DATES ARE ACCURATE.]

PROJECT DETAILS

[POPULATED AND PROVIDED TO INTERVIEWER PRIOR TO INTERVIEW]

Project ID & Project Name	
Number of projects completed	
Types of projects completed	
RFP (FT Consultant completed study) or PON (independent service provider completed study)	
Project start date(s) (“PDB Signed Date”)	
Last milestone and date recorded	
Utility	

INTERVIEW

Reminders

I have some prepared questions and also invite you to ask questions or raise topics during our interview. Just a few logistics to note:

- I want to reiterate that your responses throughout this process will be kept confidential by the study team and your comments will not be directly attributed to you without your prior consent.
- [ASSUMING RESPONDENT HAS APPROVED RECORDING THE INTERVIEW] As discussed, I am recording this interview to assist with my note-taking. It’s difficult to take thorough notes and listen to your answers at the same time.
- I expect that the interview will take about 30 minutes.

Before we begin, do you have any questions about the study or the interview process?

Background

1. My understanding is that you initiated [REFER TO PROJECT DETAILS SUMMARY TABLE] a [TYPE OF PROJECT] in [YEAR] working with [CONSULTANT NAME] [REFERENCE ADDITIONAL DETAILS IF COMPLETED MULTIPLE PROJECTS.] Is that correct?

[IF COMPANY HAS COMPLETED MULTIPLE PROJECTS] We selected you to participate in this evaluation primarily due to your experience working on the [FIRST PROJECT NOTED IN QUESTION 1] because our goal is to hear from representatives of a variety of different project types. However, as we move forward with our discussion, please feel free to comment on any of your company's FlexTech project experiences.

First, I'd like to learn about your role in your company and your background with energy efficiency.

2. Could you tell me your title and whether energy efficiency is something you deal with on a regular basis as part of that role?
3. Has your company participated in any other NYSERDA programs besides FlexTech Program?
 - a. [IF YES] What other NYSERDA programs have you participated in?

Program Marketing, Outreach, and Participation

4. How did you first learn about the NYSERDA FlexTech program? [Objective 2e]
5. [IF NOT DISCUSSED YET] Did [CONSULTANT] approach you about doing this work or was the project something that your company initiated? [Objective 2e]
6. What else do you think the program could do to increase awareness among potential participants? [Objective 2e, 2f]

Program Drivers and Barriers, and Program's Role in the Market

7. After learning about the program, did you determine right away that you wanted to participate, or did you initially have reservations? [IF RESERVATIONS] What were those reservations, and were they resolved? [Objectives 3c]
8. My records show that your company applied to participate in the program in [SPECIFY MONTH & YEAR] but that your study was never actually completed and approved by the FlexTech Program. My records show that you got as far as [X STAGE] and then stopped participating. Is that consistent with your recollection? [Objective 2a]
9. What were the main reasons that you considered participating? [PROBE FOR POTENTIAL ADDITIONAL BENEFITS DISCOVERED.] [Objective 3a]
10. What do you think are the main barriers to participating in the program?
11. Why did your company discontinue your activity in the program? [PROBE FOR TYPE OF ISSUE, E.G., TIMING-RELATED, CUMBERSOME PROCESS, QUALITY OF CONSULTANT SERVICE, BUDGET REDUCTION, INTERNAL LEADERSHIP CHANGE, EXTERNAL MARKET FACTORS (E.G., ECONOMY), ETC.] [Objective 3a]

Structural and Operational Issues

12. [IF NOT ALREADY ADDRESSED] During your time participating in the program, was there anything about the process of participation that you found particularly challenging, or that you

think could be *improved upon*? [PROBE FOR EASE OF COMPLETING APPLICATION, LEVEL OF AND TIMING OF FINANCIAL COMMITMENT] [Objectives 2a]

13. Is there something NYSERDA or your consultant could have done differently that would have kept your company participating through to the completion and approval of the FlexTech study?

Study Quality and Outcomes

14. Did your company go on to complete a study on [TYPE OF FT STUDY] independently of the FlexTech program?
 - a. [IF YES] How was that funded, and did you use the same consultant who had been working with you during your participation in the FlexTech program?
 - b. Were you satisfied with the quality of that study?
15. Did your company ultimately install any efficiency measures as a result of the FlexTech study that you had begun to pursue?

Decision-Making Regarding Measure Implementation

16. [DO YOU PLAN TO RECIEVE / HAVE YOU RECEIVED] support from any other NYSERDA program or any utility programs to facilitate implementation of energy-efficiency-related improvements at your facility(ies)? [PROBE FOR WHETHER THE SUPPORT IS FOR WORK RELATED TO THE INITIATED STUDY, OR OTHER ANOTHER TYPE OF WORK] [Objective 5a]

Program Impacts and Satisfaction

17. On a scale of 0 – 10 (with 0 being highly unsatisfied, and 10 being highly satisfied), how satisfied are you with your overall experience of participating in the program? [Objective 6c]
18. [IF NOT DISCUSSED PREVIOUSLY] Would you consider participating in the program again in the future? [Objective 6c]
 - a. [IF NO] Why not?

Wrap-Up / Recommendations

19. What steps do you think the program could take to more effectively serve the market, or to improve the efficiency of program implementation? [Objective 6d]
20. Are there any other comments you'd like to share to help us better understand the program?

NYSERDA Flex Tech Process Evaluation: External Review Contractor Interview Guide

Draft 10/29/13

[**Context:** The Flex Tech program utilizes two external review contractors to assist at various stages in the project, primarily after the first draft of the final report has been prepared to check on how study activities compare to the scope of work, and to review the recommendations for technical merit and quality. These contractors will be interviewed to gain insight into program process flow, quality of reports prepared, appropriateness and diversity of measures recommended, and to a limited extent, insights into the role the program plays in serving the market.]

Contact Name:	
Contact Title:	
Company Name:	
Contact Phone:	
Contact Email:	
Company City:	
Interviewer:	
Communication Record: (dates, times of interviewee contacts)	
Completion Date:	
Notes:	

INTRODUCTION

Hello, my name is [INSERT NAME] and I'm calling from Navigant. We are part of the team hired to evaluate NYSERDA's FlexTech program. May I please speak with [TITLE/NAME]?

Our evaluation research is aimed at understanding what the program is doing particularly well and identifying steps the program could take to better serve the needs of the market in the future. I understand that you work as an external technical review consultant for the FlexTech program, and I'd like to speak with you to learn from your experience with the program. All information that you provide will be aggregated with data provided by other participants in the program, and your comments will remain anonymous. Your input will help guide the future of NYSERDA's FlexTech program. The questions should take about [45 minutes to an hour]. I'd like to suggest [SPECIFIC TIMES] as possible times to schedule our discussion. Do any of those times work well for you, or would you like to suggest a different time?

[SEND PROGRAM PROCESS FLOW DIAGRAM IN ADVANCE OF INTERVIEW. PRIOR TO INTERVIEW, CONFIRM MEETING TIME, AND OBTAIN APPROVAL TO RECORD INTERVIEW.]

REMINDERS

I have some prepared questions and also invite you to ask questions or raise topics during our interview. Just a few logistics to note:

- I want to reiterate that your responses throughout this process will be kept confidential by the study team and your comments will not be directly attributed to you without your prior consent.
- [IF RESPONDENT HAS APPROVED RECORDING OF INTERVIEW] As discussed, I am recording this interview to assist with my note-taking. This will improve the accuracy of my notes since it's difficult to take thorough notes and listen to your answers at the same time.
- I expect that the interview will take about 45 minutes to an hour. That said, do you have a certain time when we need to impose a hard-stop on our conversation?

Before we begin, do you have any questions about the study or the interview process?

INTERVIEW

Background

34. What is your technical background (e.g., training, years in the field)? [General Background]
35. For how many years have you been assisting NYSERDA as an external reviewer for the FT program? [General Background]
36. About what percentage of your time do you spend consulting as an external reviewer for the FlexTech program, and what types of other work do you engage in when you are not consulting for the FlexTech program? [PROBE FOR WHETHER RESPONDENT IS ENGAGED FULL-TIME IN THIS AND OTHER NYSERDA WORK, AND THE EXTENT TO WHICH HE/SHE IS ACTIVE IN BUILDING ENERGY SYSTEMS ENGINEERING OUTSIDE OF THE FT CONSULTING ROLE.] [General Background]
37. My understanding is that the role you play in FlexTech projects can vary from one to the next depending on the preferences of FlexTech program staff and the needs of the project. [Objective 2a, general background]
 - a. Please describe the "typical" role you play in a project.
 - b. What other roles do you play on less typical projects?

Program Participation

38. [IF EXTERNAL REVIEWERS INDICATE THEY HAVE A ROLE IN THE PROGRAM THAT INTERFACES DIRECTLY WITH PARTICIPANTS, CONSIDER ASKING THESE QUESTIONS:]
 - a. How effective do you think NYSERDA is in recruiting and informing potential program participants (both consultants and end users) about the opportunity to participate in the program? Specifically, for those who do not participate in the program, do you think it's due more to a lack of awareness or lack of interest? [Objectives 2e, 2f]

39. Do you think there is a significant untapped opportunity for certain types of studies? Are there certain segments of the market that are underserved by this program? [PROBE FOR SPECIFIC SEGMENTS: TYPES OF CUSTOMERS, GEOGRAPHIC DIVERSITY.] [Objective 2g]

Program Drivers and Barriers and Program's Role in the Market

40. [IF EXTERNAL REVIEWERS INDICATE THAT THEY HAVE SOME ROLE IN THE MARKET OTHER THAN REVIEWING THE TECHNICAL STUDIES, CONSIDER ASKING THESE QUESTIONS:]
- a. What do you think are the main reasons people choose to participate in the program? [Objective 3a]
 - i. [IF NOT MENTIONED, PROBE]: Do you think program funding is the primary motivator, or is the program viewed as a source of superior technical services, or an easy way to gain access to quality services?
 - b. What do you think are the main barriers to participating in the program, and are there additional steps you think the program could take to encourage companies to participate in the program? [Objective 3b]

Structural and Operational Issues

41. I understand that your firm works specifically on [X PROJECT TYPE]. How does your experience prepare you to review the study types that you review? [Objective 2a]
42. I sent you a program process flow diagram for your review prior to this call. [HAVE THEM OPEN THE DIAGRAM, AND THEN PROVIDE A HIGH-LEVEL OVERVIEW OF THE STRUCTURE OF THE DIAGRAM.] [Objective 2a]
- a. How well do you think that the diagram depicts how projects proceed through the program? Should any changes be made to the diagram to better reflect actual program processes?
43. How well do you think that the program model (NYSERDA program staff utilizing external technical review contractors, and the follow up data review process of buildings portal entry) serves the requirements of the program to conduct project review and reporting? [PROBE IF NEEDED: SHOULD THE PROGRAM CONSIDER BRINGING IN MORE STAFF?]
- a. How satisfied are you with the program procedures? Do you think the scope of services you are expected to provide is reasonable? [Objective 6c]

Study Quality and Outcomes

44. Please describe the nature of your review of the draft study reports. [Objective 2a]
45. To what extent do study recommendations generally reflect the latest advancements in building systems engineering and the energy efficiency industry? [Objective 6b]
46. In your technical review of draft reports, how often do you ask the service provider to make changes, or add additional detail?

- a. Specifically, do you ever ask service providers to provide insight into potential interactive effects that are tied to the evaluated measures? [Objectives 2a, 6b]
- 47. How often do consultants need to make extensive changes to a study after you complete the review? How many rounds of review comments, draft reports do you typically provide? [Objectives 2a, 6b]
- 48. Do you have a sense of how frequently *service providers* go on to implement the recommendations that they presented in the study? To what extent do you think service providers use the program as a tool to market the other services they provide? [Objective 3a]

Program Impacts and Satisfaction

- 49. Previous evaluations of this program have found that the rate of adoption of measures recommended in the studies is higher than in peer programs (i.e., more participants go on to implement recommendations than in peer programs). Why do you think that is the case? [Objective 5f]
- 50. To what extent do you think the program serves a critical function in the marketplace? [Objective 4]
 - a. The program will continue running, but if the program were to be discontinued, do you think that the market would naturally fill in any gap left?
 - b. To what extent do you think the program is contributing to growth in the energy efficiency markets as a whole? Is the program responsible for an increase in the number and quality of energy services companies (e.g., the types of companies that become FlexTech Consultants) active in the market? [Objective 6a]
- 51. Do you think program participants (both end users and service providers) are satisfied with the program? Why or why not? [Objective 6c]

Wrap-Up / Recommendations

- 52. What steps do you think the program could take to more effectively serve the market, or to improve the efficiency of program implementation? [Objective 6d]
- 53. Are there any other comments you'd like to share to help us better understand the program?

NYSERDA Flex Tech Process Evaluation: Other Market Actor Interview Guide

Draft: 11/27/13

[Context: This guide will be used with trade associations, utilities offering programs that include energy studies, and other organizations that have a perspective on the market context within which the program operates. The primary objective of these interviews is to gather perspectives on how well the program is serving the needs of the market, and the role of the program in the market.]

Contact Name:	
Contact Title:	
Company Name:	
Contact Phone:	
Contact Email:	
Company City:	
Interviewer:	
Communication Record: (dates, times of interviewee contacts)	
Completion Date:	
Notes:	

INTRODUCTION / RECRUITMENT

Hello, my name is [INSERT NAME] and I'm calling from Navigant. We are part of the team hired to evaluate NYSERDA's FlexTech program. May I please speak with [TITLE/NAME]?

[IF NO, OBTAIN CONTACT INFORMATION FOR APPROPRIATE CONTACT AND CONTINUE WITH APPROPRIATE CONTACT.]

The FlexTech program offers funding to support energy efficiency studies. Are you familiar with it? [IF NO, PROVIDE A BRIEF EXPLANATION.]

Our evaluation research is aimed at understanding what the program is doing particularly well, and steps the program could take to better serve the needs of the market in the future. As part of our evaluation we're speaking with a broad range of individuals to get a better sense of where this program fits into the broader energy-efficiency markets in New York, and how it complements or interacts with other programs that offer similar services. All information that you provide will be aggregated with data provided by other participants in the program, and your comments will remain anonymous. Your input will help guide the future of NYSERDA's FlexTech program, so the program can do a better job of serving the needs of the market. The questions should take about [30-45 minutes]. I'd like to suggest [SPECIFIC TIMES] as possible times to schedule our discussion. Do any of those times work well for you, or would you like to suggest a different time?

REMINDERS

The high level goals of my conversation with you are to gain a better understanding of:

- Whether the program is effectively serving the needs of the marketplace,
- How the program interacts with, and perhaps complements other similar programs available in New York,
- Any opportunities to enhance the impact or effectiveness of the program.

I have some prepared questions and also invite you to ask questions or raise topics during our interview that will help address those goals.

Just a few logistics to note:

- I want to reiterate that your responses throughout this process will be kept confidential by the study team and your comments will not be directly attributed to you without your prior consent.
- **[IF RESPONDENT HAS APPROVED RECORDING OF INTERVIEW]** As discussed, I am recording this interview to assist with my note-taking. It's difficult to take thorough notes and listen to your answers at the same time.
- I expect that the interview will take about 30-45 minutes. That said, do you have a certain time when we need to impose a hard-stop on our conversation?

Before we begin, do you have any questions about the study or the interview process?

INTERVIEW

Background

1. Could you describe your professional role and your experience in the commercial/industrial energy efficiency market in New York and elsewhere?
2. How familiar are you with the NYSERDA FlexTech program? **[IF UNFAMILIAR: The program provides a cost-share to support a variety of types of energy studies including feasibility studies, CHP studies, peak load curtailment plans, retrocommissioning, and energy master plans. The program maintains a list of competitively selected firms to conduct studies, and also funds studies conducted by independent firms that meet the programs requirements.]**
3. To what extent do you or does your firm/organization interact with the FlexTech program?
 - a. In what specific ways do you or does your firm/organization engage with FlexTech?
 - b. **[IF APPLICABLE]** Does your firm/organization provide any of the services supported by the FlexTech program? If so, which ones?

Program Marketing, Outreach, and Participation

4. How effective do you think NYSERDA is in recruiting and informing potential program participants (both consultants and end users) about the opportunity to participate in the program? Specifically, for those who do not participate in the program, do you think it's due more to a lack of awareness or lack of interest? [Objectives 2e, 2f]
5. Do you think there's a significant untapped opportunity in the market for certain types of buildings or market sectors to receive the energy studies like those offered through the FlexTech program? [IF YES, PROBE FOR SPECIFICS.] [Objective 2g]
6. What else could the program do to increase awareness among potential participants in the market (both consultants and end users)? [PROBE FOR SPECIFIC STEPS.] [Objective 2e]

Program Drivers and Barriers, and Program's Role in the Market

7. [FOR UTILITY PROGRAM STAFF] What could the FlexTech program do to facilitate better coordination with you?

[FOR ALL OTHER RESPONDENTS] What could the FlexTech program do to facilitate better coordination with your firm/organization/members?
8. To what extent do you think the program serves a critical function in the marketplace? [Objective 4]
9. The program will continue running, but, theoretically, if the program were to be discontinued, do you think that the market would naturally fill in any gap left? [PROBE FOR OTHER SIMILAR PROGRAMS AVAILABLE THAT SERVE A SIMILAR FUNCTION AND HOW THE TWO COMPARE / FILL UNIQUE NICHEs IN THE MARKET.]
10. What do you think are the main reasons end-use customers choose to participate in the program? [Objective 3a]
 - a. [PROBE IF NOT MENTIONED]: Do you think program funding is the primary motivator, or is the program viewed as a source of superior technical services, or an easy way to gain access to quality services?
11. What do you think are the main barriers to participating in the program, both for potential participating consultants and end-use customers? [Objective 3b]
 - b. What steps do you think the program could take to address those barriers and encourage greater participation in the program? [Objective 3b]

Decision-Making Regarding Measure Implementation

12. Once energy-efficiency opportunities are identified in general, what are the most substantial barriers to implementation of energy-efficiency measures?

- c. What steps do you think the program could take to align with end-use customers' decision-making processes to increase the adoption of recommended measures? [Objectives 5a, 5b]
13. [IF RESPONDENT HAS EXTENSIVE KNOWLEDGE OF THE PROGRAM.] Previous evaluations of this program have found that the rate of adoption of measures recommended in the studies is higher than in peer programs (i.e., more participants go on to implement recommendations than in peer programs). Why do you think that is the case? [Objective 5f]

Program Impacts and Satisfaction

14. What is your overall assessment of the program?
- a. What are its greatest strengths?
 - b. What types of improvements could be made to the program to make it more effective?
15. [IF RESPONDENT HAS EXTENSIVE KNOWLEDGE OF THE PROGRAM.] To what extent do you think the program is contributing to growth in the energy efficiency markets as a whole? To what extent is the program responsible for an increase in the number and quality of energy services companies active in the market? [Objective 6a]

Closing

16. Do you have any other thoughts or ideas of steps the FlexTech program could take to increase its impact?

NYSERDA Flex Tech Process Evaluation: Program Staff Interview Guide

Draft: 10/1/13

Contact Name:	
Contact Title:	
Company Name:	
Contact Phone:	
Contact Email:	
Company City:	
Interviewer:	
Communication Record: (dates, times of interviewee contacts)	
Completion Date:	
Notes:	

REMINDERS

I have some prepared questions and also invite you to ask questions or raise topics during our interview. Just a few logistics to note:

- I want to reiterate that your responses throughout this process will be kept confidential by the study team and your comments will not be directly attributed to you without your prior consent.
- [\[IF RESPONDENT HAS APPROVED RECORDING OF INTERVIEW\]](#) As discussed, I am recording this interview to assist with my note-taking. This helps assure the accuracy of my notes since it's difficult to take thorough notes and listen to your answers at the same time.
- I expect that the interview will take about an hour. That said, do you have a certain time when we need to impose a hard-stop on our conversation?
- Some of the topics I'll address are things we have touched on in past communications, but I want to provide an opportunity for you to share your own perspective on the issue, and to provide additional insights. We can quickly move past those questions if you tell me you don't have anything additional to add.

Before we begin, do you have any questions about the study or the interview process?

INTERVIEW

Background: Program and Targets

1. Are the program budget and savings targets presented in the **EEPS 2012-2015 Operating Plan** still in effect or have there been amendments? Specifically, the program's electric

- budget cited in that Plan is ~\$ 52 M from 2012-2015 (2013: \$13 M), and the gas budget is ~\$3.4 M from 2012-2018 (2013: \$755 k). The savings targets cited are 758,120 MWh from 2012 – 2017, and 711,553 dTh from 2012-2018. [ALL REFERENCES TO 2012 START ACTUALLY REFER TO START AT 10/25/11 ORDER. [PROBE FOR WHETHER THE GOALS AND OBJECTIVES ACCURATELY REFLECT STAFF’S ACTUAL APPROACH TO RUNNING THE PROGRAM, AND WHETHER PROGRAM IS GENERALLY ON TRACK TO MEET THOSE PROJECTIONS.](#)] [[General Background](#)]
- a. Could you explain why the “Gas Program” budget and savings targets extend through 2018, whereas the “Electric Program” budget only extends through 2017? [[OEM BUDGET DROPS FROM \\$500K DOWN TO \\$12K IN 2016- SIGNALING THE PROGRAM MAY SHIFT INTO COMPLETING PIPELINE PROJECT ACTIVITY DURING 2016 – 2017.](#)]
 - b. Why is it that these budgets and savings targets extend beyond the 2015 end of EEPS funding period?
2. Does the program maintain internal goals for achieving a certain level of program activity in each of the three main program categories (Energy Efficiency, CHP, Peak Load Curtailment Plans)? If so, what are they? [[General Background](#)]
 3. Are there any relatively recent changes to the program that we should be aware of?
 4. How important is it to you for us to report our findings segmented by upstate/downstate regions? [[General Background](#)]

Program Marketing, Outreach and Participation

5. As part of the discussion of Outreach and Education/Marketing (OEM) for the FlexTech Program, the Operating Plan makes reference to “Vertical Outreach Contractors” who are responsible for handling leads generated through the customer relationship management (CRM) system. Please describe how the FlexTech program interacts with these contractors. [[Objective 2e](#)]
 - a. Are there any aspects of this system of having marketing and outreach go through this statewide channel [[FIRST IMPLEMENTED IN 2010](#)] that could be improved upon? [[Objective 2a](#)]
6. What steps do program staff and/or Vertical Outreach Coordinators take to increase program awareness among non-participants? [[Objective 2f](#)]
 - a. Do you think program awareness is high among non-participants? Is there more the program could be doing to increase awareness of the program? [[Objective 2f](#)]
7. Could you describe how a “lead” from the customer relationship management (CRM) system eventually makes its way into the program? [[Objectives 2a, 2e](#)]
8. How does program staff determine when and with which companies to conduct scoping meetings? [[Objective 2a](#)]

9. Do you think there's a significant untapped opportunity for certain types of studies? Are there certain segments of the market that are underserved by this program? Do you think there is sufficient geographic diversity in program activity as well?

Program Drivers and Barriers and Role within the Market / NYSERDA Portfolio

10. What do you think are the main reasons people choose to participate in the program? [Objective 3a]
- a. [PROBE IF NOT MENTIONED]: Do you think program funding is the primary motivator, or is the program viewed as a source of superior technical services, or an easy way to gain access to quality services?
11. What do you think are the main barriers to participating in the program? [Objective 3b]
12. Are there additional steps you think the program could take to encourage companies to participate? [Objective 3b]
13. During our meeting in August, you briefly described some efforts to coordinate with utilities, referencing a data center program on which NYSERDA coordinated with Con Ed, and a hospital / healthcare program on which NYSERDA partnered with National Grid. Are there new initiatives in the works in coordination with other market actors or program administrators (e.g., utilities, entities administering related energy-efficiency initiatives, the NYISO) to try to ensure the ways in which each supports the market are complementary? Are there any FlexTech-specific efforts in this area? [Objective 2b]
14. We want to make sure we're aware of other programs or initiatives that provide similar services to a similar target population as FlexTech. We're aware:
- that National Grid's and Orange and Rockland's Non-Residential Energy Efficiency programs both offer participants a 50% cost-share on technical assistance services, and
 - that a few of the utility programs (e.g., Con Ed, NYSG and RG&E) offer free energy audits upon entry to their programs, or if a participant is completing custom measures. [General Background]
- a. Are there other programs we should be aware of?
- b. Is it allowable for customers in National Grid and Orange and Rockland territories to take advantage of technical assistance funding from both their utility and NYSERDA? If so, is it commonly done? [Objective 4]
15. If FlexTech were to go away, how would the market for energy efficient products and services change? To what extent would end users in the market be left with significant unmet needs? [Objective 4]

Structural and Operational Issues

16. We recently reviewed the program process flow diagram with [YOU / SOME PROGRAM STAFF], and we discussed whether we had accurately depicted how projects flow through program. Are there any components of the program process flow that you think the program could *improve upon*? [Objectives 2a, 6c]

- Are you aware of any program processes that might cause dissatisfaction on the part of participating contractors or end users?
17. Has the program encountered any significant issues with project delays? If so, what typically causes those delays? [Objectives 2a]
 18. Is the program still placing an emphasis on servicing ratepayers in the Consolidated Edison and Orange and Rockland service territories due to load constraints and higher energy costs in those locations? [REFERENCE: LOGIC MODEL, P. 3] [Objectives 2c, 2g]
 19. Are there certain priority industry sectors the program is currently targeting? [Objective 2g]
 20. The EEPS 2012-2015 Operating Plan includes discussion of trade ally training efforts (e.g., annual orientation sessions, meetings to explain program expectations before project initiation, and outreach efforts in coordination with Business Partners and Workforce Development Programs.). However, the budget line item for “trade ally training” shows no spending allocated to these efforts. Could you comment on the extent to which trade ally training activity is taking place as part of this program? [Objective 2a]
 21. As a follow up to some comments on our draft interview guides:
 - I understand there are two firms that conduct External Technical Review work, and one firm that conducts QA / QC work. During the kickoff meeting, you and Jaime indicated that that the two ETR contacts we should speak with are: Brenden Kelly @ LNS Energy Services and Eric Burka @ Bergman & Associates.
 - a. Among the two firms that conduct ETR work, is there any division of labor in terms of the types of projects each firm works on?
 - b. In a comment on the ETR interview guide, you noted, “There are “pools:” of review firms to choose from. Not all firms are used for all programs and programs rotate some firms.” Previously you indicated that there were two firms that conduct this work. Could you elaborate on that? Are there more firms that conduct this work?
 - c. Why is it that ETRs do not review PLCPs?

Decision Making Regarding Measure Implementation

22. Previous evaluations of this program have found that the rate of adoption of measures recommended in the studies is higher than in peer programs (i.e., more participants go on to implement recommendations than in peer programs). What factors do you think contribute to that difference? [Objective 5f]
23. What are the most substantial barriers to implementation of program-recommended measures? [Objective 5b]
 - What do you find most challenging about trying to affect end-use customers’ decision-making? [Objective 5b]
 - What additional steps do you think the program could take to affect decision-making in these areas? [Objective 5b]

24. Do you find that some types of end-use participants are more likely to implement recommendations than others? [IF YES] Which types? Why do you think that is? [Objective 5b]

Program Impacts and Satisfaction

25. How do you think program is contributing to growth in the energy efficiency markets as a whole?
- To what extent is the program responsible for an increase in the number of energy services companies (e.g., the types of companies that become FlexTech Consultants) entering the market? [Objective 6a]
26. Could you comment on the quality of the services provided by the FlexTech consultants and independent service providers? [Objective 6b]
- a. How do the external review contractors contribute to the overall quality of the studies completed by consultants? [Objectives 2a, 6b]
27. Do you think program participants (both end users and service providers) are satisfied with the program? Why or why not? [Objective 6c]
- a. What aspects of program participation are most challenging for end users and consultants, and are there steps the program could take to address these challenges?

Wrap Up

28. We're looking to conduct interviews with Other Market Actors that do not fit into the designated interview categories for this program (i.e., participating and partially participating end users, FlexTech Contractors, Independent Service Providers, program staff, external review contractors). Do you have any recommendations about someone who we should interview because of the expertise or unique perspective on the market?
29. Are there any other comments you'd like to share to help us better understand the program?