

Matter Number 16-00681, In the Matter of the Clean Energy Fund  
Investment Plan

# Clean Energy Fund Investment Plan: Communities Chapter

Portfolio: Market Development

**Submitted by:**

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

Revised November 1, 2017

Clean Energy Fund Investment Plan: Communities Chapter		
<b>Revision Date</b>	<b>Description of Changes</b>	<b>Revision on Page(s)</b>
April 29, 2016	Original Issue	Original Issue
March 3, 2017	Added Communities Energy Engagement initiative	Multiple
June 23, 2017	Revised benefit estimates to reflect updated data. Tables 1, 2, 4, 5, 6a, 6b, 7 and 8 have been updated to reflect this revision, 2016 actual values, and a shift in timing of budget and benefits.	Multiple
July 17, 2017	Updated to correct an error in the allocation of committed funds between RGGI and CEF in 2016. Tables 1 and 2 have been updated to reflect CEF committed funds in 2016, and Tables 4, 5, 6a, and 6b have been updated to show revised benefits.	Multiple
November 1, 2017	Updated the baseline values in Table 3 to reflect latest data available. In addition, updated 2019 values to show cumulative targets rather than incremental targets as previously filed. Added a new Table 4 to provide additional detail on the baseline values. Renumbered subsequent tables accordingly.	13-14

## 6 Communities

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This plan has been updated to reflect a timing shift in when budgets, benefits, and participants will be committed. Since program launch, NYSERDA has acquired additional data from applications that have been submitted since the program launched on which to base savings estimates. Estimates have been updated accordingly based on factors such as preliminary program participation rates, participant attributes, and some verified project savings. This revision also includes a minor adjustment to the RGGI budget (-\$97,512) due to a technical assistance contract being executed for less than originally anticipated. Finally, the CEF Only share of “CO<sub>2</sub>e Emission Reduction (metric tons) Annual” (Table 5) went down slightly, while the overall program portfolio of emissions reductions increased. This change is due to CEF Only savings originally being more heavily weighted on anticipated savings from grant projects, which were also more heavily weighted in fossil fuel savings. After revising the grant project savings estimates to more accurately reflect the expected variety of projects, the overall savings associated with fossil fuels were reduced by a larger percentage than electric, disproportionately affecting the CEF Only emission reductions.

NYSERDA aims to enable and partner with local governments and communities in affecting energy choices in their communities, government operations, homes, businesses, and community institutions. Local governments and communities also struggle with the lack of funding, staff capacity, and inability to prioritize the highest impact clean energy actions. NYSERDA will engage with local governments and communities to focus on addressing these issues.

The first initiative described in this Chapter is the Clean Energy Communities initiative, which will provide grants, direct technical support, tools and resources, and recognition to local governments that demonstrate leadership in clean energy. Clean Energy Communities will help to decrease resources communities need to advance clean energy in their neighborhoods, demonstrate the benefits of such investments, and encourage replication throughout communities and across the State. The second initiative described in this Chapter is the Community Energy Engagement Program, which will deploy locally-based organizations to drive energy efficiency and renewable energy deployment to residential, multi-family, and small business customers. The Community Energy Engagement Program will focus on improving energy affordability and increasing deployment of distributed energy resources, with an emphasis on LMI households and communities. Additionally, this effort will increase access to financing for LMI communities and households and shall create opportunities for green jobs.

Projected additional initiatives under development include development of additional resources aimed at helping resource-constrained and staff-strapped local governments and communities through partnerships with universities, local associations, and other organizations. In addition, NYSERDA will develop competitions aimed at challenging communities to take innovative clean energy actions through a variety of structured, NYSERDA-funded community competitions.

Program investments and activities will be informed via engagement with stakeholders and subject matter experts.

## 6.1 Clean Energy Communities

### 6.1.1 Overview

<b>Present Situation</b>	Many local governments in New York State are not aware of the clean energy opportunities that are available to them. Those that are aware of the opportunities often struggle with how to prioritize, and eventually implement, the most impactful actions.
<b>Intervention Strategy</b>	The “Clean Energy Communities Program” will drive energy efficiency and deployment of clean energy in local government (‘municipality’ or ‘community’ – villages, cities, towns, and counties) operations and within the communities where local governments have control (i.e., permitting for renewable energy). NYSERDA will provide technical assistance, outreach, engineering support, tools, and clear guidance for implementing 10 low cost, clean energy High-Impact Actions, listed in Activities Section below. Upon completion of at least 4 of those High-Impact Actions, NYSERDA will reward local governments with recognition and grant funding to implement more innovative clean energy initiatives and demonstration projects. This strategy encourages replication by promoting the successes of participating local governments and demonstrating, with real-world data, the cost-effectiveness of specific High-Impact Actions. The Clean Energy Communities Program will serve as the primary entry for local governments into the State’s clean energy programs and will complement the State’s existing, and more comprehensive, Climate Smart Communities (CSC) Certification Program <sup>1</sup> and the recent Public Service Commission’s approval of Statewide Community Choice Aggregation (CCA). <sup>2</sup> By supporting initial local government clean energy action through the Clean Energy Communities Program, NYSERDA expects that communities will gain the capacity needed to take on more projects that could eventually lead to CSC Certification. Many communities have expressed an interest and a willingness to take on clean energy actions, but have indicated that they aren’t sure where to start. The Clean Energy Communities Program will finally provide local governments with a simple, but robust, framework to guide them through implementation of the most impactful clean energy actions. For a visual representation of this strategy, please reference the flow chart entitled “Logic Model: Clean Energy Communities,” which can be found in Appendix A.
<b>Goals</b>	<ul style="list-style-type: none"> <li>• Decrease the amount of time, expertise, and funding needed to prioritize and implement clean energy actions in New York State communities.</li> <li>• Increase adoption of high-impact, clean energy policies and actions in city, town, village, and county governments across New York State.</li> <li>• Support and replicate innovative clean energy initiatives and demonstration projects.</li> <li>• Demonstrate the value proposition associated with high-impact clean energy actions.</li> </ul>

<sup>1</sup> U<sup>1</sup> The Climate Smart Communities Certification program provides local governments with a robust framework to guide their climate action and enables high-performing communities to achieve recognition for their leadership. Designed around ten pledge elements, the certification program recognizes communities for their accomplishments through a rating system leading to four levels of award: Certified, Bronze, Silver, and Gold. Participating communities are also eligible to apply for \$11 Million worth of Climate Smart Communities grant funding focusing on climate change mitigation and adaptation. The program is jointly sponsored by six New York State agencies: The Departments of State (DOS), Health (DOH), and Transportation (DOT), NYSERDA, the Public Service Commission, and the Department of Environmental Conservation (DEC), which administers the program.

<sup>2</sup> Case 14-M-0224. Proceeding on Motion of the Commission to Enable Community Choice Aggregation Programs, Order Authorizing Framework for Community Choice Aggregation Opt-Out Program, filed April 21, 2016.

<b>State Energy Plan/Clean Energy Standard Link</b>	<ul style="list-style-type: none"> <li>Supports State Energy Plan (SEP) goals for the interagency New York State Community Partnership<sup>3</sup> (NYSCP) initiative: providing packaged clean energy resources that will help communities save on energy costs, stimulate their local clean economies, and reduce greenhouse gas (GHG) emissions</li> </ul>
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### 6.1.2 Target Market Characterization

<b>Target Market</b>	<p>Primary: Local Government Operations/Municipalities (initial roll-out to a subset of 80 communities, explained in more detail in the Market Readiness section)  Secondary: Private and public transportation, Commercial and Residential Buildings</p> <p><u>Composition of 1,601 General Purpose Local Governments (Municipalities) in New York State</u>  Villages: 545  Cities: 62  Towns: 932  Counties: 62</p> <p>Local government elected officials, public works officials, non-governmental organizations (i.e., Chambers of Commerce), community volunteers, and private consultants, as well as utility and industry representatives.</p> <p>Early Adopter Municipalities</p> <ul style="list-style-type: none"> <li>Climate Smart Communities tend to have higher levels of involvement in all community-related state offerings, have already undertaken many actions, and are likely to recognize the benefits of doing more going forward. Their feedback as early adopters will be critical in shaping the Clean Energy Communities Program strategy going forward. The tools, guidance, and technical support that were made available to communities during the Climate Smart Communities Coordinators Pilot Program proved to be successful as demonstrated by the progress made by many of the participating communities. Year-end reports summarizing the successes and lessons learned in each of the pilot regions involved in the program can be found on the Department of Environmental Conservation’s website: <a href="http://www.dec.ny.gov/energy/84508.html">http://www.dec.ny.gov/energy/84508.html</a>.</li> </ul> <p>Mid-Late Adopter Municipalities</p> <ul style="list-style-type: none"> <li>Tying grant funding to adoption of four or more High-Impact Actions will encourage mid-late adopters to initiate action, realize benefits, and eventually implement more advanced actions with grant funding. NYSERDA expects to see increased rates of participation within six months to a year of launching the Clean Energy Communities Program, after mid-late adopter municipalities have had time to implement some of the High-Impact Actions.</li> </ul>
<b>Market Participants</b>	CSC and Clean Energy Communities program partnering agencies, including the New York State DEC, DOT, DOH, DOS, the Public Service Commission, the New York Power Authority (NYPA), and the Governor’s Office.

<sup>3</sup> The New York State Community Partnership (NYSCP) is New York State’s new, unified approach to driving clean energy action and energy literacy in local governments and communities across the state. The NYSCP and associated program components are managed by a dedicated NYSERDA staff team working in close collaboration with the Governor’s Office, the New York Power Authority NYPA, the Department of Public Service, and the Department of Environmental conservation.

	<ul style="list-style-type: none"> <li>• Provide technical expertise and input regarding High-Impact Actions and associated tools and resources, including alignment with existing agency offerings.</li> <li>• Provide ongoing input regarding overall structure of Clean Energy Communities program.</li> </ul> <p>Private consultants, engineering firms, and other clean energy service providers</p> <ul style="list-style-type: none"> <li>• Work with municipalities to implement innovative clean energy projects.</li> </ul> <p>Partner Organizations (environmental groups, schools, etc.)</p> <ul style="list-style-type: none"> <li>• Help to promote High-Impact Actions and provide support to communities in line with existing organizational goals.</li> <li>• Help to organize and host events related to organizational goals.</li> </ul> <p>Local government elected officials, public works officials, non-governmental organizations (i.e., Chambers of Commerce), community volunteers, and private consultants, as well as utility and industry representatives.</p>
<p><b>Market Readiness</b></p>	<p>Municipal officials – At least 423 (26%) municipalities in New York State have participated in one or more of the following clean energy programs. 49 municipalities have participated in 3 or more, demonstrating there is municipal interest in clean energy.</p> <ul style="list-style-type: none"> <li>• Adopted Unified Solar Permit</li> <li>• Adopted streamlined electric vehicle supply equipment permitting</li> <li>• NY Prize</li> <li>• Property Assessed Clean Energy (PACE) Financing</li> <li>• Community Solar</li> <li>• NYPA Energy Services Project</li> <li>• CSC</li> <li>• CSC Certified</li> </ul> <p>In addition, over the past 6 years, the CSC program, a strong indicator of municipal interest in clean energy, has seen significant growth. To date, 170 municipalities in New York have joined the CSC program and more continue to join each month. Over the past couple of years, they have been joining at an increasing rate. Most of these communities have been diligently working to implement clean energy and sustainability initiatives and are eager for more support.</p> <p>NYSERDA also interviewed more than 50 municipal representatives and other stakeholders (i.e., regional planning organizations) to understand what High-Impact Actions would be of interest to communities, including barriers to adoption, and developed the list accordingly. While the Clean Energy Communities Program is open to any municipality, NYSERDA’s initial roll-out is going to target 80 specific municipalities for proactive outreach. These municipalities were selected based on the following criteria to help ensure success:</p> <ul style="list-style-type: none"> <li>• Geographic parity.</li> <li>• Record of previous accomplishments indicating willingness to go further. <ul style="list-style-type: none"> <li>○ Track record of participation in CSC, CSC Certification, PACE, Unified Solar Permit, Community Solar, NY Prize, and NYPA Energy Services.</li> <li>○ Only 1 of the 80 has taken no action.</li> </ul> </li> <li>• Favored medium and large population communities to leverage impact, but also included small communities to assess replicability of actions across New York’s approximately 1000 smaller communities.</li> </ul>

	<ul style="list-style-type: none"> <li>Selected the Five Cities, which are highly likely to participate, so that they can be held up as case studies for other communities early on.</li> </ul> <p>Emerging Partners Include:</p> <ul style="list-style-type: none"> <li>Sustainable Westchester provides lessons learned in developing and implementing Community Choice Aggregation (CCA) for municipalities in Westchester County.</li> <li>NYPA – provides technical assistance, project management services, and financing for energy upgrades</li> <li>New York State DEC – provides joint support for CSC Certification, which will award credit for Clean Energy Community High-Impact Actions</li> <li>Natural Resources Defense Council (NRDC) – Provides assistance with developing guidance and support materials essential for communities implementing High-Impact Actions</li> <li>New York State DOS: Developing updated green building standards (NY Stretch)</li> <li>Other potential partners include organizations whose mission relates to clean energy. NYSERDA will work to develop new and expand existing relationships with all relevant or interested partners.</li> </ul> <p>In general, there has been an increasingly strong focus on community clean energy and sustainability initiatives recently as evidenced by the growth of organizations such as ICLEI<sup>4</sup> for- Local Governments for Sustainability, the Compact of Mayors, and the Urban Sustainability Directors Network.</p>
<b>Customer Value</b>	<ul style="list-style-type: none"> <li>Local government leaders constantly struggle with where to start and what to prioritize with respect to clean energy action. NYSERDA will provide them with tools and resources to accomplish the following: <ul style="list-style-type: none"> <li>Reduce the cost of implementing clean energy actions.</li> <li>Reduce information overload, giving municipalities clear options and a path forward.</li> <li>Alleviate confusion regarding prioritizing highest impact actions and what State support is available.</li> <li>Refocus on most impactful actions to facilitate participation and increase penetration of those actions.</li> <li>Animate consumer demand by clarifying available resources and recommended actions.</li> </ul> </li> <li>Local governments also struggle with staff capacity and lack of technical knowledge. The combination of technical assistance, outreach, engineering support, and tools will not only help municipalities overcome this barrier in the near term, it will help to build capacity and an institutionalized knowledge base for them to take future action with less external support.</li> <li>Lack of funding is a critical barrier in local governments. The Clean Energy Communities Program motivates communities to implement High-Impact Actions (i.e., benchmarking laws) by offering rewards in the form of grant funding for future projects.</li> <li>The flexible grant structure (no narrowly defined eligible project types) allows municipalities to come to NYSERDA for support without trying to fit their well-planned, innovative projects into currently available solicitations that are not a good fit. Providing this ongoing opportunity reduces the amount of time municipalities need to spend searching for solicitations, applying, and failing,</li> </ul>

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<sup>4</sup> ICLEI originally stood for “International Council for Local Environmental Initiatives,” but the full phrase has since been dropped.

	<p>and makes it more likely that they will dedicate staff time to developing a great project.</p> <ul style="list-style-type: none"> <li>• The grant funding also creates demand for innovative solutions in communities, providing a market ripe for the most innovative companies, including clean energy providers, to bring their business to New York State.</li> </ul> <p>In addition to grant funding, local governments will also receive numerous other benefits associated with implementation of the High-Impact Actions. For example, communities that would like to implement the Solarize Community High-Impact Action are eligible to apply for funding to support outreach and marketing efforts through NYSERDA’s Community Solar program. Similarly, communities that adopt the Unified Solar Permit are eligible for incentives through NYSERDA’s existing Streamlined Permitting program.</p> <ul style="list-style-type: none"> <li>• While the High-Impact Actions require little to no up-front investment, the staff time associated with implementing them varies widely by community. Developing refined estimates will be a focus of immediate and ongoing market research to give communities a better up-front understanding of the amount of time and effort required to complete each High-Impact Action. Expected direct financial benefits<sup>5</sup> include approximately \$29 million in annual energy cost savings through 2019, cumulatively totaling more than \$433 million saved by 2030. Without investment in the Clean Energy Communities program. NYSERDA estimates that uptake of the High-Impact Actions, and the associated savings, would be reduced by approximately 75%<sup>6</sup>.</li> </ul>
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6.1.3 Stakeholder/Market Engagement

<b>Stakeholder/Market Engagement</b>	<p>To-date:</p> <ul style="list-style-type: none"> <li>• Developed, and will continue to refine, overall program structure and list of High-Impact Actions in collaboration with NYPA, DEC, Governor’s office, municipal representatives, other New York State agency partners, and the private sector.</li> <li>• Interviewed 50+ communities asking them what actions they’ve taken, what they would like to do, and what support they need to do it.</li> </ul> <p>Planned:</p> <ul style="list-style-type: none"> <li>• Continued engagement with stakeholders and key market partners to gather real-time feedback on the success of the strategy, remaining barriers, and market changes.</li> <li>• Continue outreach: In-person meetings, webinars, and conference presentations.</li> <li>• NYSERDA will also utilize the Clean Energy Advisory Council (CEAC) to engage with stakeholders, as appropriate.<sup>7</sup></li> </ul>
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<sup>5</sup> Benefits are based on approximately 800 actions being implemented by approximately 300 communities (approximately 2.5 actions each on average), 163 of which (including the initial target 80) NYSERDA expects will implement enough to be designated Clean Energy Communities, through 2019.

<sup>6</sup> Currently, only 75 communities have implemented 2 or more comparable actions (i.e., participating in NY Prize). By increasing uptake to 300 communities, NYSERDA more than triples the number of communities implementing High-Impact actions. (75/300 = 25%)

<sup>7</sup> The Clean Energy Advisory Council was established by the Public Service Commission through an Order in the Clean Energy Fund Proceeding (Case 14-M-0094. et al, Proceeding on Motion of the Commission to Consider a Clean Energy Fund, Order Authorizing the Clean Energy Fund Framework, filed January 21, 2016).



## 6.1.4 Theory of Change

<b>Market Barriers Addressed</b>	<ul style="list-style-type: none"> <li>• Many municipalities lack information regarding what clean energy opportunities exist, have inadequate financial resources readily available for implementing clean energy projects, lack staff capacity, and often do not have the in-house technical knowledge needed to properly implement clean energy projects.</li> <li>• There are few opportunities for municipal staff to engage in peer-to-peer exchange to learn from the successes of other, similar municipalities.</li> <li>• Municipalities that are aware of clean energy opportunities or programs are often overwhelmed with too many choices and have trouble prioritizing the highest impact actions.</li> <li>• There is no reliable (ongoing), open source of funding that municipalities know will be there if they take the time to put together plans for innovative clean energy projects.</li> </ul>
<b>Testable Hypotheses</b>	<ul style="list-style-type: none"> <li>• If templates and standardized tools highlight the most impactful clean energy actions and take the guess work out of prioritization of initiatives, then more communities will act.</li> <li>• If competition, rewards, and recognition are provided, then uptake of clean energy actions among the State’s municipalities will increase.</li> <li>• If communities with unique values and priorities are presented with a limited number of tailored options with clear value propositions, then they will be more likely to act.</li> </ul>
<b>Activities</b>	<p><u>All activities are ultimately intended to increase adoption of the following High-Impact Actions among municipalities in New York State:</u></p> <ol style="list-style-type: none"> <li> <b>1. Benchmarking</b>  Municipalities adopt a policy to report the energy use of municipal buildings on an annual basis and, in large communities, municipalities also adopt legislation requiring the annual disclosure of energy use in large private buildings. </li> <li> <b>2. Clean Energy Upgrades</b>  Municipalities achieve a 10 percent reduction in the greenhouse gas emissions from municipal buildings through energy efficiency upgrades and renewable energy. </li> <li> <b>3. LED Street Lights</b>  Municipalities convert at least half of the municipal “cobra-head” style street lights within the jurisdiction to energy-efficient light-emitting diode (LED) technology. </li> <li> <b>4. Clean Fleets</b>  Municipalities increase the deployment of alternative fuel vehicles by installing electric vehicle charging stations or other alternative fuel infrastructure and/or by expediting permitting for charging stations. </li> <li> <b>5. Solarize</b>  Municipalities undertake a solarize campaign to increase the number of solar rooftops in the jurisdiction through group purchasing, locally-organized community education and outreach, and a limited time offer. </li> <li> <b>6. Unified Solar Permit</b>  Municipalities pass an ordinance to adopt the New York State Unified Solar Permit to reduce costs and delays for solar projects in the jurisdiction. </li> </ol>

**7. Energy Code Enforcement Training**

Municipalities train code compliance officers and other municipal officials in best practices in energy code enforcement through training, collaborative plans reviews, and joint onsite inspections of local construction projects.

**8. Climate Smart Communities Certification**

Municipalities earn Climate Smart Community (CSC) Certification at the certified, bronze, silver and gold levels through compliance with this robust, comprehensive rating system.

**9. Community Choice Aggregation**

Municipalities transition to a cleaner, more affordable energy supply by passing an ordinance to allow for the aggregated purchase of electric and gas supply for residential and commercial customers within the jurisdiction.

**10. Property Assessed Clean Energy (PACE) Financing**

Municipalities help property owners undertake clean energy improvements to commercial properties by passing an ordinance to establish a Property Assessed Clean Energy (PACE) financing program.

Activities/Outputs:

*1. Accelerate the development of tools, resources, and policies for successful deployment of High Impact Actions (2016-2019)*

- NYSERDA will develop standard packages of tools and resources for the High-Impact Actions, including benefits and best practices. Tools and resources will be made publicly available to all communities regardless of program participation status.
- Implement Customer Relationship Management (i.e., Salesforce) software for NYSERDA to track community progress of High-Impact Actions and innovative project implementation.
- As certain High-Impact Actions become widely adopted or standard practice, NYSERDA will begin developing and promoting tools and resources for new High-Impact Actions with the next highest potential impact, gradually phasing out previous actions (“grandfathering” them in) to ensure the success of communities currently working on implementation.
- In addition to being phased out after successful adoption across the state, High-Impact Actions may also be adjusted, phased out, or newly developed based on a variety of other factors including, but not limited to, level of uptake in communities relative to other actions, changes in the regulatory environment, consistency with NYSERDA and other New York State agency program offerings, and availability of external assistance, such as federal programs, tools, and resources.
- Compile data and lessons learned from successful implementation of the High-Impact Actions and consequently adjust the outreach strategy, program requirements, and tools and resources to ensure the most impactful subsequent implementation.

*2. Provide Technical Assistance (2016-2019)*

- NYSERDA will provide free, on-demand, locally-based general technical assistance, including supplemental engineering support services, with contractors covering every region of New York State. Technical assistance providers will work with one-on-one with communities, providing overall guidance and assistance with using the tools and resources. Monitoring the usefulness of the tools and resources, they will also work with NYSERDA to refine them based on feedback from municipalities. For communities implementing actions that require more specific technical expertise, the supplemental engineering support contractors

	<p>can provide more in-depth services, such as energy audits or assessments. (Technical assistance, although supporting this effort, is funded via a separate funding source (Regional Greenhouse Gas Initiative auction proceeds – RGGI) and is not included in the budget for this Investment Plan. Supplemental engineering support services are included.)</p> <p><i>3. Assist Communities with achieving the Clean Energy Communities designation (2016-2019)</i></p> <ul style="list-style-type: none"> <li>• Assist communities with achieving the Clean Energy Community designation. To accomplish this objective, municipalities will advance through a five-step process facilitated by NYSERDA and its technical assistance and engineering support network: <ul style="list-style-type: none"> <li>Step 1) NYSERDA engages with Municipalities to complete a survey to capture baseline information</li> <li>Step 2) NYSERDA will work with the municipality to identify the recommended high impact actions most applicable to each municipality.</li> <li>Step 3) NYSERDA and the municipality will work together to develop a detailed action plan with the support of state tools and resources.</li> <li>Step 4) Municipalities document and report at least 4 High-Impact Actions taken.</li> <li>Step 5) Municipalities will be designated a Clean Energy Community to earn recognition and be eligible to apply for grant funding for more innovative projects.</li> </ul> </li> </ul> <p><i>4. Provide an on-line communications and resource portal for peer-to-peer learning and engagement (initially rolled out by Q4 2016, enhancements ongoing through 2019)</i></p> <ul style="list-style-type: none"> <li>• Develop and implement an interactive, online communications and resource portal (Clean Energy Communities Portal) hosting publicly available tools and resources. Include a peer-to-peer learning platform, a mechanism to distribute aggregated community-level energy use data<sup>8</sup> by sector, and a link with the Customer Relationship Management software for communities to track progress.</li> </ul> <p><i>5. Provide innovation and replication support (2016-2019)</i></p> <ul style="list-style-type: none"> <li>• Offer flexible grants for implementation of innovative clean energy projects to communities that have achieved the Clean Energy Community designation.</li> <li>• Host regular summits and other, less formal meetings through which community leaders can learn from one another, exchange best practices, provide feedback to NYSERDA, and learn about new opportunities from the State.</li> </ul> <p><i>6. Provide quality assurance, making periodic adjustments as needed in response to the needs of the communities (2016-2019)</i></p> <ul style="list-style-type: none"> <li>• Adjust the list of High-Impact Actions periodically, including new tools and resources, in accordance with market demand and changing community needs.</li> <li>• Conduct ongoing market research to fully understand the current needs of communities and changing market conditions.</li> </ul> <p>The combination of technical assistance, outreach, engineering support, tools, resources, and dedicated funding will provide the foundation necessary to enable</p>
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<sup>8</sup> Data will be collected and distributed in accordance with all privacy rules established by the Public Service Commission. Efforts are already underway to make this non-private, aggregated (on a community-level by service class) data easily accessible for community clean energy planning and tracking purposes.

	communities to undertake clean energy actions and projects. One of the key aims of this support structure is to help build the capacity needed for local governments and communities to take future action on their own.
<b>Key Milestones</b>	<p><u>Milestone 1</u></p> <ul style="list-style-type: none"> <li>80 communities complete, and demonstrate replicability of, four out of ten High-Impact Actions and submit successful grant applications to the Clean Energy Communities Program to complete innovative clean energy projects.</li> </ul> <p><u>Milestone 2</u></p> <ul style="list-style-type: none"> <li>After realizing the benefits associated with completing High-Impact Actions, many communities go on to pursue the more rigorous CSC Certification. The number of Certified CSCs doubles, from 6 currently certified to 12 certified.</li> </ul> <p><u>Milestone 3</u></p> <ul style="list-style-type: none"> <li>NYSERDA has conducted market research on impact of initial uptake of High-Impact Actions and has adjusted the Clean Energy Communities Program accordingly. NYSERDA will continuously compile feedback from communities on High-Impact Actions and associated tools and resources, and adjust accordingly.</li> </ul>
<b>Goals Prior to Exit</b>	<ul style="list-style-type: none"> <li>Tools and resources developed for all current and future potential High-Impact Actions.</li> <li>75% of communities in New York State are taking advantage of tools and resources provided.</li> <li>Reduce level of perceived difficulty associated with implementing High-Impact Actions to between 1 and 4 on a scale of 1-10, with 10 being most difficult.</li> <li>Significant private sector participation in related activities.</li> <li>Self-sustaining mechanism is in place to facilitate knowledge transfer among communities, including tools and resources.</li> <li>Municipal greenhouse gas inventories indicate that the trajectory of community emissions is on track to meet 2050 goal of reducing statewide emissions 80% below 1990 levels.</li> </ul>

6.1.5 Relationship to Utility/REV

<b>Utility Role/Coordination Points</b>	<ul style="list-style-type: none"> <li>Utilities play a critical role in increasing access to aggregated community-level energy use data needed for clean energy planning and tracking. To date, many utilities have demonstrated a willingness and have begun to work with NYSERDA to figure out how best to go about providing data in a way that is useful to municipalities, while simultaneously protecting customer privacy.</li> <li>Coordination with utilities, as well as other state agencies (i.e., NYPA), other NYSERDA groups, non-profits, and federal organizations to ensure their offerings, as applicable, are incorporated in all tools and resources that support High-Impact Actions as well as innovative projects funded through resulting grants.</li> <li>Coordination is needed with utilities on issues related to LED street lighting tariffs/municipal ownership and aggregated community energy use data needed to facilitate Community Choice Aggregation and NYSERDA tracking of program success.</li> <li>NYSERDA will also work to ensure that utilities are kept apprised of various clean energy actions happening in their respective territories so that they can better serve municipal customers.</li> <li>NYSERDA will also take advantage of the CEAC Clean Energy Implementation and Coordination Working Group to coordinate planning and implementation with the New York State utilities.</li> </ul>
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<b>Utility Interventions in Target Market</b>	<ul style="list-style-type: none"> <li>Incentives for energy upgrades, enabling LED street light conversions, economic development grants, approval for installing charging stations in public right-of-ways</li> </ul>
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### 6.1.6 Budgets & Expenditures

An annual commitment budget for all activities included in this chapter is shown in Table 1. The annual expenditure projection is included in Table 2. Budgets and expenditures do not include Administration, Evaluation, or Cost Recovery Fee; these elements are addressed in the Budget Accounting and Benefits chapter filing. The budget as presented in the Budget Accounting and Benefits Chapter will serve as the basis for any subsequent reallocation request. The additional level of detail presented within the table below is intended for informational purposes only.

To ensure the success of the Clean Energy Communities program statewide, including in municipalities that do not pay into the System Benefits Charge, such as those on Long Island or that run their own municipal utilities, RGGI funding is being used to supplement CEF activities. In addition to the budget outlined below, \$13,504,488 of RGGI funding is being used: \$8,902,488 for the Technical Support contractors; \$4,500,000 to supplement the Clean Energy Communities grant funding; and \$102,000, to build the first iteration of an interactive web portal for communities to track progress of their clean energy action.

**Table 1: Annual Market Development Budget Allocation – Commitment Basis (CEF only)**

Budget		2016	2017	2018	2019	2020	Total
Clean Energy Communities (CEF Only)	Tools, Training, and Replication	\$12,941	\$178,489	\$1,064,340	\$588,913	\$0	\$1,844,683
	Implementation Support	\$0	\$182,315	\$182,315	\$182,315	\$0	\$546,946
	Direct Incentives and Services	\$0	\$2,569,073	\$3,778,020	\$3,785,020	\$1,694,785	\$11,826,898
	Sub-Total	\$12,941	\$2,929,877	\$5,024,675	\$4,556,249	\$1,694,785	\$14,218,527

**Table 2: Annual Expenditures Projection – CEF Only**

Expenditures	2016	2017	2018	2019	2020	2021	2022	2023	2024	Total
<b>Total</b>	0.1%	1%	7%	14%	22%	25%	18%	10%	3%	100%

### 6.1.7 Progress and Performance Metrics

Table 3 provides program Activity/Output indicators representing measurable, quantifiable direct results of activities undertaken in the initiative. Outputs are a key way of regularly tracking progress, especially in the early stages of an initiative, before broader market changes are measurable. Outcome indicators can encompass near-term through longer-term changes in market conditions expected to result from the activities/outputs of an intervention. Outcome indicators will have a baseline value and progress will be measured periodically through Market Evaluation.

Table 4 provides additional detail on the baseline perceived level of difficulty in implementing each High Impact Action.

Because the Clean Energy Communities program is being co-funded with CEF and RGGI funding, the table below includes metrics associated with program implementation in its entirety. Program success will be measured on a funding-agnostic basis, with *reported* savings and metrics being allocated proportionately to the CEF and RGGI budgets committed/spent to date.

**Table 3. Initiative Specific Metrics**

Indicators <sup>9</sup>		Baseline (Before/Current) <sup>10</sup>	2019 (Cumulative)
Activity/ Outputs	Number of communities that are aware of the Clean Energy Communities Program	0	800
	Number of Communities that have joined the Clean Energy Communities Program	0	400
	<i>Number of communities that have completed:</i>		
	1 or more High-Impact Action	467	800 (333 since initiative began)
	2 or more High-Impact Actions	248	498 (250 since initiative began)
	3 or more High-Impact Actions	128	353 (225 since initiative began)
	4 or more High-Impact Actions (minimum for designation)	10	173 (163 since initiative began)
	Number of Designated Clean Energy Communities	0	163
	Number of registered Climate Smart Communities (indicates interest in going beyond High-Impact Actions)	175	219
	Partner engagement: Number of organizations helping to promote High-Impact Actions without NYSERDA contracts	0	3
Outcomes	Number of communities that indicate clean energy is a priority	473	800
	Number of communities regularly accessing Clean Energy Communities Portal and tracking progress	0	80
	Perceived level of difficulty, on the part of community representatives, in implementing each High-Impact Action (1-10, with 10 being most difficult)	See table 4 below	4 (or less, on average, for each action)
	Number of communities that have participated in NYS clean energy programs	423	560
	Number of communities that have completed High-Impact Actions but are not designated Clean Energy Communities	0 <sup>11</sup>	100
	Percentage of communities in New York State taking advantage of tools and resources provided	0	75% (1,200)

<sup>9</sup> A 0 (zero) denotes that the actual value is currently believed to be zero for baseline/market metrics.

<sup>10</sup> Revised baseline metrics reflect the recently-completed Clean Energy Communities market baseline evaluation. This study will be available publicly on NYSERDA's website and in the DPS Document and Matter Management system in the near future.

<sup>11</sup> At the time of the baseline measurement, some communities had completed High Impact Actions, but since these actions took place prior to the program start, these communities would not have been designated clean energy communities. Thus, the metric value is zero.

**Table 4. Baseline Average Difficulty to Implement Each Action**

Action <sup>12</sup>	Average perceived level of difficulty to implement (1-10 scale with 10 being most difficult)
Benchmarking overall	6.2
Benchmarking - Small and medium communities (n=1076)	6.2
Benchmarking - Large communities (n=110)	6.1
Clean Energy Upgrades (n=1075)	6.0
LED Street Lights (n=943)	5.1
Clean Fleets overall	7.5
Clean Fleets - Add vehicle to fleet (n=1448)	8.1
Clean Fleets - Install charging station (n=1377)	6.9
Solarize overall	6.3
Solarize - Conduct a Solarize Campaign (n=1248)	6.1
Solarize - Achieve 10 solar installations (n=1314)	6.4
Unified Solar Permit (n=1003)	5.6
Energy Code Enforcement Training (n=688)	4.2
Climate Smart Communities Certification (n=1194)	5.7
Community Choice Aggregation (n=1231)	6.7
PACE Financing (n=136)	6.8

Benefits shown in Tables 5 through 7 are direct, near term benefits associated with program implementation. Because the Clean Energy Communities program is being co-funded with CEF and RGGI funding, all reported metrics associated with implementation of the program will be split proportionately according to the level of funding coming from each source. These benefits will be quantified and reported on a quarterly basis and will be validated through later evaluation. The first table (5) shows all metrics associated with the entire program, including both CEF and RGGI funding, and the second table (6) shows prorated metrics associated only with CEF funding. Table 7 shows program participation associated with the entire program, including both CEF and RGGI funding.

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<sup>12</sup> Community contacts rated the difficulty to implement each action in Spring 2017. The value in parentheses indicates size of the population represented, which is the number of communities that were eligible for, but had not completed, the action.

**Table 5: Direct Impacts – CEF + RGGI (entire initiative) <sup>13</sup>**

Primary Metrics		2016	2017	2018	2019	2020	TOTAL
Energy Efficiency	MWh Annual	35,400	47,700	68,100	47,900	18,700	217,900
	MWh Lifetime	532,000	716,000	1,020,000	719,000	281,000	3,268,000
	MMBTU Annual	35,200	214,000	371,000	427,000	253,000	1,300,000
	MMBTU Lifetime	529,000	3,210,000	5,560,000	6,400,000	3,790,000	19,500,000
	MW	-	-	-	-	-	-
Renewable Energy	MWh Annual	14,000	49,700	73,900	71,000	50,400	259,100
	MWh Lifetime	210,000	747,000	1,110,000	1,070,000	755,000	3,886,000
	MW	10	41	102	49	19	221
CO2e Emission Reduction (metric tons) Annual		28,000	63,500	95,900	87,000	50,800	325,200
CO2e Emission Reduction (metric tons) Lifetime		421,000	953,000	1,440,000	1,300,000	762,000	4,878,000
Customer Bill Savings Annual (\$ million)		\$6.91	\$15.00	\$22.30	\$19.80	\$11.50	\$75.55
Customer Bill Savings Lifetime (\$ million)		\$104.00	\$224.00	\$335.00	\$297.00	\$173.00	\$1,133.00
Private Investment (\$ million)		\$25.60	\$34.50	\$49.20	\$34.60	\$13.50	\$157.50

**Table 6: Direct Impacts – CEF only<sup>14</sup>**

Primary Metrics		2016	2017	2018	2019	2020	TOTAL
Energy Efficiency	MWh Annual	-	24,600	41,900	38,000	14,100	118,700
	MWh Lifetime	-	368,000	629,000	571,000	212,000	1,780,000
	MMBTU Annual	-	138,000	236,000	214,000	79,500	666,700
	MMBTU Lifetime	-	2,070,000	3,530,000	3,200,000	1,190,000	10,000,000
	MW	-	-	-	-	-	-
Renewable Energy	MWh Annual	-	26,100	44,500	40,400	15,000	125,900
	MWh Lifetime	-	391,000	668,000	605,000	225,000	1,889,000
	MW	-	22	38	34	13	107
CO2e Emission Reduction (metric tons) Annual		-	34,500	58,900	53,400	19,900	166,800
CO2e Emission Reduction (metric tons) Lifetime		-	518,000	884,000	802,000	298,000	2,502,000
Customer Bill Savings Annual (\$ million)		\$-	\$8.02	\$13.70	\$12.40	\$4.62	\$38.75
Customer Bill Savings Lifetime (\$ million)		\$-	\$120.00	\$205.00	\$186.00	\$69.30	\$581.20
Private Investment (\$ million)		\$-	\$16.70	\$28.50	\$25.90	\$9.63	\$80.78

<sup>13</sup> Impacts are expressed on a commitment-year basis, and are incremental additions in each year. Assumes a 15-year measure life. Benefits are rounded to three significant figures. Totals may not sum due to rounding. Customer Bill Savings are calculated as direct energy bill savings realized by customers participating in NYSERDA's programs.

<sup>14</sup> Impacts are expressed on a commitment-year basis, and are incremental additions in each year. Assumes a 15-year measure life. Benefits are rounded to three significant figures. Totals may not sum due to rounding. Customer Bill Savings are calculated as direct energy bill savings realized by customers participating in NYSERDA's programs.



**Table 7a. Annual Projected Initiative Participation (CEF + RGGI)**

	2016	2017	2018	2019	Total
Participants	76	126	80	51	333

**Table 7b. Annual Projected Initiative Participation (CEF Only)**

	2016	2017	2018	2019	Total
Participants	0	40	80	51	171

Benefits shown in Tables 8 and 9 represent the estimated indirect market effects expected to accrue over the longer term as a result of this investment and follow on market activity. Because the Clean Energy Communities program is being co-funded with CEF and RGGI funding, all reported metrics associated with implementation of the program will be split proportionately according to the level of funding coming from each source. The indirect benefits that accrue from this investment will be quantified and reported based on periodic Market Evaluation studies to validate these forecasted values. Market Evaluation may occur within one year (-/+ ) of the years noted in the table and projected future indirect benefits and/or budgets necessary to achieve them may be updated based on the results of market evaluation. Indirect impact across NYSERDA initiatives may not be additive due to multiple initiatives operating within market sectors. The values presented below are not discounted, however NYSERDA has applied a discount of 50% to the overall portfolio values in the Budget Accounting and Benefits chapter. Table 8 shows all metrics associated with the entire program, including both CEF and RGGI funding, and Table 9 shows prorated metrics associated only with CEF funding.

**Table 8. Estimated Indirect Market Impact – CEF + RGGI (entire initiative)**

Indirect Impact		2020	2025	2030
Energy Efficiency	MWh Cumulative Annual	141,000	494,000	847,000
	MMBtu Cumulative Annual	545,000	1,910,000	3,270,000
Renewable Energy	MWh Cumulative Annual	168,000	587,000	1,010,000
	MW	175	612	1,050
CO2e Emission Reduction (metric tons) Cumulative Annual		194,000	569,000	975,000

**Table 9: Estimated Indirect Market Impact – Prorated with CEF funding only**

Indirect Impact		2020	2025	2030
Energy Efficiency	MWh Cumulative Annual	76,900	269,000	461,000
	MMBtu Cumulative Annual	279,000	978,000	1,680,000
Renewable Energy	MWh Cumulative Annual	81,600	286,000	490,000
	MW	90	314	538
CO2e Emission Reduction (metric tons) Cumulative Annual		99,300	292,000	500,000

### 6.1.8 Fuel Neutrality

<b>Fuel Neutrality</b>	<p>NYSERDA intends to offer this program in a fuel neutral manner to encourage more efficient use of all fuel types. This will help develop the market at the scale needed to achieve New York State’s clean energy goals. Offering the program on a fuel neutral basis will allow NYSERDA to achieve a ton of carbon savings at a cost of \$85.20, compared to a cost of \$110.47 in an electric only scenario.<sup>15</sup></p>
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### 6.1.9 Performance Monitoring and Evaluation Plans

<b>Performance Monitoring &amp; Evaluation Plan</b>	<p>NYSERDA’s approach to monitoring and assessing the effectiveness of the initiative and overall market development is described below.</p> <p><b><u>Test-Measure-Adjust Strategy</u></b></p> <p>Each year, NYSERDA will undertake a reassessment of priorities and funding levels and will adjust the program as appropriate. Specifically:</p> <ul style="list-style-type: none"> <li>• Uptake of High-Impact Actions will be tracked in the Clean Energy Communities Portal and Customer Relationship Management software.</li> <li>• As uptake of certain High-Impact Actions are scaled to the point where funding is no longer necessary for communities to act, funding will be eliminated or shifted to new actions.</li> <li>• Depending on identified needs, NYSERDA may use portion of the grant funding budget to support new, more structured project grant funding offerings, rather than keeping all funding open for loosely defined ‘innovative’ projects.</li> </ul> <p>If the Clean Energy Communities program is continuing to make progress after the initial three-year period, NYSERDA will reassess longer term programmatic needs and submit a revised Investment Plan outlining new funding requirements and updated implementation strategies. NYSERDA anticipates that this program will continue in some form after the initial three-year period.</p> <p><b><u>Market Evaluation</u></b></p> <p>This program intervention will include surveys/interviews with samples of communities at various stages and levels of involvement to assess:</p> <ul style="list-style-type: none"> <li>• Effectiveness and value of the Clean Energy Communities Portal and resources provided</li> <li>• Which High-Impact Actions communities have implemented, and which ones they have not</li> <li>• Barriers to implementing energy actions</li> <li>• Cost of implementing High-Impact Actions</li> <li>• Detailed information on implemented actions, including project impacts</li> <li>• Related actions by non-participating communities that are causally linked to the intervention</li> </ul> <p>These surveys/interviews will be used to provide real-time insights and support systematic evaluation of the intervention, including its effectiveness for participating communities and in other communities that may replicate the program actions.</p>
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<sup>15</sup> Fossil fuel savings make up 23% of overall program savings. This equates to 29.65% more emissions saved per dollar invested compared to electric-only projects. If current fossil fuel emissions savings were replaced with electric-only projects, the program costs would increase by approximately 29.65%.

**Impact Evaluation/Field Verification**

For communities implementing actions, impact evaluation will involve measurement and verification (M&V) of energy and other benefits for a sample of communities/measures. M&V will also examine a subset of innovative clean energy projects funded through Clean Energy Community grants to determine replication opportunities through potentially adding the project type as a new High-Impact Action.

Where communities participate in other NYSERDA programs, this data will also be gathered and used in assessing impact in a coordinated manner.

Aggregated community-level energy use data will be used, as available, to track progress toward 2050 goals across communities implementing certain High-Impact Actions and those that are not.

## 6.2 Community Energy Engagement Program<sup>16</sup>

### 6.2.1 Overview

<b>Present Situation</b>	<ul style="list-style-type: none"> <li>• Many households and communities are not aware of the clean energy opportunities that are available to them or are unable to access them due to financial barriers to project implementation.<sup>17</sup></li> <li>• Low- to moderate-income (LMI) consumers<sup>18</sup> are less likely than market rate consumers to be reached in the near term by clean energy market actors and project developers because of poor profitability and financial barriers.<sup>19</sup></li> <li>• These consumers also pay a disproportionate share of their income toward the cost of energy.</li> <li>• LMI households are an important targeted community for enhancing access to and uptake of renewable and energy efficiency solutions under Reforming the Energy Vision (REV).</li> </ul>
<b>Intervention Strategy</b>	<ul style="list-style-type: none"> <li>• NYSERDA will build on the model developed under Green Jobs-Green NY including the success of organizations in being able to leverage multiple sources of funding for completion of clean energy projects. It will competitively select locally-based organizations (LBOs) across the State, each with a strong local presence, to provide outreach and education services to drive energy efficiency and renewable energy deployment to residential, multi-family, and small business customers (collectively referred to herein as “communities”).</li> <li>• Although the primary focus of the Program and of these LBOs will be to serve the needs of LMI households and communities and the outreach efforts will target these communities, this initiative may also assist market-rate customers as individual customers will not be screened for outreach based on income-eligibility criteria.</li> <li>• The Program will focus on increasing adoption rates for clean energy programs and services in economically distressed, LMI communities and making linkages to local labor for completion of clean energy projects. Additional activities will allow local organizations to propose regional specific projects that leverage a variety of resources to reduce the energy bills of households and communities.</li> <li>• For a visual representation of this strategy, please reference the flow chart entitled “Community Engagement Program”, which can be found in Appendix A.</li> </ul>
<b>Goals</b>	<ul style="list-style-type: none"> <li>• Address the energy affordability needs and reduce the energy bills of households and communities.</li> </ul>

<sup>16</sup> The Fuel Neutrality section that is included in other CEF Investment Plan Chapters is not included for the Community Energy Engagement initiative because it is not relevant for a community-based outreach and education effort.

<sup>17</sup> See the Green Jobs-Green New York Community Outreach Discussion Working Group Recommendations Report, available at <https://www.nyserra.ny.gov/-/media/Files/EDPPP/GJGNY/Advisory-Council-Updates/GJGNY-Community-Outreach-Working-Group-Recommendations.pdf>, and the 2012-2013 Home Performance with ENERGY STAR® Process Evaluation/Market Characterization Assessment Final Report, available at <https://www.nyserra.ny.gov/-/media/Files/Publications/PPSER/Program-Evaluation/2015ContractorReports/2012-2013-HPwES-Process-Evaluation-Market-Characterization-Assessment-FinalReport.pdf>.

<sup>18</sup> NYSERDA defines the low-income market segment as households with annual incomes at or below 60% of the State Median Income (SMI), and the moderate-income market segment as households with an annual income between 60% and 80% of the SMI or the Area Median Income (AMI), whichever is greater. Together these form the LMI market segment.

<sup>19</sup> 2015 New York State Energy Plan: <http://energyplan.ny.gov/Plans/2015>

	<ul style="list-style-type: none"> <li>• Increase participation in energy efficiency and renewable energy solutions and programs for LMI households and communities.</li> <li>• Increase participation in financing opportunities and programs for LMI communities and households.</li> <li>• Demonstrate the value proposition of clean energy solutions and programs through education to households and communities to achieve greater energy literacy.</li> </ul>
<b>State Energy Plan/Clean Energy Standard Link</b>	This strategy supports the State Energy Plan (SEP) goals to increase the State’s emphasis on improving energy affordability for LMI households, while increasing deployment of distributed energy resources in LMI communities throughout New York, both as a matter of equity, and as a matter of necessity if the State is to meet its clean energy targets.

## 6.2.2 Target Market Characterization

<b>Target Market Segment(s)</b>	The target market is locally-based organizations that have strong ties to their community, an established group of local partners, and are well-positioned to engage and stimulate the regional market to influence and drive clean energy actions of homeowners, renters, and community stakeholders, especially with LMI participants.
<b>Market Participants</b>	<p>Market participants include:</p> <ul style="list-style-type: none"> <li>• Locally-based organizations</li> <li>• Partner organizations (environmental groups, economic development organizations, schools, community action agencies, etc.)</li> <li>• LMI and market-rate households</li> <li>• Clean energy service providers</li> <li>• External Funding Sources (e.g. State, non-profit, financiers)</li> </ul>
<b>Market Readiness</b>	<ul style="list-style-type: none"> <li>• LMI and environmental justice (EJ) communities<sup>20</sup> have demonstrated their interest in participating in their clean energy future, as evidenced by their active party status in many of the Reforming the Energy Vision (REV) proceedings.</li> <li>• Additionally, previous LMI outreach and education efforts through the Green Jobs, Green New York (GJGNY) conducted by Constituency-Based Organizations (CBOs) have resulted in the successful completion of numerous energy efficiency and renewable energy projects, including aggregation strategies. <ul style="list-style-type: none"> <li>○ As of June 2016, CBOs conducted 1,686 events to raise awareness and educate customers. These events, in addition to other outreach efforts, resulted in a total of 11,430 applications for the Home Performance with ENERGY STAR®.</li> <li>○ CBOs have worked with customers to realize the completion of 7,755 audits; and to approve work scopes and assist completions for a total of 2,201 residential retrofit projects through the Home Performance with ENERGY STAR® program.<sup>21</sup></li> </ul> </li> </ul>
<b>Customer Value</b>	<ul style="list-style-type: none"> <li>• LMI households and communities will benefit from education and assistance through the entire process of making improvements to the home and in ways that they may not otherwise be assisted by contractors (e.g. completing applications, working with lenders, applying for financing, following up with consumers, etc.).</li> <li>• Customers will be more likely to pursue these improvements, which can reduce their energy bills and improve their air quality and comfort.</li> </ul>

<sup>20</sup> Environmental justice communities are commonly identified as those where residents are predominantly minorities or low-income; where residents have been excluded from the environmental policy setting or decision-making process; where they are subject to a disproportionate impact from one or more environmental hazards; and where residents experience disparate implementation of environmental regulations, requirements, practices and activities in their communities. [http://www.energy.ca.gov/public\\_adviser/environmental\\_justice\\_faq.html](http://www.energy.ca.gov/public_adviser/environmental_justice_faq.html)

<sup>21</sup> NYSERDA. (2016). Green Jobs-Green New York 2016 Annual report. Retrieved from <https://www.nyserda.ny.gov/About/Publications/GJGNY-Advisory-Council-Reports>.

### 6.2.3 Stakeholder/Market Engagement

<b>Stakeholder/Market Engagement</b>	<ul style="list-style-type: none"> <li>• Meetings with CBOs, low-to moderate-income consumer advocates, and stakeholders (including contractors) of the home energy services industries through a Community Outreach Discussion Working Group that was established by the Green Jobs – Green New York (GJGNY) Advisory Council have included discussions to determine how best to leverage valuable resources toward achieving the best outcome for low- to moderate-income households.<sup>22</sup></li> <li>• Market research has been conducted on other State and national clean energy programs focused on LMI households and communities, as well as interviews conducted with associated program staff.</li> <li>• Interviews with other locally-based organizations such as local development corporations (LDCs), non-profits, and foundations on best practices and strategies for addressing the energy affordability needs of the LMI consumer and how to ensure the new initiative will target the best organizations to provide this support.</li> <li>• NYSERDA will ensure ongoing and future market engagement through establishing partnerships with low-to moderate-income consumer advocates, stakeholders (including contractors) of the home energy services industries, community action agencies, non-profits, etc.</li> <li>• NYSERDA will also utilize the Clean Energy Advisory Council (CEAC) to engage with stakeholders, as appropriate.<sup>23</sup></li> </ul>
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### 6.2.4 Theory of Change

<b>Market Barriers Addressed</b>	<p>LMI households and communities are interested in taking advantage of clean energy programs and resources, but they are often under-resourced and lack the knowledge and expertise necessary to take advantage of the opportunities available to them. LMI households and communities face several barriers to participating in clean energy programs and opportunities including:</p> <ul style="list-style-type: none"> <li>• Lack of capital for homeowners (who have difficulty paying utility bills) and building owners (who are hesitant to take on additional debt).</li> <li>• Difficulty obtaining financing for clean energy projects.</li> <li>• Lack of confidence in clean energy projects’ ability to deliver energy savings.</li> <li>• Minimal understanding of clean energy practices and operation of equipment (e.g., boilers and furnaces).</li> <li>• Lack of awareness of available clean energy resources.</li> </ul>
<b>Testable Hypotheses</b>	<ul style="list-style-type: none"> <li>• If locally-based organizations support home owners, tenants, and landlords through the complete process of clean energy projects then there will be an increase in the number of completed projects and in participants that previously did not participate in clean energy programs.</li> <li>• If locally-based organizations with experience working on community projects and accessing NYSERDA and other State, Federal, and non-profit funding identify available resources to households that can successfully leverage these resources to</li> </ul>

<sup>22</sup> NYSERDA. (2016). Green Jobs-Green New York Community Outreach Discussion Working Group Recommendations. Retrieved from <https://www.nysERDA.ny.gov/About/Publications/GJGNY-Advisory-Council-Reports>.

<sup>23</sup> The Clean Energy Advisory Council was established by the Public Service Commission through an Order in the Clean Energy Fund Proceeding (Case 14-M-0094. et al, Proceeding on Motion of the Commission to Consider a Clean Energy Fund, Order Authorizing the Clean Energy Fund Framework, filed January 21, 2016).

	<p>deploy energy efficiency improvements and renewable energy projects, then the number of completed projects will increase.</p> <ul style="list-style-type: none"> <li>• If locally-based organizations provide education on energy efficiency and renewable energy to households and communities, then market rate and LMI households and communities will gain the necessary knowledge to reduce their energy bills.</li> </ul>
<b>Activities</b>	<ul style="list-style-type: none"> <li>• NYSERDA will issue a competitive solicitation to select up to ten organizations covering each of the 10 Economic Development Regions, as defined by Empire State Development, to conduct outreach and provide support to New York State households and communities, with an emphasis on LMI engagement. These “base activities” will include: <ul style="list-style-type: none"> <li>○ Educating consumers about clean energy programs and resources: Involves working with contractors and funding entities to help customers understand and access NYSERDA and other State, Federal, and local funding resources to complete clean energy projects and to reduce energy burden including payment assistance. Additionally, organizations will need to leverage funding for non-energy benefits (e.g. roof repair, electrical work, health and safety) for completion of clean energy projects.</li> <li>○ Contractor engagement: Involves developing strong relationships with Contractors including routine coordination meetings to create tools and templates to help make work scopes easier for customers to understand and make decisions about, and providing qualified customer leads to contractors.</li> <li>○ Develop local partnerships: Involves working with other locally-based service organizations that engage LMI consumers on related practices (i.e., lead paint abatement) to form partnerships, extending the outreach efforts for mutually beneficial results.</li> <li>○ Consumer outreach: Involves participation in events conduct energy literacy activities, and one on one outreach to community leaders (includes speaking at rotary clubs, chambers of commerce, block clubs, community groups, church groups, etc. and responding to customer inquiries).</li> <li>○ Facilitate loan applications: Assisting customers with processing loan applications (including assisting with paperwork and loan qualification). Often, customers do not feel comfortable providing personal financial information to contractors so organizations can fill a critical role in the process.</li> </ul> </li> <li>• Outside of the base activities, NYSERDA will reserve funds (approximately \$600,000) for complementary activities that the organizations selected under the base activities solicitation can submit proposals to during the duration of the initiative on a quarterly basis. Proposals will be reviewed each quarter on a competitive basis subject to a set of specific view criteria and detailed scoring rubric. These review criteria will include the extent to which the project helps to reduce the energy bills of households and communities (specifically LMI); estimated energy savings, renewable energy generation, and greenhouse gas emission savings; amount of external funding leveraged; etc. Examples of what NYSERDA anticipates for these regional-specific activities may include: <ul style="list-style-type: none"> <li>○ Aggregation: Bringing together eligible homes, businesses and/or not-for-profits in a neighborhood who have all agreed to use the same contractor(s) to perform audits and the ensuing retrofit work. This will include a community benefits agreement that comes with discount for people getting the retrofit as well as benefits that create pathways for people to attain jobs.</li> <li>○ Workforce development: Facilitating and connect contractors with resources in the community that they may not be aware of, such as courses or training programs with the goal of attaining new or advanced job positions in the clean energy industry.</li> </ul> </li> </ul>

	<ul style="list-style-type: none"> <li>○ Pilot projects to reduce energy bills for LMI households and communities: Potential projects could include bulk fuel purchasing where outreach organizations work to obtain funding from non-profits, foundations, state, federal, or other entities to create and maintain a program for assistance to LMI customers.</li> </ul>
<b>Key Milestones</b>	<p><u>Milestone 1 (2017)</u></p> <ul style="list-style-type: none"> <li>• NYSERDA issues competitive “base activities” solicitation.</li> </ul> <p><u>Milestone 2 (2017)</u></p> <ul style="list-style-type: none"> <li>• Awards from base activity solicitation are contracted.</li> </ul> <p><u>Milestone 3 (2017)</u></p> <ul style="list-style-type: none"> <li>• Commencement of local outreach and support to households and communities (with the focus on LMI).</li> </ul> <p><u>Milestone 4 (2018)</u></p> <ul style="list-style-type: none"> <li>• NYSERDA initiates awards proposals for regional-specific pilot projects.</li> </ul> <p><u>Milestone 5 (Annually 2018-2020)</u></p> <ul style="list-style-type: none"> <li>• NYSERDA develops one or more case study on regional-specific pilot projects and other support provided through the base activities.</li> </ul> <p><u>Milestone 6 (2019)</u></p> <ul style="list-style-type: none"> <li>• Conduct surveys of customers assisted by LBOs to assess performance.</li> </ul>
<b>Goals Prior to Exit</b>	<ul style="list-style-type: none"> <li>• Households and communities have increased awareness and access to resources, including capital and finance opportunities, for completion of clean energy projects.</li> <li>• Increased funding from developers and financiers for clean energy projects in households without direct support from NYSERDA.</li> <li>• Increase the number of organizations promoting clean energy and other benefits to households and communities.</li> <li>• Increase the number of completed residential clean energy projects with a focus on LMI.</li> </ul>

6.2.5 Relationship to Utility/REV

<b>Utility Role/ Coordination Points</b>	<ul style="list-style-type: none"> <li>• Utilities offer incentive programs for residential customers, which organizations awarded through this initiative will leverage to assist LMI households.</li> <li>• Utilities administer bill payment assistance programs for LMI households.</li> <li>• NYSERDA will also take advantage of the CEAC Clean Energy Implementation and Coordination Working Group to coordinate planning and implementation with the New York State utilities.</li> </ul>
<b>Utility Interventions in Target Market</b>	<p>Utilities have incentive programs that LMI households and communities could take advantage of. Utilities may also be useful partners in reaching out to LMI households and communities to provide them with information about programs that they administer. Locally-based organizations will work to develop relationships with their local utility providers to assist customers with accessing available clean energy programs.</p>



## 6.2.6 Budgets & Expenditures

An annual commitment budget for all activities included in this chapter is shown in Table 10. The annual expenditure projection is included in Table 11. Budgets and expenditures do not include Administration, Evaluation, or Cost Recovery Fee; these elements are addressed in the Budget Accounting and Benefits chapter filing. The budget as presented in the Budget Accounting and Benefits Chapter will serve as the basis for any subsequent reallocation request. The additional level of detail presented within the table below is intended for informational purposes only.

To ensure the success of the LMI Community Engagement program statewide, including in LMI households and communities that do not pay into the System Benefits Charge, such as those on Long Island or communities that run their own municipal utilities, RGGI funding is being used to supplement CEF activities. In addition to the budget outlined below, \$1,400,000 of RGGI funding is being used for LMI community engagement activities and pilot projects.

**Table 10. Annual Market Development Budget Allocation – Commitment Basis (CEF Only)**

<b>Commitment Budget</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>	<b>Total</b>
Implementation Support	\$4,409,882	\$0	\$0	\$0	\$4,409,882
<b>Total</b>	\$4,409,882	\$0	\$0	\$0	\$4,409,882

**Table 11. Annual Expenditures Projection (CEF Only)**

<b>Expenditures</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>	<b>Total</b>
<b>Total</b>	17%	33%	33%	17%	100%

## 6.2.7 Progress and Performance Metrics

Table 12 provides program Activity/Output indicators representing measurable, quantifiable direct results of activities undertaken in the initiative. Outputs are a key way of regularly tracking progress, especially in the early stages of an initiative, before broader market changes are measurable. Outcome indicators can encompass near-term through longer-term changes in market conditions expected to result from the activities/outputs of an intervention. Outcome indicators will have a baseline value and progress will be measured periodically through Market Evaluation.

Because the LMI Community Engagement program is being co-funded with CEF and RGGI funding, the table below includes metrics associated with program implementation in its entirety. Program success will be measured on a funding-agnostic basis, with reported savings and metrics being allocated proportionately to the CEF and RGGI budgets committed/spent to date.

**Table 12. Initiative Specific Metrics**

Indicators <sup>24</sup>		Baseline <sup>25</sup> (Before/Current)	2020 (Cumulative)
Activity/Outputs	Amount of funding received by customers (including NYSERDA and non-NYSERDA funding)	\$5,190,000	\$9,750,000
	Number of new partnerships developed with other locally-based organizations	0	10
	Number of customers assisted with clean energy applications (audit, grant, and finance applications)	5,230	9,650
	Number of completed (closed) loans	726	2,020
Outcomes	Number of organizations promoting clean energy and other benefits to households and communities	0	10
	Number of projects completed with NYSERDA and non-NYSERDA funding	726	2,020

Benefits shown in Table 13 and Table 14 are direct, near term benefits associated with this initiative’s implementation. Because the Community Energy Engagement program is being co-funded with CEF and RGGI funding, all reported metrics associated with implementation of the program will be split proportionately per the level of funding coming from each source. These benefits will be quantified and reported on a quarterly basis and will be validated through later evaluation. Table 13 shows all metrics associated with the entire program, including both CEF and RGGI funding, and Table 14 shows prorated metrics associated only with CEF funding. Table 15 shows program participation associated with the entire program, including both CEF and RGGI funding, and Table 15 shows participation associated with CEF funding only. Participants are defined as all single-family residential customers that are assisted by LBOs with clean energy applications (audit, grant, and finance applications) in Tables 15 and 16.

Due to the nature of the activities, estimating energy savings impacts at this stage is difficult due to the potential for significant overlap in savings with other CEF initiatives that offer financial support to the residential sector for clean energy projects. However, energy savings for projects supported directly and exclusively by this initiative will be tracked and reported. The Community Energy Engagement program will drive benefits not directly captured by the CEF metrics, including bringing participants into existing programs at a faster rate, as well as bringing in participants from populations that wouldn’t have been reached otherwise. NYSERDA will also track additional efforts beyond NYSERDA activities spurred by this work, including funding leveraged from foundations and other sources (included in the private investment estimates in Table 13 and 14), as well as energy savings efforts that originate outside of existing programs, such as challenges and campaigns driven directly by locally-based organizations.

<sup>24</sup> A 0 (zero) denotes that the actual value is currently believed to be zero for baseline/market metrics.

<sup>25</sup> Value shown here is total cumulative Home Performance with ENERGY STAR® audits and incentives and GJGNY financing associated with CBO activity from January 1, 2014 through September 30, 2016, and is not discounted based on a percent attributable to the CBO program vs. the GJGNY program.

**Table 13. Direct Impacts – CEF + RGGI (entire initiative)**

Primary Metrics <sup>26</sup>		2017	2018	2019	2020	TOTAL
Energy Efficiency	MWh Annual	-	-	-	-	-
	MWh Lifetime	-	-	-	-	-
	MMBTU Annual	-	-	-	-	-
	MMBTU Lifetime	-	-	-	-	-
	MW	-	-	-	-	-
Renewable Energy	MWh Annual	-	-	-	-	-
	MWh Lifetime	-	-	-	-	-
	MW	-	-	-	-	-
CO2e Emission Reduction (metric tons) Annual		-	-	-	-	-
CO2e Emission Reduction (metric tons) Lifetime		-	-	-	-	-
Customer Bill Savings Annual (\$ million)		\$ -	\$ -	\$ -	\$ -	\$ -
Customer Bill Savings Lifetime (\$ million)		\$ -	\$ -	\$ -	\$ -	\$ -
Private Investment (\$ million)		\$2.28	\$ -	\$ -	\$ -	\$2.28

**Table 14. Direct Impacts – CEF Only**

Primary Metrics <sup>27</sup>		2017	2018	2019	2020	TOTAL
Energy Efficiency	MWh Annual	-	-	-	-	-
	MWh Lifetime	-	-	-	-	-
	MMBTU Annual	-	-	-	-	-
	MMBTU Lifetime	-	-	-	-	-
	MW	-	-	-	-	-
Renewable Energy	MWh Annual	-	-	-	-	-
	MWh Lifetime	-	-	-	-	-
	MW	-	-	-	-	-
CO2e Emission Reduction (metric tons) Annual		-	-	-	-	-
CO2e Emission Reduction (metric tons) Lifetime		-	-	-	-	-
Customer Bill Savings Annual (\$ million)		\$ -	\$ -	\$ -	\$ -	\$ -
Customer Bill Savings Lifetime (\$ million)		\$ -	\$ -	\$ -	\$ -	\$ -
Private Investment (\$ million)		\$1.73	\$ -	\$ -	\$ -	\$1.73

**Table 15. Annual Projected Initiative Participation (CEF+RGGI)**

	2017	2018	2019	2020	Total
Participants <sup>28</sup>	3964	274	183	0	4420

<sup>26</sup> Impacts are expressed on a commitment-year basis, and are incremental additions in each year. Assumes a 15-year measure life. Benefits are rounded to three significant figures. Totals may not sum due to rounding. Customer Bill Savings are calculated as direct energy bill savings realized by customers participating in NYSEDA's programs.

<sup>27</sup> Impacts are expressed on a commitment-year basis, and are incremental additions in each year. Assumes a 15-year measure life. Benefits are rounded to three significant figures. Totals may not sum due to rounding. Customer Bill Savings are calculated as direct energy bill savings realized by customers participating in NYSEDA's programs.

<sup>28</sup> Participants include all single-family residential customers that are assisted by LBOs with clean energy applications (audit, grant, and finance applications). Metrics are on a commitment basis; however, it is anticipated that actual participation will occur through 2020.

**Table 16. Annual Projected Initiative Participation (CEF Only)**

	2017	2018	2019	2020	Total
Participants <sup>29</sup>	3353	-	-	-	3353

Due to the nature of the activities, estimating indirect market impacts at this stage is difficult due to the potential for significant overlap in savings with other CEF initiatives that offer financial support to the residential sector for clean energy projects. However, it is expected there will be additional (non-overlapping) energy and private investment benefits over time and NYSERDA will seek to track and evaluate them.

## 6.2.8 Performance Monitoring and Evaluation Plans

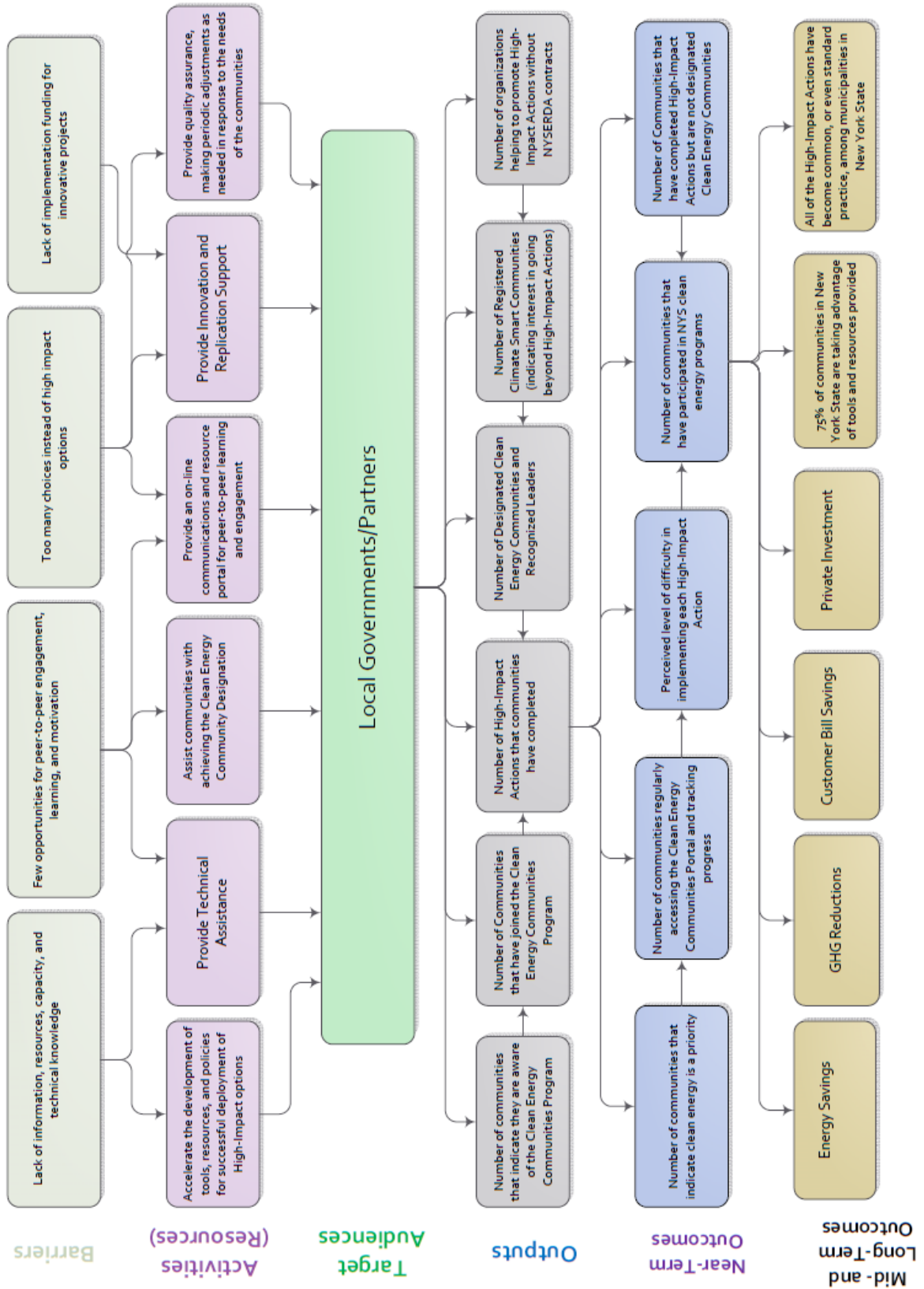
<p><b>Performance Monitoring &amp; Evaluation Plan</b></p>	<p>NYSERDA’s approach to monitoring and assessing the effectiveness of the initiative and overall market development is described below.</p> <p><b><u>Test-Measure-Adjust Strategy</u></b></p> <ul style="list-style-type: none"> <li>• NYSERDA will institute quarterly plans with the locally-based organizations so that each quarter, organizations must develop and submit a plan for that quarter’s activities with defined actions and target metrics. This will allow NYSERDA to review and approve activities on a real-time basis and adjust efforts based on the needs of the market at that point in time.</li> <li>• At the end of each year, NYSERDA will evaluate performance of each locally-based organization and adjust as needed to ensure effectiveness of their efforts and that the goals of the initiative are being met.</li> </ul> <p><b><u>Market Evaluation</u></b></p> <p>This program intervention will include surveys/interviews with samples of households and communities at various stages and levels of involvement to assess:</p> <ul style="list-style-type: none"> <li>• Effectiveness of the locally-based organizations and the resources provided;</li> <li>• Barriers to households and communities to implementing clean energy projects;</li> <li>• Investigating the awareness of and interest in locally-based organizations’ services; and</li> <li>• Documenting the experience and expectations of households in completing clean energy projects and contractors interacting with the locally-based organizations.</li> </ul> <p>These surveys/interviews will be used to provide real-time insights and support systematic evaluation of the intervention, including its effectiveness for participating households and communities and in other households and communities that may replicate pilot projects and other efforts implemented through the initiative.</p> <p><b><u>Impact Evaluation/Field Verification</u></b></p> <ul style="list-style-type: none"> <li>• Impact evaluation for projects that overlap with other clean energy programs, savings (both direct and indirect) will be evaluated as part of the clean energy initiative providing direct financial support (incentives and/or loans).</li> </ul>
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<sup>29</sup> Participants include all single-family residential customers that are assisted by LBOs with clean energy applications (audit, grant, and finance applications). Metrics are on a commitment basis; however, it is anticipated that actual participation will occur through 2020.

	<ul style="list-style-type: none"><li>• Impact evaluation for projects that do not overlap with other clean energy programs will involve measurement and verification (M&amp;V) of the energy impacts of clean energy projects that are supported through this initiative but do not receive direct financial support from NYSERDA or other utility clean energy program.</li><li>• Data from Field Verification/Impact Evaluation can be used to help lend confidence in the market, especially among other end users.</li></ul>
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# Appendix A – Logic Models

## LOGIC MODEL: Clean Energy Communities



# LOGIC MODEL: Community Energy Engagement Program

