

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

Clean Energy Fund: Communities Chapter

Portfolio: Market Development

Submitted by:

The New York State Energy Research and Development Authority

Revised May 7, 2021

Clean Energy Fund Investment Plan: Communities Chapter		
Revision Date	Description of Changes	Revision on Page(s)
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
April 19, 2019	As part of the Annual Investment Plan & Performance Report (IPPR) process, NYSERDA has updated budget and benefit values to align with actuals for past years and adjusted budget and benefit forecasts for future years, as appropriate, based on experience to date. Budget and benefit tables have been moved to Appendix B of this chapter and output/outcome tables have been moved to Appendix C of this chapter. Updated rounding convention has been applied to budget and benefit tables.	Multiple
November 4, 2019	Clean Energy Communities: Extended program through 2025, added additional activities and corresponding budget and benefits.	Multiple
December 11, 2019	Revised Appendix B-1 (Clean Energy Communities) to address incorrectly labeled budget categories. Totals remain the same.	Appendix B-1
June 15, 2020	As part of the Annual Investment Plan & Performance Report (IPPR) process, NYSERDA has updated budget and benefit values to align with actuals for past years and adjusted budget and benefit forecasts for future years, as appropriate, based on experience to date. has been revised - Appendix C updated to incorporate additional outputs/outcomes for both Clean Energy Communities and Community Energy Engagement.	Multiple
May 7, 2021	As part of the Annual Investment Plan & Performance Report (IPPR) process, NYSERDA has updated budget and benefit values to align with actuals for past years and adjusted budget and benefit forecasts for future years, as appropriate, based on experience to date. The investment plans have been updated to provide a bridge between committed and acquired planning. Committed budget and benefits summaries have been added to plan text, while Appendix B has been updated to reflect expenditure & acquired benefits plans.	Appendix B 9-10, 15-16, Appendix B

6 Communities

NYSERDA aims to partner with local governments and communities to enable them to make energy choices in their communities, government operations, homes, businesses, and community institutions. Local governments and communities often lack the funding, staff capacity, and information needed to prioritize and implement 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 provide 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 initiative was updated in June, July and November 2017 to reflect timing shifts in when budgets, benefits, and participants will be committed. Since program launch, NYSERDA has acquired additional data from applications on which to base savings estimates, and the estimates have been updated accordingly based on factors such as preliminary program participation rates, participant attributes, and some verified project savings. The November 2017 revision also made minor adjustments to the budget and total carbon benefits. The initiative was updated again in April 2019 to reflect actual values for budget and benefits for 2016-2018 and update the projected future values accordingly. The initiative was updated again in November 2019 to add activities and corresponding budget and benefits.

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. The initiative was updated in April 2019 to reflect actual values for budget and benefits for 2017-2018 and update the projected future values accordingly.

Program investments and activities will be informed via engagement with stakeholders and subject matter experts. The investments support State Energy Plan (SEP) goals by stimulating substantial opportunities for communities across the State to save on energy costs, create jobs, and drive local economic growth, while protecting our environment by reducing greenhouse gas (GHG) emissions and other pollutants. The investment also supports Clean Energy Standard (CES) goals by helping retain existing renewable energy resources while stimulating demand for new clean energy resources.

6.1 Clean Energy Communities

6.1.1 Theory of Change

NYSERDA's Clean Energy Communities program is for local government officials and staff who want their communities to benefit from the new clean energy economy but struggle with tight budgets and limited staff. By providing grants, coordinator support, and clear guidance for implementing a range of high-impact clean energy actions, NYSERDA is helping local governments save money, grow the local economy, and improve the environment.

<p>Market Barriers Addressed</p>	<ul style="list-style-type: none"> • Lack of information, resources, capacity, and technical knowledge. 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. • Few opportunities for peer-to-peer engagement, learning, and motivation. There are few opportunities for municipal staff to engage in peer-to-peer exchange to learn from the successes of other, similar municipalities. • Too many choices, some which appear complex and time consuming. 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. • Lack of implementation funding for innovative projects. 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 clean energy projects.
<p>Testable Hypotheses</p>	<ul style="list-style-type: none"> • 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. • If competition, rewards, and recognition are provided, then uptake of clean energy actions among the State's municipalities will increase. • 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.
<p>Activities</p>	<p><u>High Impact Actions</u> NYSERDA will provide an impactful set of high-impact actions that the Clean Energy Communities program will encourage local governments to complete. Communities will work with regional coordinators to prioritize and implement high-impact actions, apply for grants that emphasize new activity and impact, and earn new forms of recognition. Communities can earn the Clean Energy Community designation by completing at least four high-impact actions. The high impact actions include:</p> <ul style="list-style-type: none"> • Benchmarking: Adopt a policy to report the energy use of municipal buildings on an annual basis. Large-population communities may adopt legislation requiring the annual disclosure of energy use in large private buildings. • Clean Energy Upgrades: Municipalities achieve a 10 percent reduction in the greenhouse gas emissions from municipal buildings through energy efficiency upgrades and renewable energy. • LED Street Lights: Municipalities convert at least half of the municipal "cobra-head" style street lights within the jurisdiction to energy-efficient light-emitting diode (LED) technology. • Clean Fleets: 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.

	<ul style="list-style-type: none"> • Unified Solar Permit: Municipalities pass an ordinance to adopt the New York State Unified Solar Permit to reduce costs and delays for solar projects in the jurisdiction. • 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. • Climate Smart Communities Certification: Municipalities earn Climate Smart Community (CSC) Certification through compliance with this robust, comprehensive rating system. • 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. • Energize NY 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. <ul style="list-style-type: none"> • Battle of the Buildings: A state-wide competition open to all commercial, multifamily and municipal buildings where buildings compete on the basis of energy use reduction, achieved mostly through operational and behavior changes. • Stretch Energy Code: Local governments that adopt a stretch energy code will significantly reduce energy consumption, operating costs, utility costs and greenhouse gas emissions. • Innovation in Energy Efficiency: Local governments achieve significant reductions in community energy use through mandatory building upgrade policies or other innovative policies targeted at private buildings. • Clean Transportation: Local governments take action in support of non-municipal electric vehicles, transportation demand management (TDM), congestion mitigation, and smart growth. • Community Campaigns: Community-scale campaigns can be an effective way to encourage adoption of new, innovative technologies to generate value and savings for consumers while advancing New York’s clean energy goals. <p>NYSERDA will encourage action in low-to-moderate income communities, potential environmental justice areas and other communities that might be defined as disadvantaged communities in accordance with the Climate Leadership and Community Protection Act of 2019. NYSERDA will do this through a multi-pronged strategy, including targeted outreach to encourage participation by those communities and high-impact actions specifically serving low-to-moderate residents including, for example, Community Campaigns (Solar For All).</p> <p><u>Provide Community Grants and Recognition</u></p> <ul style="list-style-type: none"> • Action grants will be available to communities that complete designated high-impact actions and meet all applicable requirements. The grants will range in size from small to large, with criteria for the size of the grant varying based on the high impact action. For example, the total action grant amount for a Community Campaigns action could be based on the total campaign participation, while a grant for Stretch Energy Code could be based on community size. • In addition to the action grants, point-based grants will also be available. Each high-impact action will have a certain number of points assigned to it based on its projected impact. Communities collect as many points as possible by
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	<p>completing high-impact actions and then they apply for a one-time, point-based grant. By crossing certain point thresholds, communities become eligible for larger grant amounts. This encourages communities to reach beyond the low-hanging fruit to consider actions with the greatest potential impact, like Community Choice Aggregation (CCA), Stretch Energy Code, and Innovation in Energy Efficiency. To encourage participation throughout the state, a certain number of grants are set aside based on community size and region. For example, a small/medium size community in the Southern Tier will only compete against other small/medium size communities in the Southern Tier for a Point-Based Grant.</p> <ul style="list-style-type: none"> • NYSERDA will leverage the grants to encourage action in low-to-moderate income communities, potential environmental justice areas and other communities that might be defined as disadvantaged communities in accordance with the Climate Leadership and Community Protection Act of 2019 including selection criteria that prioritize investments in those communities. • Each community’s point score will be posted on NYSERDA’s website to allow communities to see where they stand relative to their peers. NYSERDA will organize events and other opportunities to recognize communities in a number of categories including, but not limited to, top performers by region, community size, and government type. • Grants may be used to implement additional clean energy projects that meet program criteria and performance requirements. <p>Provide Support Services</p> <p>In addition to the grant opportunities, NYSERDA will provide a range of supportive services to aid communities in pursuing clean energy projects. These activities will include:</p> <ul style="list-style-type: none"> • Provide free, on-demand, locally-based general technical assistance, including supplemental engineering support services, with contractors covering every region of New York State. <ul style="list-style-type: none"> ○ Technical assistance providers will work one-on-one with communities, providing overall guidance to help municipal staff prioritize and implement the high-impact actions and navigate the program, as well as provide assistance with using the tools and resources, such as step-by-step guidance, important forms, template legislation, and case studies. 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 can provide more in-depth services, such as energy audits or assessments. ○ Support the Energy Improvement Corporation (EIC), which works in close partnership with its municipal members and local stakeholders to promote clean energy implementation by increasing public awareness of clean energy projects and providing an innovative means of clean energy financing. EIC supports the Energize NY Finance action. • Develop and implement Clean Energy Communities website with publicly available tools and resources. <ul style="list-style-type: none"> ○ Include a peer-to-peer learning platform, a mechanism to distribute aggregated community-level energy use data¹ by sector, and a mechanism for communities to track progress.
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¹ 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.

	<ul style="list-style-type: none"> • 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. • Develop a statewide building energy benchmarking platform to support both mandatory and voluntary benchmarking programs. Building owners and operators will use the platform to track and report energy data and receive the value of deeper building analysis and better targeting to help drive greater savings. This will enable smarter investment decisions, reward efficiency, and drive widespread, continuous improvement. • Support local community partnerships to implement activities to consider, organize, launch, and operate innovative CCA programs. <p>The combination of concise choices, technical assistance, outreach, engineering support, tools, resources, and dedicated funding will provide the foundation necessary to enable 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.</p>
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6.1.2 Target Market Characterization

Target Market Segment(s)	<ul style="list-style-type: none"> • Target market segments include Local Governments / Municipalities, including elected officials, staff, non-governmental organizations (i.e., Chambers of Commerce), community volunteers, and private consultants, as well as utility and industry representatives. • Other market participants include: <ul style="list-style-type: none"> ○ 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. ○ Private consultants, engineering firms, and other clean energy service providers. ○ Partner Organizations (environmental groups, schools, etc.)
Stakeholder/Market Engagement	<ul style="list-style-type: none"> • Since the Clean Energy Communities program launched in August 2016, 569 participating communities, including 290 designated Clean Energy Communities, have completed 1,641 high impact actions, validating the program’s broad appeal. Results of actions taken include: <ul style="list-style-type: none"> ○ 288,000 street lights converted to LED ○ 635 electric vehicles deployed ○ 938 electric vehicle charging ports installed ○ 876 municipal officials trained in energy code enforcement ○ 341 benchmarking resolutions passed ○ 341 communities have adopted the NYS Unified Solar Permit • Communities have indicated that barriers to further program participation include lack of funding, staff capacity, and information. These barriers can be addressed through coordinator support, appropriate tools, and effective program design, providing a clear path forward. • Local governments indicated they will pursue grants which they view are commensurate with the effort required to complete actions that may be complex and time-consuming. • NYSERDA has also connected with several partners who provided guidance and resources in launching and running the initiative, including: <ul style="list-style-type: none"> ○ Sustainable Westchester – provided lessons learned in developing and implementing Community Choice Aggregation (CCA) for municipalities in Westchester County.

	<ul style="list-style-type: none"> ○ NYPA – provided technical assistance, project management services, and financing for energy upgrades. ○ New York State DEC – provided joint support for Climate Smart Communities Certification, which will award credit for Clean Energy Community High-Impact Actions. ○ Natural Resources Defense Council (NRDC) – Provided assistance with developing guidance and support materials essential for communities implementing high-impact actions. ○ Northeast Energy Efficiency Partnerships (NEEP) – Provided support in development of efficiency policies and programs. ● NYSERDA will continue to refine, overall program structure and high-impact actions in collaboration with NYPA, DEC, Governor’s office, municipal representatives, other New York State agency partners, and the private sector. ● Engagement will continue with stakeholders and key market partners including local partner organizations, school districts and other special districts to gather real-time feedback on the success of the strategy, remaining barriers, and market changes. The engagement will include in-person meetings, webinars, and conference presentations.
<p>Relationship to Utility Programs and REV Initiatives</p>	<ul style="list-style-type: none"> ● 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 are working with NYSERDA to provide community energy data that is useful to municipalities, while simultaneously protecting customer privacy. ● 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 municipal clean energy actions as well as projects funded through resulting grants. ● 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. ● 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. ● Utilities provide incentives for energy upgrades, enabling LED street light conversions, economic development grants, approval for installing charging stations in public right-of-ways.

Key Implementation Milestones

<p>Key Milestones</p>	<p><u>Milestone 1 – Complete</u></p> <ul style="list-style-type: none"> ● 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. <p><u>Milestone 2 – Complete</u></p> <ul style="list-style-type: none"> ● After realizing the benefits associated with completing High-Impact Actions, many communities go on to pursue the more rigorous Climate Smart Communities (CSC) Certification. The number of Certified CSCs doubles, from 6 currently certified to 12 certified.
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6.1.3 Fuel Neutrality

<p>Fuel Neutrality</p>	<ul style="list-style-type: none"> • 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 an annual ton of carbon savings at a cost of \$85, compared to a cost of \$110 in an electric only scenario.
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6.1.4 Performance Monitoring and Evaluation Plans

<p>Performance Monitoring & Evaluation Plan</p>	<p>NYSERDA’s approach to monitoring and assessing the effectiveness of the initiative and overall market development is described below.</p> <p><u>Test-Measure-Adjust Strategy</u> 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"> • Uptake of high-impact actions will be tracked in the Clean Energy Communities website and program management software. • As uptake of certain 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. • 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. <p>Once the Investment Plan period ends in 2025, continued engagement with municipalities will be needed to drive the next level of action. The goal prior to exit is to build broad awareness of clean energy opportunities, make available tools and resources for all high-impact actions enabling local governments to act on their own, and generate significant private sector participation in related activities.</p> <p><u>Market Evaluation</u> 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"> • Effectiveness and value of the Clean Energy Communities website and resources provided • Which actions communities have implemented, and which ones they have not • Barriers to implementing high-impact actions • Cost of implementing high-impact actions • Detailed information on implemented actions, including project impacts • Related actions by non-participating communities that are causally linked to the intervention <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> <p><u>Impact Evaluation/Field Verification</u></p> <ul style="list-style-type: none"> • Impact evaluation for projects that overlap with other clean energy programs, savings (both direct and indirect) will be evaluated as part of
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	<p>the clean energy initiative providing direct financial support (incentives and/or loans).</p> <ul style="list-style-type: none"> • Impact evaluation for projects that do not overlap with other clean energy programs will involve measurement and verification (M&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 programs. • Data from Field Verification/Impact Evaluation can be used to help lend confidence in the market, especially among other end users.
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6.1.5 Budgets

The commitment budget for all activities included in this investment plan is as follows:

Funding Commitments		----- Commitments Plan -----						
Budget	Plan Total	Previously Committed	2020	2021	2022	2023	2024	2025
Incentives and Services	56,548,697	13,119,314	10,379,602	6,622,884	9,726,977	8,359,465	7,464,054	876,401
Implementation	12,264,266	1,373,539	609,652	2,000,000	3,281,353	3,000,000	1,500,000	499,721
Research and Technology Studies	-	-	-	-	-	-	-	-
Tools, Training and Replication	12,459,000	351,977	773,636	2,000,000	4,200,000	2,400,000	1,733,387	1,000,000
Business Support	-	-	-	-	-	-	-	-
Total	81,271,963	14,844,831	11,762,890	10,622,884	17,208,330	13,759,465	10,697,441	2,376,122

An annual expenditure budget for all activities included in this investment plan is shown in Appendix B alongside expected acquired benefits. Budgets 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 Appendix B 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 (SBC), such as those on Long Island or that run their own municipal utilities, Regional Greenhouse Gas Initiative (RGGI) funding is being used to supplement CEF activities. In addition to the budget outlined in Appendix B, \$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 to support Climate Smart Communities Certification.

6.1.6 Progress and Performance Metrics

The anticipated commitment benefits totals for the initiative with respect to CEF Order target metrics is as follows:

Benefit Commitments

Direct Benefit (2016-2025)	Plan Total
Energy Efficiency MWh Annual	339,775
Energy Efficiency MMBtu Annual	1,375,885
Renewable Energy MWh Annual	1,181,429
CO ₂ e Emission Reduction (metric tons) Lifetime	6,300,940
Participant Bill Savings Lifetime	1,636,776,019
Leveraged Funds	116,308,138

Indirect Benefit (2016-2030)	Plan Total
Energy Efficiency MWh Annual	97,516
Energy Efficiency MMBtu Annual	384,579
Renewable Energy MWh Annual	957,238
CO ₂ e Emission Reduction (metric tons) Lifetime	3,465,851

Benefits summarized in Appendix B represent the plan for acquiring impacts through completed projects or activities.

Benefits shown in Appendix B, listed as direct, are direct, near term benefits associated with program implementation. Because the Clean Energy Communities program is offered on a state-wide basis, impact associated with each community (high-impact actions, grant projects, etc.) will be reported to CEF or RGGI according to whether or not they pay the SBC. These benefits will be quantified and reported on a quarterly basis and will be validated through later evaluation. Appendix B shows all metrics and program participation associated with CEF funding.

Benefits shown in Appendix B, listed as indirect, represent the estimated indirect market effects expected to accrue over the longer term as a result of this investment and follow on market activity. 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 in Appendix B are not discounted, however NYSERDA has applied a discount of 50% to the overall portfolio values in the Budget Accounting and Benefits chapter.

Appendix C 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.

6.2 Community Energy Engagement Program²

6.2.1 Overview

Present Situation	<ul style="list-style-type: none"> • 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.³ • Low- to moderate-income (LMI) consumers⁴ 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.⁵ • These consumers also pay a disproportionate share of their income toward the cost of energy. • 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).
Intervention Strategy	<ul style="list-style-type: none"> • 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”). • 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. • 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. • For a visual representation of this strategy, please reference the flow chart entitled “Community Engagement Program”, which can be found in Appendix A.
Goals	<ul style="list-style-type: none"> • Address the energy affordability needs and reduce the energy bills of households and communities.

² 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.

³ See the Green Jobs-Green New York Community Outreach Discussion Working Group Recommendations Report, available at <https://www.nyserd.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.nyserd.ny.gov/-/media/Files/Publications/PPSER/Program-Evaluation/2015ContractorReports/2012-2013-HPwES-Process-Evaluation-Market-Characterization-Assessment-FinalReport.pdf>.

⁴ 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.

⁵ 2015 New York State Energy Plan: <http://energyplan.ny.gov/Plans/2015>

	<ul style="list-style-type: none"> • Increase participation in energy efficiency and renewable energy solutions and programs for LMI households and communities. • Increase participation in financing opportunities and programs for LMI communities and households. • Demonstrate the value proposition of clean energy solutions and programs through education to households and communities to achieve greater energy literacy.
State Energy Plan/Clean Energy Standard Link	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

Target Market Segment(s)	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.
Market Participants	<p>Market participants include:</p> <ul style="list-style-type: none"> • Locally-based organizations • Partner organizations (environmental groups, economic development organizations, schools, community action agencies, etc.) • LMI and market-rate households • Clean energy service providers • External Funding Sources (e.g. State, non-profit, financiers)
Market Readiness	<ul style="list-style-type: none"> • LMI and environmental justice (EJ) communities⁶ 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. • 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"> ○ 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®. ○ 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.⁷
Customer Value	<ul style="list-style-type: none"> • 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.). • Customers will be more likely to pursue these improvements, which can reduce their energy bills and improve their air quality and comfort.

⁶ 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

⁷ NYSERDA. (2016). Green Jobs-Green New York 2016 Annual report. Retrieved from <https://www.nyserd.ny.gov/About/Publications/GJGNY-Advisory-Council-Reports>.

6.2.3 Stakeholder/Market Engagement

Stakeholder/Market Engagement	<ul style="list-style-type: none"> • 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.⁸ • 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. • 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. • 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. •
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6.2.4 Theory of Change

Market Barriers Addressed	<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"> • Lack of capital for homeowners (who have difficulty paying utility bills) and building owners (who are hesitant to take on additional debt). • Difficulty obtaining financing for clean energy projects. • Lack of confidence in clean energy projects' ability to deliver energy savings. • Minimal understanding of clean energy practices and operation of equipment (e.g., boilers and furnaces). • Lack of awareness of available clean energy resources.
Testable Hypotheses	<ul style="list-style-type: none"> • 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. • 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 deploy energy efficiency improvements and renewable energy projects, then the number of completed projects will increase. • If locally-based organizations provide education on energy efficiency and renewable energy to households and communities, then market rate and LMI

⁸ NYSERDA. (2016). Green Jobs-Green New York Community Outreach Discussion Working Group Recommendations. Retrieved from <https://www.nyserdera.ny.gov/About/Publications/GJGNY-Advisory-Council-Reports>.

	households and communities will gain the necessary knowledge to reduce their energy bills.
Activities	<ul style="list-style-type: none"> • 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"> ○ 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. ○ 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. ○ 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. ○ 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). ○ 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. • 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"> ○ 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. ○ 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. ○ 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.

Key Milestones	<p><u>Milestone 1 (2017) - Complete</u></p> <ul style="list-style-type: none"> • NYSERDA issues competitive “base activities” solicitation. <p><u>Milestone 2 (2017) - Complete</u></p> <ul style="list-style-type: none"> • Awards from base activity solicitation are contracted. <p><u>Milestone 3 (2017) - Complete</u></p> <ul style="list-style-type: none"> • Commencement of local outreach and support to households and communities (with the focus on LMI).
Goals Prior to Exit	<ul style="list-style-type: none"> • Households and communities have increased awareness and access to resources, including capital and finance opportunities, for completion of clean energy projects. • Increased funding from developers and financiers for clean energy projects in households without direct support from NYSERDA. • Increase the number of organizations promoting clean energy and other benefits to households and communities. • Increase the number of completed residential clean energy projects with a focus on LMI.

6.2.5 Relationship to Utility/REV

Utility Role/ Coordination Points	<ul style="list-style-type: none"> • Utilities offer incentive programs for residential customers, which organizations awarded through this initiative will leverage to assist LMI households. • Utilities administer bill payment assistance programs for LMI households. •
Utility Interventions in Target Market	<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

The commitment budget for all activities included in this investment plan is as follows:

Funding Commitments		----- Commitments Plan -----						
Budget	Plan Total	Previously Committed	2020	2021	2022	2023	2024	2025
Incentives and Services	4,247,058	4,230,149	(140,615)	157,524	-	-	-	-
Implementation	160,760	160,730	30	-	-	-	-	-
Research and Technology Studies	-	-	-	-	-	-	-	-
Tools, Training and Replication	-	-	-	-	-	-	-	-
Business Support	-	-	-	-	-	-	-	-
Total	4,407,818	4,390,879	(140,586)	157,524	-	-	-	-

An annual expenditure budget for all activities included in this investment plan is shown in Appendix B alongside expected acquired benefits. Budgets 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 Appendix B 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 in Appendix B, \$1,400,000 of RGGI funding is being used for LMI community engagement activities and pilot projects.

6.2.7 Progress and Performance Metrics

The anticipated commitment benefits totals for the initiative with respect to CEF Order target metrics is as follows:

Benefit Commitments

Direct Benefit (2016-2025)	Plan Total
Energy Efficiency MWh Annual	-
Energy Efficiency MMBtu Annual	-
Renewable Energy MWh Annual	-
CO2e Emission Reduction (metric tons) Lifetime	-
Participant Bill Savings Lifetime	-
Leveraged Funds	1,181,132

Indirect Benefit (2016-2030)	Plan Total
Energy Efficiency MWh Annual	-
Energy Efficiency MMBtu Annual	-
Renewable Energy MWh Annual	-
CO2e Emission Reduction (metric tons) Lifetime	-

Benefits summarized in Appendix B represent the plan for acquiring impacts through completed projects or activities

Benefits shown in Appendix B, listed as direct, are direct, near term benefits associated with this initiative’s implementation. Although 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 allocated to the CEF as these metrics are not included in RGGI reporting. These benefits will be quantified and reported on a quarterly basis and will be validated through later evaluation. Appendix B shows all metrics associated with the entire program, including both CEF and RGGI funding. Appendix B shows program participation associated with the entire program. Participants are defined as all single-family residential customers that are assisted by LBOs with clean energy applications (audit, grant, and finance applications) in Appendix B.

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 Appendix B), as well as energy savings efforts that originate outside of existing programs, such as challenges and campaigns driven directly by locally-based organizations.

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.

Appendix C 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, Appendix C includes metrics associated with program implementation in its entirety. Program success will be measured on a funding-agnostic basis, however reported savings and metrics are allocated to the CEF as these metrics are not included in RGGI reporting .

6.2.8 Performance Monitoring and Evaluation Plans

<p>Performance Monitoring & Evaluation Plan</p>	<p>NYSERDA’s approach to monitoring and assessing the effectiveness of the initiative and overall market development is described below.</p> <p><u>Test-Measure-Adjust Strategy</u></p> <ul style="list-style-type: none"> • 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. • 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. <p><u>Market Evaluation</u></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"> • Effectiveness of the locally-based organizations and the resources provided; • Barriers to households and communities to implementing clean energy projects; • Investigating the awareness of and interest in locally-based organizations’ services; and • Documenting the experience and expectations of households in completing clean energy projects and contractors interacting with the locally-based organizations. <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>
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	<p><u>Impact Evaluation/Field Verification</u></p> <ul style="list-style-type: none"> • 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). • Impact evaluation for projects that do not overlap with other clean energy programs will involve measurement and verification (M&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. • Data from Field Verification/Impact Evaluation can be used to help lend confidence in the market, especially among other end users.
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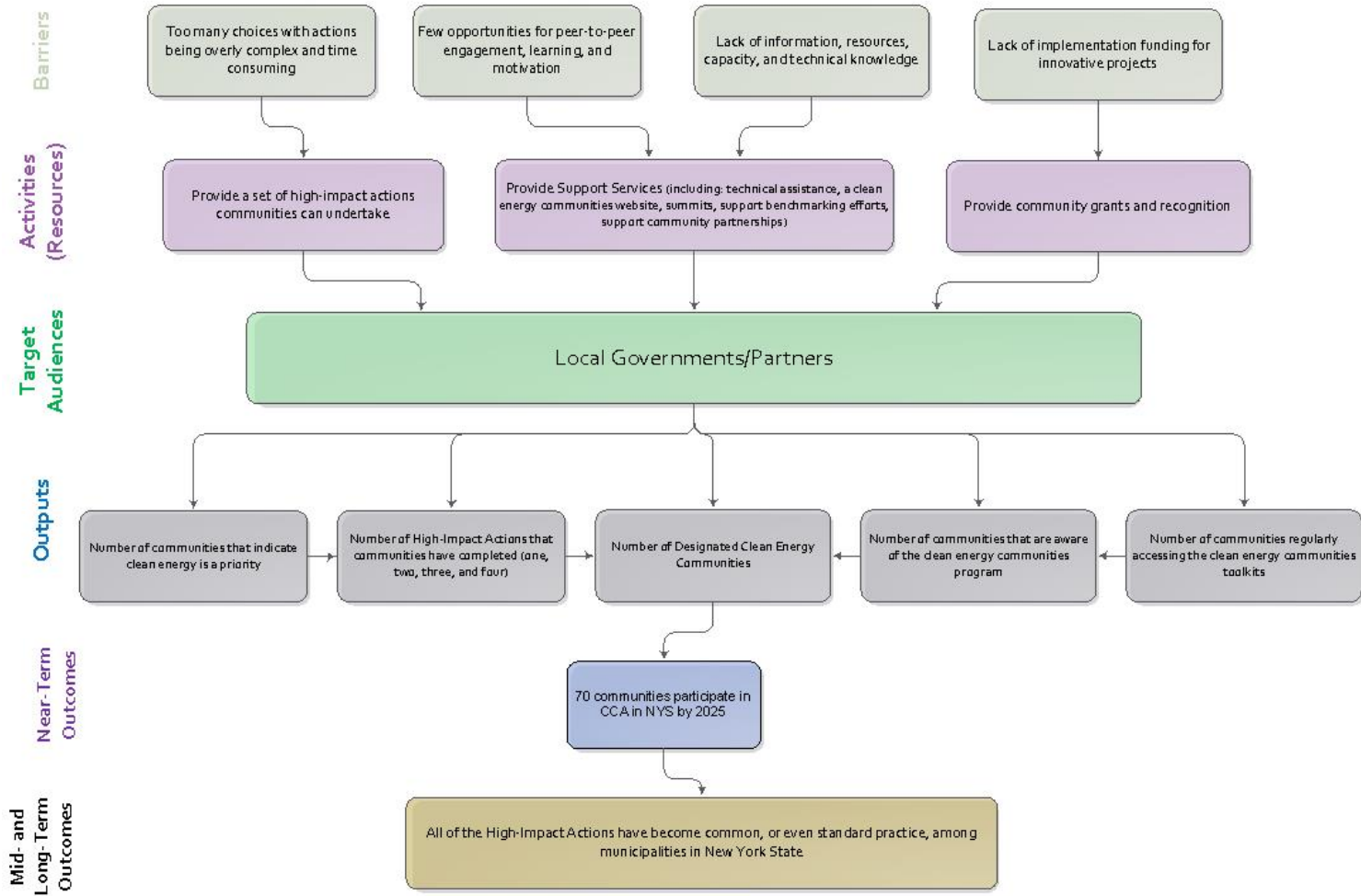
Verified Gross Savings Specifications

Verified Gross Savings Specification Template	
Date of ETIP/SEEP/CEF filing: (see Chapter cover page)	
Program Name	Clean Energy Communities
Program Description	The Clean Energy Communities initiative provides grants, direct technical support, tools and resources, and recognition to local governments that demonstrate leadership in clean energy. The initiative offers 10 different high impact actions (HIA) that communities can take, when a community completes four actions, they are considered a clean energy community.
Gross Savings Methodology	Energy benefits are calculated specific to each HIA reported as completed to NYSERDA by communities. The amount of energy benefits associated with each HIA is based on prior NYSERDA experience, e.g., solar PV, and other documented sources. All energy savings estimates have been conservatively discounted by 25% to account for possible overlap of HIAs with other activities. Energy savings are only included for high-impact actions with a completion date after 8/1/2016. Internal QA/QC protocols verify compliance with program requirements.
Realization Rate (RR)	No RR has been determined for this program within the preceding five-year time frame. The first impact evaluation will be in the field in early November 2019.
Planned VGS Approach	The Clean Energy Communities program will undergo Gross Savings Analysis for program period 2016-2018. Details related to the Gross Savings Analysis methodology have been submitted and will consist of engineering desk reviews, billing analysis, deemed savings estimates, and expert interviews among other approaches. The evaluation will also normalize the savings based on an appropriate normalizing variable for each HIA and the data available on all communities. The estimated completion of the Gross Savings Analysis Report is February 2020. An independent evaluator will perform the Gross Savings Analysis.
Exemption from EAM Status	N/A

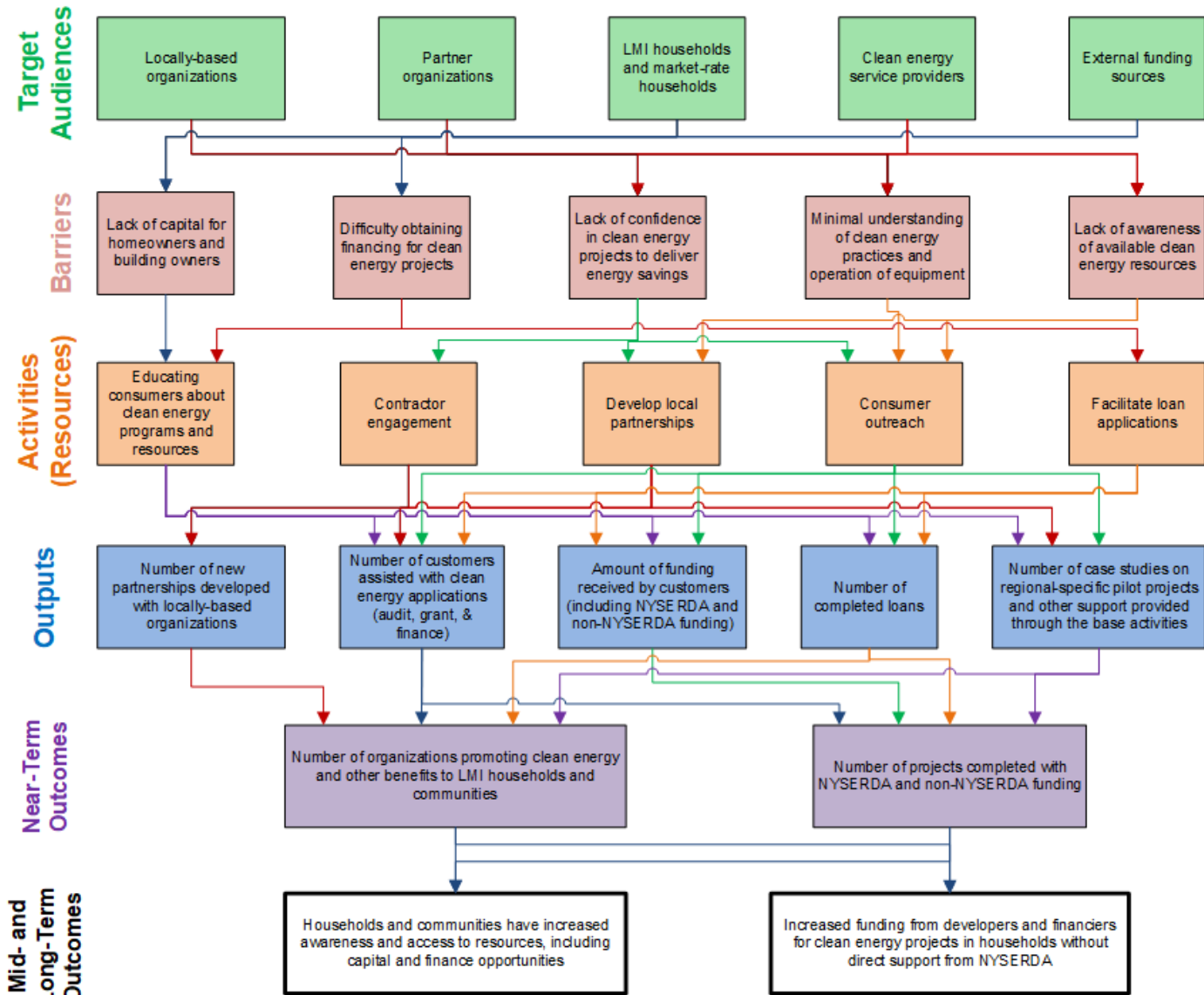
Verified Gross Savings Specification Form	
Date of CEF filing: See cover page	
CEF Chapter Name: Communities	
Initiative Name	Community Energy Engagement Program
Initiative Period	This initiative was originally launched in November 2017. It was a new initiative and not previously under any other name.
Initiative Description	<p>The Community Energy Engagement Program (CEEP) is NYSERDA's statewide community-based outreach and engagement initiative. NYSERDA works with locally based and constituency-based organizations across the state to deploy Community Energy Advisors (CEAs) to conduct engagement activities to New York State residents, small businesses, and multifamily building owners, with an emphasis on low-to-moderate income (LMI) households and communities. The goal is to help build clean energy awareness and connect underserved communities with cost-saving opportunities and help customers access audits, grants, and financing for clean energy projects.</p> <p>This Program will also award funding for regionally specific initiatives to compliment the efforts of base activities to increase adoption of energy efficiency and/or clean energy solutions and to expand the reach of CEEP.</p>
Gross Savings Methodology	Energy savings are not calculated for the Community Energy Engagement Program.
Realization Rate (RR)	No RR will be determined for this initiative as there are no energy savings.
Planned VGS Approach	Impact evaluation/field verification will not occur for the Community Energy Engagement Program.
Exemption from EAM Status	N/A

Appendix A – Logic Models

LOGIC MODEL: Clean Energy Communities



LOGIC MODEL: Community Energy Engagement Program



Appendix B | Initiative Budget and Benefits Summary

Clean Energy Communities

		Benefits Acquisition Plan														
		2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Direct Benefit	Plan Total															
Energy Efficiency MWh Annual	339,775	8,624	81,269	52,384	49,055	5,411	21,455	32,897	32,897	22,885	18,594	7,152	4,291	2,861	-	-
Energy Efficiency MWh Lifetime	3,494,519	97,082	1,151,746	783,533	556,656	33,007	130,874	200,674	200,674	139,599	113,424	43,625	26,175	17,450	-	-
Energy Efficiency MMBtu Annual	1,375,885	96,790	219,947	127,756	504,153	24,607	60,395	92,605	64,421	52,605	34,421	20,132	12,079	8,053	-	-
Energy Efficiency MMBtu Lifetime	15,307,457	1,025,921	2,411,252	1,886,944	5,198,260	275,601	676,422	1,037,180	1,037,180	721,517	586,232	225,474	135,284	90,190	-	-
Energy Efficiency MW	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Renewable Energy MWh Annual	1,181,429	7,959	18,242	51,644	154,601	1,691	142,094	217,877	217,877	151,567	123,148	47,365	28,119	18,946	-	-
Renewable Energy MWh Lifetime	7,359,498	87,104	206,335	303,982	973,279	10,316	866,772	1,329,051	1,329,051	924,557	751,203	288,924	173,354	115,570	-	-
Renewable Energy MW	1,043	7	16	82	181	1	113	174	174	121	98	38	23	15	-	-
CO2e Emission Reduction (metric tons) Annual	839,059	13,801	62,128	59,492	130,627	4,959	85,262	130,635	130,610	90,872	73,840	28,404	17,057	11,372	-	-
CO2e Emission Reduction (metric tons) Lifetime	6,300,940	150,495	814,080	654,102	1,062,031	37,442	537,747	823,939	823,787	573,149	465,721	179,147	107,580	71,720	-	-
Participant Bill Savings Annual	218,740,448	3,187,560	17,445,256	17,542,487	30,767,284	1,172,693	22,308,073	34,179,333	34,172,683	23,775,771	19,319,476	7,431,591	4,462,945	2,975,296	-	-
Participant Bill Savings Lifetime	1,636,776,019	34,898,798	235,489,097	187,674,218	244,643,779	8,322,811	138,949,312	212,894,704	212,854,139	148,093,609	120,336,199	46,289,394	27,797,975	18,531,984	-	-
Leveraged Funds	116,308,138	748,387	38,235,785	4,238,008	9,588,253	2,414,176	9,162,530	14,049,212	14,049,212	9,773,365	7,940,859	3,054,177	1,832,506	1,221,671	-	-

		2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Indirect Benefit	Plan Total															
Energy Efficiency MWh Annual	97,516	-	-	-	-	48,045	-	-	-	-	35,575	-	-	-	-	13,896
Energy Efficiency MMBtu Annual	384,579	-	-	-	-	222,398	-	-	-	-	116,624	-	-	-	-	45,557
Renewable Energy MWh Annual	957,238	-	-	-	-	60,457	-	-	-	-	644,876	-	-	-	-	251,905
Renewable Energy MW Annual	795	-	-	-	-	50	-	-	-	-	535	-	-	-	-	210
CO2e Emission Reduction (metric tons) Annual	549,746	-	-	-	-	67,030	-	-	-	-	347,122	-	-	-	-	135,594
CO2e Emission Reduction (metric tons) Lifetime	3,465,851	-	-	-	-	473,882	-	-	-	-	2,151,528	-	-	-	-	840,441

		2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Energy Usage	Plan Total															
Direct Energy Usage MWh Annual	(2,374)	(10)	(1,062)	(177)	(66)	(9)	(50)	(275)	(325)	(200)	(150)	(50)	-	-	-	-
Direct Energy Usage MWh Lifetime	(26,185)	(150)	(15,930)	(2,655)	(990)	(55)	(305)	(1,678)	(1,983)	(1,220)	(915)	(305)	-	-	-	-
Direct Energy Usage MMBtu Annual	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Direct Energy Usage MMBtu Lifetime	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Indirect Energy Usage MWh Annual	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Indirect Energy Usage MWh Lifetime	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Indirect Energy Usage MMBtu Annual	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Indirect Energy Usage MMBtu Lifetime	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

		2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Participants	Plan Total															
Participants	517	56	210	201	43	7	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	517	56	210	201	43	7	-	-	-	-	-	-	-	-	-	-

		Budget Expenditures Plan														
		2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Budget	Plan Total															
Incentives and Services	56,548,697	-	25,000	1,413,625	3,046,075	4,758,662	4,521,064	6,881,596	9,517,127	9,511,825	6,431,596	4,936,851	3,294,745	1,210,531	1,000,000	-
Implementation	12,264,266	-	288,594	356,178	722,026	477,420	1,900,000	2,650,000	2,319,648	1,350,000	1,100,000	600,000	500,000	-	-	-
Research and Technology Studies	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tools, Training and Replication	12,459,000	12,941	4,653	39,117	39,249	247,808	2,040,994	2,015,995	2,115,994	2,215,995	1,610,262	-	-	-	-	
Business Support	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	81,271,963	12,941	318,646	1,808,920	3,807,350	5,483,890	8,462,058	11,547,591	13,952,769	13,077,820	9,647,591	7,147,113	3,794,745	1,210,531	1,000,000	-

Table Notes:

* With the May 2021 IPPR filing of all investment plans, each Appendix B table that accompanies an investment plan was transitioned from yearly commitment-based budget and benefit plans to plans that forecast expenditures and acquired benefits.

- Customer Bill Savings are calculated as direct energy bill savings realized by customers participating in NYSERDA's programs.
- As of Q3 2019, NYSERDA's method for reporting Clean Energy Communities program benefits in connection with RGGI funds changed to more accurately reflect community locations (CEF, non-CEF) as well as the proportion of funds now being committed by CEF vs. RGGI.

Appendix B | Initiative Budget and Benefits Summary

Community Energy Engagement

		Benefits Acquisition Plan														
Direct Benefit	Plan Total	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Energy Efficiency MWh Annual	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Energy Efficiency MWh Lifetime	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Energy Efficiency MMBtu Annual	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Energy Efficiency MMBtu Lifetime	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Energy Efficiency MW	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Renewable Energy MWh Annual	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Renewable Energy MWh Lifetime	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Renewable Energy MW	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CO2e Emission Reduction (metric tons) Annual	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CO2e Emission Reduction (metric tons) Lifetime	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Participant Bill Savings Annual	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Participant Bill Savings Lifetime	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Leveraged Funds	1,181,132	-	-	-	-	-	1,181,132	-	-	-	-	-	-	-	-	-

Indirect Benefit	Plan Total	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Energy Efficiency MWh Annual	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Energy Efficiency MMBtu Annual	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Renewable Energy MWh Annual	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Renewable Energy MW Annual	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CO2e Emission Reduction (metric tons) Annual	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CO2e Emission Reduction (metric tons) Lifetime	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Energy Usage	Plan Total	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Direct Energy Usage MWh Annual	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Direct Energy Usage MWh Lifetime	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Direct Energy Usage MMBtu Annual	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Direct Energy Usage MMBtu Lifetime	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Indirect Energy Usage MWh Annual	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Indirect Energy Usage MWh Lifetime	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Indirect Energy Usage MMBtu Annual	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Indirect Energy Usage MMBtu Lifetime	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Participants	Plan Total	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Participants	6,524	-	-	-	-	-	6,524	-	-	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	6,524	-	-	-	-	-	6,524	-	-	-	-	-	-	-	-	-

		Budget Expenditures Plan														
Budget	Plan Total	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Incentives and Services	4,247,058	-	-	-	2,123,277	1,196,349	927,431	-	-	-	-	-	-	-	-	-
Implementation	160,760	-	34,449	861,844	(735,562)	30	-	-	-	-	-	-	-	-	-	-
Research and Technology Studies	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tools, Training and Replication	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Business Support	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	4,407,818	-	34,449	861,844	1,387,715	1,196,379	927,431	-	-	-	-	-	-	-	-	-

- Table Notes:**
- * With the May 2021 IPPR filing of all investment plans, each Appendix B table that accompanies an investment plan was transitioned from yearly commitment-based budget and benefit plans to plans that forecast expenditures and acquired benefits.
 - a. 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 NYSEERDA's programs.
 - b. Participants include all single-family residential customers that are assisted by LBOs with clean energy applications (audit, grant, and finance applications).

Appendix C | Initiative Outputs and Outcomes Summary

Clean Energy Communities

	Indicators	Baseline	2025 Target
		(Before/Current)	(cumulative)
Outputs	Number of communities that are aware of the Clean Energy Communities Program	0	1200
	Number of communities that have completed: 1 or more High-Impact Action	467	1067 (600 since initiative began)
	Number of communities that have completed: 2 or more High-Impact Actions	248	798 (550 since initiative began)
	Number of communities that have completed: 3 or more High-Impact Action	128	578 (450 since initiative began)
	Number of communities that have completed: 4 or more High-Impact Action	10	410 (400 since initiative began)
	Number of Designated Clean Energy Communities	0	400
Outcomes	Number of communities that indicate clean energy is a priority	473	900
	Number of communities regularly accessing the Clean Energy Communities Toolkits	0	200
	Number of communities participating in Community Choice Aggregation	0	70

Table notes

- a. A 0 (zero) denotes that the actual value is currently believed to be zero for baseline/market metrics.
- b. At the time of the baseline measurement for Number of Designated Clean Energy Communities, some communities had completed High Impact Actions, but since these actions took place prior to the program start, these communities

Appendix C | Initiative Outputs and Outcomes Summary

Community Energy Engagement

	Indicators	Baseline	2019 Target	2020 Target	2021 Target
		(Before/Current)	(cumulative)	(cumulative)	(cumulative)
Outputs	Amount of funding received by customers (including NYSERDA and non-NYSERDA funding)	\$5,190,000	0	\$9,750,000	
	Number of new partnerships developed with other locally-based organizations	0	0	10	
	Number of customers assisted with clean energy applications (audit, grant, and finance applications)	5,230	0	9,650	
	Number of completed (closed) loans	726	0	2,020	
	Number of case studies on regional-specific pilot projects and other support provided through the base activities	0	0	1	2
Outcomes	Number of organizations promoting clean energy and other benefits to households and communities	0	0	10	
	Number of projects completed with NYSERDA and non-NYSERDA funding	726	0	2,020	

Table notes

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

b. Baseline 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.