Clean Energy Communities Market Evaluation: Program Years 2019-2023

Final Report

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1 Introduction

As part of its Clean Energy Fund, the New York State Energy Research and Development Authority (NYSERDA) created an Investment Plan for local governments in New York State (NYS). Integral to this effort is the Clean Energy Communities (CEC) Program, which encourages investments in energy efficiency and the deployment of clean energy in local government operations and in their communities. Local governments include counties, cities, towns, and villages. The research team uses the terms 'municipality' and 'community' to refer to the local governments and the area in which they have jurisdictional control.

1.1 Program Description

The Program offers a list of High Impact Actions (HIAs), three types of grants, and regionally based Coordinators who provide outreach, guidance, and support, including technical assistance and tools, to overcome common barriers to implementing clean energy projects experienced by local governments. These barriers include a lack of awareness of clean energy opportunities available to municipalities, difficulty prioritizing clean energy projects, a lack of funding, and limited staff capacity and technical knowledge to implement clean energy projects. The Program activities are designed to achieve the following goals:

- Decrease the amount of time, expertise, and funding needed to prioritize and implement clean energy actions in NYS communities.
- Increase adoption of high-impact, clean energy policies and actions in city, town, village, and county governments across NYS.
- Support and replicate innovative clean energy initiatives and demonstration projects.
- Demonstrate the value proposition associated with high-impact clean energy actions.

1.2 Evaluation Objectives and Methods

Table 1 summarizes the study objectives and methods; see Section 5 for methodological detail and Appendix A for the full list of research objectives. For the purposes of this evaluation, a

community is defined as a Disadvantaged Community (DAC) if half or more of the population resides in census tracts categorized as DACs by NYS.[1]

Table 1. Evaluation Objectives and Methods[2]

Objective	Purpose	Method
Market Evaluation		
Characterize indirect impacts and participation in DACs and non-DACs between 2019-2023.	Calculate the indirect energy impacts from HIAs completed from 2019-2023. Calculate the proportion of communities with a clean energy task force and using Program-provided tools and resources.	Survey of communities; review of Program data
Document on which aspects of the Clean Energy Program are the most valuable for communities.	Identify which HIAs have become "Common Practice" and characterize which aspects of the CEC Program are the most useful for communities.	Review of Program data; survey of communities
Grants Analysis		
Characterize how many CEC Program grants were earned by communities between 2019 and 2023, the types of projects supported, and the impacts.	Number of different grant types awarded between 2019 and 2023, characterization of the types of projects, and energy impacts from projects	Review of Program Grant Project Data, desk reviews, and interviews of communities (where needed)
Estimate how many HIAs were funded through Program grants?	Number of HIAs funded or partially funded by grants between 2019 and 2023	Review of Program Grant Project Data

[1] See this webpage for information on DACs: https://climate.ny.gov/resources/disadvantaged-communities-criteria/

[2] The results of the Leveraged Funds Analysis referenced in the Clean Energy Communities Market Assessment (program years 2019-2023) Statement of Work will be published within the NYSERDA CEF Q1 2026 report (March 31, 2026), with the results memo concurrently being posted to the NYSERDA website and Document and Matter Management System (DMM) https://dps.ny.gov/dmm-login-document-and-matter-management-system.

2 Market Characterization and Assessment Results

2.1 Performance Metrics

The Contractor Team calculated performance metrics related to the CEC Program including how many HIAs have been completed. All reported numbers of communities are estimated from a representative sample whose size provided 90 percent confidence and 8 percent precision.

2.1.1 Number of HIAs Completed

Table 2 contains metrics indicating how many of the 1,596 NYS communities have completed one or more HIAs, two or more HIAs, three or more HIAs, and four or more HIAs. The Contractor Team estimated that 1,401 communities had completed at least one HIA between January 1, 2019, and December 31, 2023. Table D-2 in Appendix D contains data on the completed HIAs that were captured through the survey. Approximately 930 communities had completed four or more HIAs, the minimum required to be designated a clean energy community.

Table 2. Number of HIAs Completed by Community Type (N=1,596)

Community Description	One or More HIAs	Two or More HIAs	Three or More HIAs	Four or More HIAs
DAC (n=208)	161 (77%)	142 (68%)	132 (64%)	104 (50%)
Non-DAC (n=1,388)	1,240 (89%)	1,129 (81%)	962 (69%)	826 (59%)
Total (N=1,596)	1,401 (88%)	1,271 (80%)	1,094 (69%)	930 (58%)

Downstate New York, despite having fewer communities, is slightly more active in the CEC Program, in terms of HIAs completed (Table 3). Downstate regions included Long Island, most of the Mid-Hudson region, some communities in the Capital District, and New York City.[3]

[3] The distinction of whether communities belonged to upstate or downstate New York State came from the CEC Program.

Table 3. Number of HIAs Completed Upstate or Downstate (N=1,596)

Community Description	One or More HIAs	Two or More HIAs	Three or More HIAs	Four or More HIAs
Upstate (n=1,212)	1,053 (87%)	942 (78%)	784 (65%)	663 (55%)
Downstate (including NYC) (n=384)	347 (90%)	329 (86%)	310 (81%)	267 (69%)
Total (N=1,596)	1,401 (88%)	1,271 (80%)	1,094 (69%)	930 (58%)

There has been substantial growth in the number of HIAs communities completed since the Program began, as shown in Table 4. For example, the number of designated clean energy communities, achieved after completing four HIAs, has doubled since the prior market evaluation, growing from 465 to 930 communities.

Table 4. Number of HIAs Completed Since Program Inception

Metric	Baseline (Attained by August 2016)	Time 1 (Attained by August 2018)	Time 2 (Attained by December 2023)
Number of communities that completed one or more HIAs	467 (29%)	1,178 (74%)	1,401 (88%)
Number of communities that completed two or more HIAs	248 (16%)	753 (47%)	1,271 (80%)
Number of communities that completed three or more HIAs	128 (8%)	609 (38%)	1,094 (69%)
Number of communities that completed four or more HIAs	10 (1%)	465 (29%)	930 (58%)

The most commonly completed HIAs were Energy Code Enforcement Training (64%; 1,021 of 1,596), Cobra-Head LED Streetlight conversions (62%; 996 of 1,596), and the Unified Solar Permit (35%; 551 of 1,596). Additionally, 428 municipalities registered as a Climate Smart Community in the current evaluation, indicating an interest in going beyond the HIAs.[4]

[4] The number of registered municipalities as a Climate Smart Community may be an overestimation, as only available data was from December 2024, a year after the evaluation period.

Non-DAC communities appeared to be more active in completing the Program's HIAs compared to DAC Communities, with 89% of non-DAC communities completing at least one HIA compared to 77% of DAC communities. Appendix E shows the proportion of communities completing all HIAs offered between 2019 and 2023. Appendix F contains data on the number of communities that achieved 3,000 points, 4,000 points, and 5,000 points from completing HIAs[5].

2.1.2 HIAs as Standard Practice

To assess whether any HIAs have become standard practice in NYS, the Contractor Team asked community representatives whether more than half of communities they were in contact with had completed each action[6]. Figure 1 shows the percentage of community representatives who reported that the specified action was standard practice among their communities. Responses varied widely. For example, 86% of respondents (795 out of 924) reported that sending an energy code enforcement officer to CEC energy code enforcement training was standard practice, whereas none reported that purchasing a heavy-duty municipal vehicle was standard. The heavy-duty EV HIA is also one of the more recently added HIAs to the Program.

In general, community representatives' perceptions of HIAs are standard practice align with the ranking of actual completion of HIAs. For example, as shown in Appendix D, the most commonly completed HIAs were Energy Code Enforcement Training, Cobra Head LED Streetlight conversions, and the Unified Solar Permit, respectively, which match the top three HIAs representatives reported were standard practice in the State. These are also some of the longest-lived HIAs, which have been part of the CEC Program since its inception.

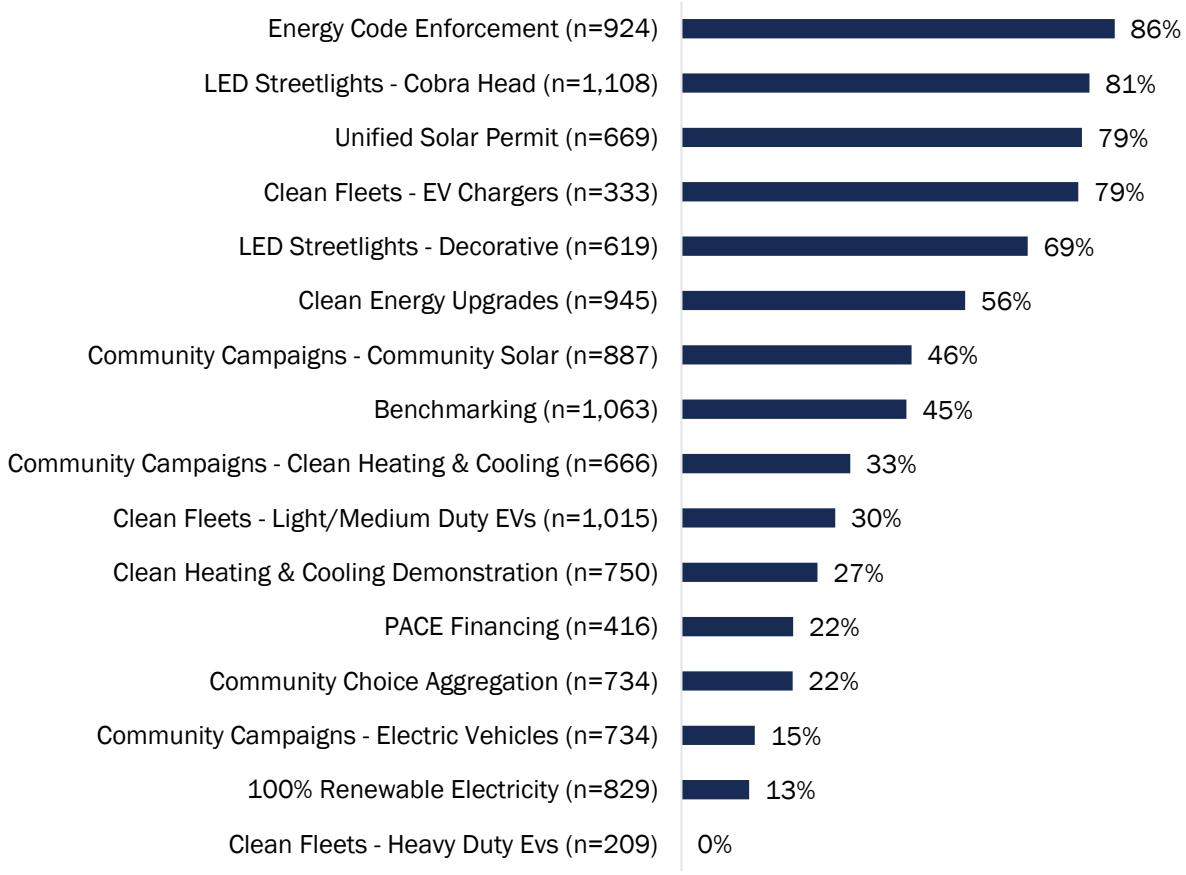
When comparing the actual numbers of communities that completed specific HIAs to the proportions reporting them as standard practice, there is a discrepancy: community representatives reported they HIAs are more common than they actually are. For example, while 79% of community representatives who completed the Clean Fleets - EV Charging HIA viewed it as standard practice among the communities they know, in actuality, 12% of communities statewide completed the HIA in 2019—2023.

[5] Communities collect points by completing high-impact actions. Each high-impact action has a certain number of points assigned to it. Each community's point balance is available at www.nyserda.ny.gov/cec.

[6] Previous CEC evaluations have shown there is consistent contact between municipalities sharing knowledge of energy policies effecting NYS.

As many community representatives indicated that they were not familiar enough with other communities to determine whether certain HIAs were standard practice, the reader should take note of the "n" associated with each HIA in Figure 1.

Figure 1. Perceptions of HIAs as Standard Practice in NYS



2.2 Program Value

This section presents findings about the CEC Program value as reported by surveyed communities. Findings relate to the value of the Coordinators, the Program's tools and resources, the formation of working groups or task forces due to CEC Program activity, and the community perception of taking clean energy actions on their own without those Program resources.

2.2.1 Prevalence of Task Forces

Due to the CEC Program, one in eight municipalities had an established task force seeking to advance clean energy locally (158 of 1,169). Non-DAC communities were more likely to create a task force due to CEC Program involvement than DAC communities. Over one tenth of non-

DAC communities created a task force due to CEC (148 of 1,388; 11%) versus 5% of DAC communities (10 of 208).

The task forces created due to the CEC Program involved various types of participants and primarily focused on NYSERDA programs, activities, and incentives. Most task forces involved volunteers and community members (111 of 158; 70%), half of the task forces involved government officials (79 of 158; 50%), and nearly a fourth involved either a CEC Coordinator or another NYSERDA representative (37 of 158; 23%). In terms of initiatives, nearly two-thirds of these task forces educated municipal staff about NYSERDA activities, incentives, and programs (97 of 158; 62%). Nearly half of these task forces supported the municipality on clean energy actions by keeping them apprised of clean energy programs and funding opportunities, advising on climate action plans and implementation, and one contributing to community campaign HIAs (74 of 158; 47%). Nearly two-fifths of them collaborated with other municipalities on clean energy work (60 of 158; 38%). Nearly half of these respondents voluntarily mentioned that their group also worked on activities supporting the Climate Smart Communities program in conjunction with CEC Program activities (74 of 158; 47%).

2.2.2 Use of Program Resources

The CEC Program offers a wide variety of tools and resources to local governments, providing them with the assistance and guidance needed for Program participation. Program resources consist of the Program Opportunity Notices (PON), Program Toolkits, and Coordinator Assistance. The PON provides communities with a list of high-impact actions offered, grant types and eligibility requirements, and program recommendations for HIA implementation. The CEC Toolkits[7] provides communities step-by-step guidance for completing each high impact action, templates, technical assistance, fact sheets and customized action guidance. Overall, 85% of communities in NYS (1,363 of 1,596) reported using NYSERDA CEC tools and resources. Surveyed representatives from DACs reported lower usage compared to non-DACs. Specifically, 68% of DAC communities (142 of 208) reported using CEC resources, compared to 88% of non-DAC communities (1,221 of 1,388; Figure 2). This distinction could be explained from survey results (displayed later in the report Figure7) showing that representatives from DACs feel more

[7] https://www.nyserda.ny.gov/All-Programs/Clean-Energy-Communities/High-Impact-Actions/Toolkits

capable of completing high impact actions without the use of available tools and resources as compared to non-DAC.

Figure 2. Number of Communities Using CEC Resources

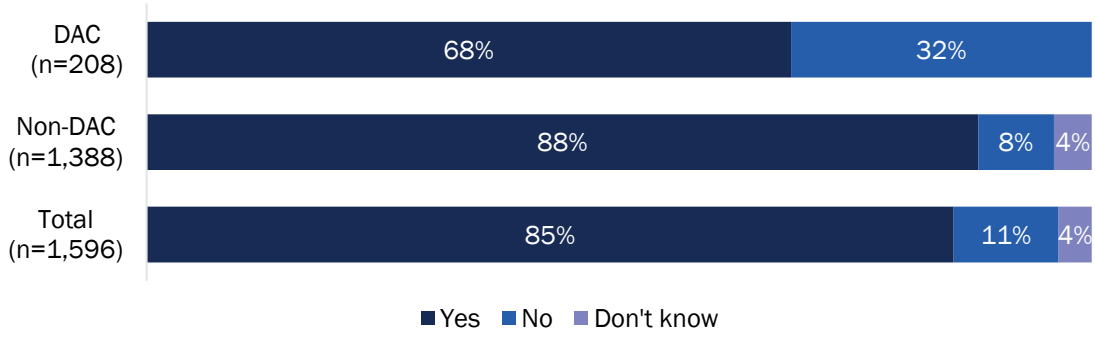
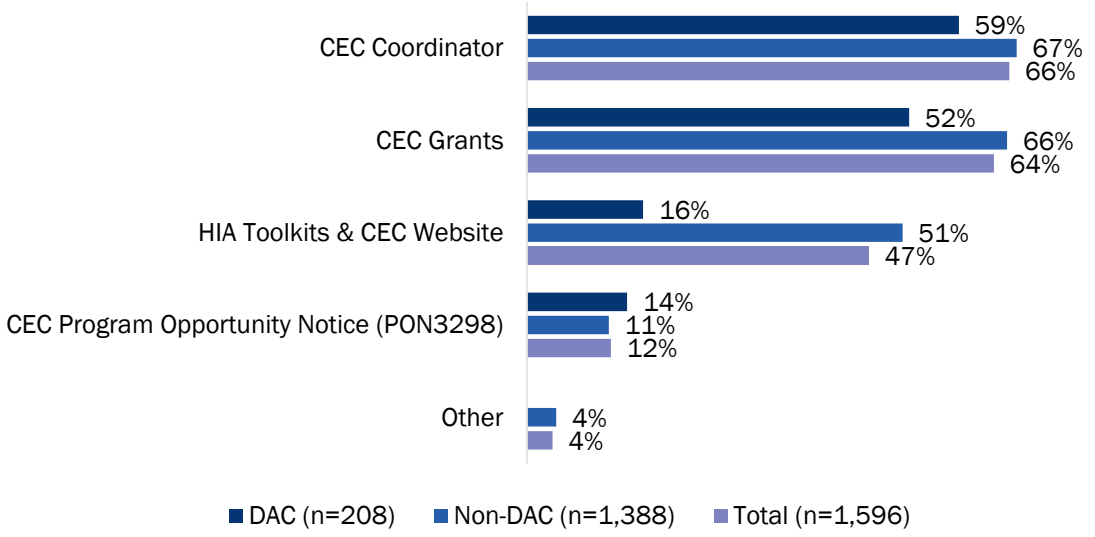


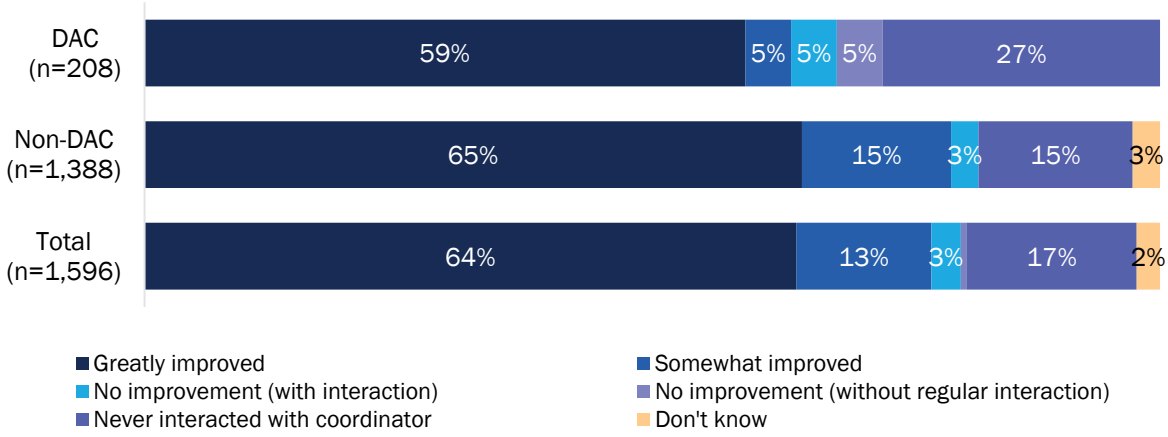
Figure 3 displays the percentage of community representatives who reported using certain CEC resources. The most utilized CEC Program resources were the CEC Coordinators and CEC Grants, with two-thirds of communities, suggesting these are the most valuable resources available to communities. While more than half of non-DAC communities reported using the online HIA toolkits and other CEC website resources, DACs reported using these resources far less frequently. The CEC PON was reported as the least popular Program resource, with only 12% of all communities (183 of 1,596) reporting that they used the PON.

Figure 3. CEC Program Resource Utilization



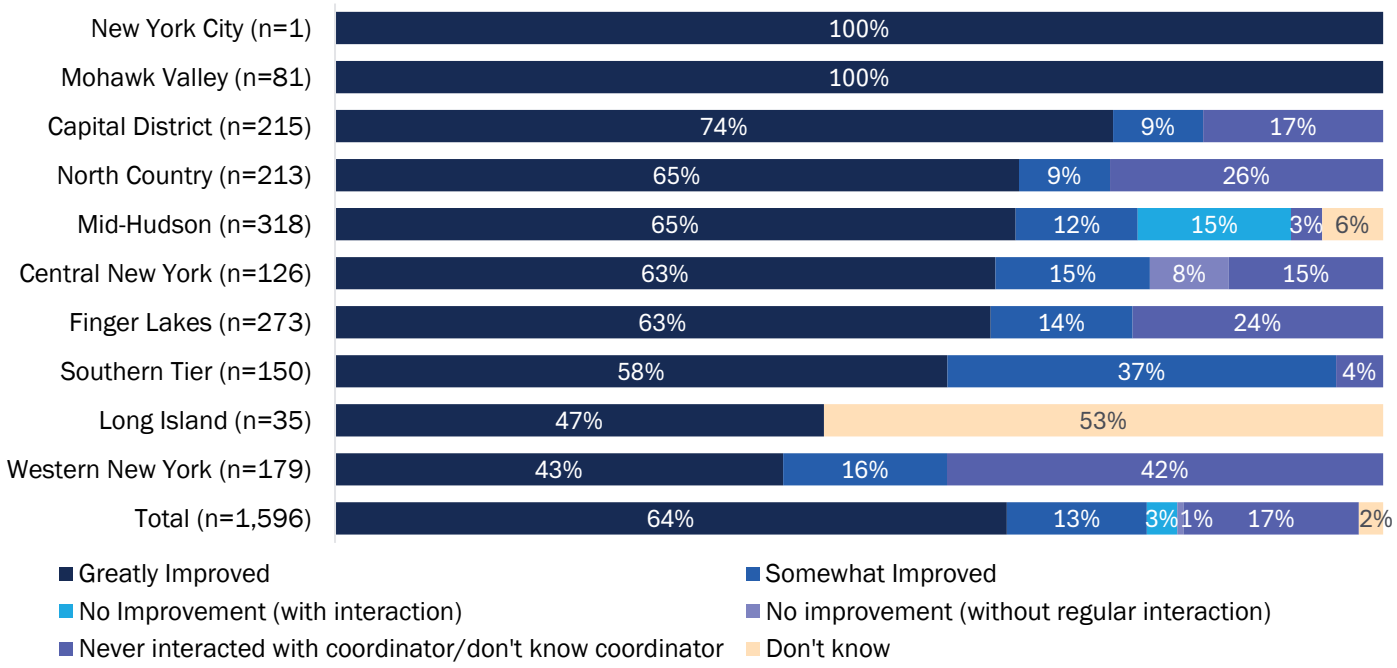
Not only did a large portion of communities (66%) report utilizing the CEC Coordinator, but when asked specifically about their experience, many also reported that the Coordinator assistance was a valuable resource. Figure 4 presents community representatives' responses to how their Coordinator impacted their awareness and understanding of the benefits of clean energy. The majority of community representatives in NYS (1,023 of 1,596; 64%) reported that their assigned CEC Coordinator greatly improved their understanding of clean energy. Only 3% (46 of 1,596) reported no improvement in their understanding or awareness of clean energy benefits after interacting with their Coordinator. However, 17% (267 of 1,596) indicated they had never interacted with their Coordinator or were not aware of them. This lack of engagement was more common among DACs, with 27% (57 of 208) reporting no interaction with their assigned Coordinator, compared to 15% (210 of 1,388) of non-DACs.

Figure 4. Coordinator Impact on Community Clean Energy Awareness and Knowledge



Since Coordinators are regionally based, the Contractor team assessed improvements in understanding by region. Community representatives from Western New York, Finger Lakes and the North Country reported fewer interactions with their Coordinators compared to those in other regions. The team cautions the reader that there were small survey sample sizes for the Mohawk Valley, Long Island, and New York City regions.

Figure 5. Coordinator Impact on Clean Energy Awareness and Knowledge by Region



Community representatives who had interacted with their Coordinator were also asked how their Coordinator was most helpful and Figure 6 presents the distribution of their answers. The greatest proportion of representatives reported that Coordinators helped them access financial incentives or project financing (960 of 1,246; 77%) and raise general awareness about the benefits of clean energy (954 of 1,246; 77%). DACs were also less likely to receive support from their Coordinators in accessing technical services/engineers (19 of 142; 13%) or generating community support (33 of 142; 23%).

A quarter of communities (314 of 1,246; 25%) reported that their Coordinator was helpful in "other" ways. The most common of this included support in developing project ideas tailored to the community's needs and navigating the HIA submission process through the program's portal. Additionally, some communities noted that Coordinators led meetings on local clean energy activities, facilitated connections with peers in other communities, and filled gaps in cases where local staff capacity was limited. One respondent reported, "The Program would not work without the Coordinator. They help steer clean energy actions, tell you what is available, and then help you fill in the application and submit it."

Figure 6. How CEC Coordinators Were the Most Helpful to Communities (Multiple Responses Allowed)

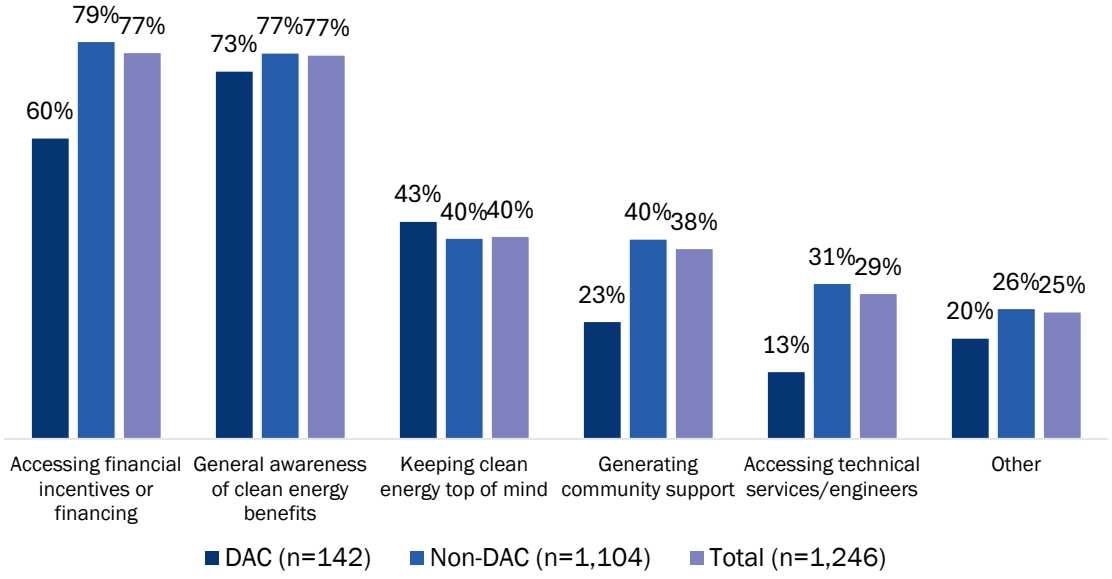


Table 5 shows how Coordinators were most helpful by NYS region among those who reported interacting with their Coordinator. Representatives from the Capital District and Western New York reported the most assistance with accessing technical services or engineers, while Mid-Hudson representatives reported the most support in keeping clean energy top of mind. The Contractor team sees no variation in support across regions that would cause concern.

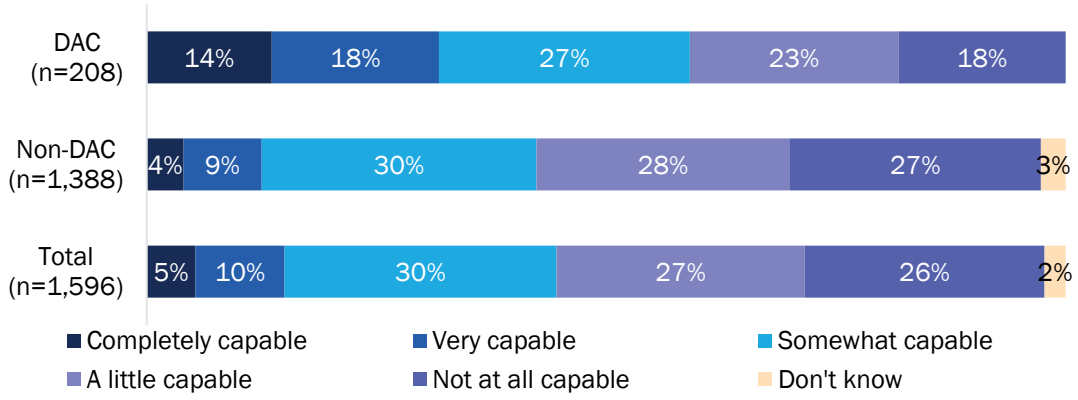
Table 5. How Coordinators Were the Most Helpful by Region (n=1,246)

Region	Accessing technical services or engineers	Accessing financial incentives or financing	General awareness of clean energy benefits	Keeping clean energy top of mind	Generating community support	Other
Capital District (n=176)	93 (52%)	146 (82%)	123 (69%)	74 (41%)	74 (41%)	25 (14%)
Central New York (n=98)	19 (19%)	88 (90%)	51 (52%)	23 (24%)	46 (48%)	5 (5%)
Finger Lakes (n=208)	62 (30%)	162 (78%)	171 (82%)	62 (30%)	81 (39%)	13 (6%)
Long Island (n=16)	7 (42%)	16 (100%)	16 (100%)	16 (100%)	7 (42%)	0 (0%)
Mid-Hudson (n=253)	56 (22%)	202 (80%)	227 (90%)	141 (56%)	102 (40%)	125 (50%)

Region	Accessing technical services or engineers	Accessing financial incentives or financing	General awareness of clean energy benefits	Keeping clean energy top of mind	Generating community support	Other
Mohawk Valley (n=81)	0 (0%)	44 (54%)	56 (69%)	19 (23%)	19 (23%)	62 (77%)
New York City (n=7)	7 (100%)	7 (100%)	7 (100%)	0 (0%)	0 (0%)	0 (0%)
North Country (n=158)	46 (29%)	102 (65%)	111 (71%)	83 (53%)	37 (24%)	19 (12%)
Southern Tier (n=143)	25 (18%)	124 (87%)	87 (61%)	50 (35%)	56 (39%)	37 (26%)
Western New York (n=104)	46 (45%)	70 (67%)	104 (100%)	33 (31%)	51 (49%)	28 (27%)
Total (n=1,246)	**360 (29%)**	**960 (77%)**	**954 (77%)**	**502 (40%)**	**472 (38%)**	**314 (25%)**

As previous results showed DACs utilizing fewer CEC resources, they also reported being more likely than non-DACs of being capable of completing clean energy actions without the support of the CEC Program's tools and resources, as displayed in (Figure 7). Nearly a third of DACs (66 of 208; 32%) reported feeling completely or very capable of completing energy or sustainability actions without CEC Program support, as compared to 13% of non-DACs (174 of 1,388). Overall, about half of all communities in NYS (53%; 847 of 1,596) reported that they would be "not at all capable" or only "a little capable" of completing clean energy actions without the Program's tools and resources.

Figure 7. Capability to Complete Energy Actions Without Program Support by Segment



2.3 Energy Impacts

The Contractor team estimated CEC Program indirect benefits for the 2019-2023 program period based on a combination of Program and survey data that categorized, and weighted completed HIAs to the per unit savings (detailed methodology in section 5). Communities that completed the CEC Program HIAs annually saved 244,741 MWh, and 219,651 MMBtu in natural gas savings, leading to impacts of 1,367,830 metric tons of CO2e emissions reductions. Table 6 lists the annual indirect energy impacts resulting from complete HIAs identified through the Program tracking data and through the market survey. A comparison of forecasted impacts to evaluated impacts can be found in Appendix H.

Table 6. Estimated Indirect Energy Impacts (HIA's) from 2019-2023[8]

Energy Metric	DAC (N=208)	Non-DAC (N=1,314)	All NYS Communities
Efficiency MWh Savings annual	40,017	204,723	244,741
Natural Gas MMBtu Savings annual	37,297	182,354	219,651
Fuel Oil MMBtu Savings annual	3,245	25,628	28,873
Propane MMBtu Savings annual	23	729	751
Renewable MW Generation annual (Installed capacity)	141	259	400
Renewable MWh Generation annual	138,743	178,580	317,323
Gasoline MMBtu Savings annual	4,552	21,206	25,758
Diesel MMBtu Savings annual	28	184	212
Beneficial Electrification MWh annual (usage reported)	1,002	7,367	8,369
MTCO2e annual	560,328	807,502	1,367,830

*Total MMBtus for 2019-2023 reporting period is 275,245

**TBTus for the 2019-2023 reporting period is 0.275

[8] Savings impacts that overlap with other NYSERDA programs are removed at the portfolio level to avoid double counting.

3 Grants Analysis

Through participation in the CEC Program, communities can earn grants to use toward additional clean energy projects. The Program offers three main types of grants: designation, points-based, and action grants. Communities can receive a designation grant (offered since program inception) when they complete four high-impact actions (HIAs) and receive the Clean Energy Community designation. Points-based grants became available in 2020 and are awarded for reaching milestones of 3,000, 4,000, and 5,000 points by completing additional HIAs. The action grants were also introduced in 2020 and are available to communities that complete Community Campaigns or adopt the NY Stretch Energy Code.[9] Funding amounts for points-based and action grants vary based on community size: small and medium communities (populations under 40,000) and large communities (over 40,000). Communities with a proposed grant project in a Disadvantaged Community (DAC) may be eligible for a bonus grant.

Overview of Grants Awarded

The Contractor team reviewed all grants awarded through the CEC Program between 2019 and 2023. Between those years, the NYSERDA CEC Program awarded 599 grants totaling over $7.2 million to support clean energy projects in 369 unique municipalities (T). The distribution of grants varied by both community size and region. More grants were awarded to small communities, with 515 grants totaling $4.2 million, compared to 84 grants totaling $3.0 million awarded to large communities. Given the much smaller number of large communities (93 compared to 1,503 small communities), this represents a disproportionately greater share of grants awarded to large communities.

Regionally, the Mid-Hudson area received the most grant support, with 197 grants totaling $2.5 million, more than double both the number of grants and total funding awarded in the Capital Region, which was the second most funded region with 85 grants totaling $995,000.

[9] Adopting the NY Stretch Energy Code was offered as an HIA in 2020 and 2021, and completing this action made communities eligible for an action grant in those years.

Table 7 . Summary of Grants Awarded from 2019 to 2023

Category	Item	Number of Grants Awarded	Total Dollars Awarded
Grant Type	Points-Based	99	$3,000,000
	Designation	289	$2,660,000
	Action	211	$1,562,500
Community Size	Small	515	$4,177,500
	Large	84	$3,045,000
Region	Mid-Hudson	196	$2,527,500
	Capital Region	85	$995,000
	Southern Tier	80	$895,000
	Finger Lakes	60	$765,000
	North Country	47	$640,000
	Western New York	28	$385,000
	Central New York	63	$345,000
	Mohawk Valley	22	$255,000
	Long Island	15	$235,000
	New York City	3	$180,000
Total		**599**	**$7,222,500**

Designation Grants

Designation grants were the most common grant type awarded between 2019 and 2023, representing nearly half of all grants awarded during the evaluation period (289 of 599). While the majority of these grants (272 of 289) were for $5,000 each, in 2019, 17 grants ranged between $30,000 and $250,000. That year, the Program offered a limited number of designation grants from $30,000 to $250,000 on a first-come, first-served basis. Additionally, communities in four counties were eligible to receive $30,000 designation grants as part of a settlement from a lawsuit filed by the State of New York.[10] The total number of designation grants awarded annually varied from 53 to 85, as shown in Table 8.

[10] Local governments in Albany, Rensselaer, Columbia and Greene Counties were eligible for the additional grant funding made available through the settlement of a lawsuit by the State of New York against Lafarge North America, Inc.

Table 8. Designation Grants Awarded Through CEC Program

Community Size	2019	2021	2022	2023	Total
Small Community	47	73	78	60	**258**
Large Community	6	9	7	9	**31**
Total	**53**	**82**	**85**	**69**	**289**

Points-Based Grants

Communities collect points by completing high-impact actions. Each high-impact action has a certain number of points assigned to it[11]. The object is to collect enough points to cross certain point thresholds to become eligible for larger grant amounts. After their introduction in 2020, 99 points-based grants were awarded between 2021 and 2023. The number of grants awarded decreased as the required point thresholds increased. Between 2021 and 2023, 62 grants were awarded for achieving 3,000 points, 24 for 4,000 points, and 13 for 5,000 points (Table 9).

Eleven communities received fourteen DAC bonuses in addition to their points-based grant awards. Five of these DAC bonus grants were awarded to small communities, and nine were awarded to large communities.

Table 9. Points-Based Grants Awarded Between 2021-2023[a]

Grant Type	Community Size	Grant Amount	2021	2022	2023	Total
3,000+ Points	Small Community	$10,000	14	17	18	**49**
	Large Community	$30,000	1	9	3	**13**
4,000+ Points	Small Community	$20,000	8	7	2	**17**
	Large Community	$70,000	0	5	2	**7**
5,000+ Points	Small Community	$70,000	4	1	5	**10**
	Large Community	$150,000	0	1	2	**3**
DAC Bonus[b]	Small Community	$10,000	3	2	0	**5**
	Large Community	$10,000	1	5	3	**9**
Total	**Small Community**	**$1,580,000**	**26**	**25**	**25**	**76**
	Large Community	**$1,420,000**	**1**	**15**	**7**	**23**

[a] The table provides data from 2021 to 2023 since points-based grants were not available in 2019, and program data indicate no points-based grants were awarded in 2020.[b] DAC bonus grants are not included in total counts, as they are distributed along with the points-based grants.

[11] https://www.nyserda.ny.gov/All-Programs/Clean-Energy-Communities/How-It-Works/Earn-Grants

Action Grants

The NYSERDA CEC Program awarded a total of 211 action grants between 2019 and 2023. Large communities received $50,000 and small communities received $5,000 for the NYStretch Energy Code action grants. For Community Campaigns, large communities received $15,000 and small communities received $5,000. Two large communities received additional $10,000 DAC bonus award with their NY Stretch action grants.

Municipalities conduct Community Campaigns to organize groups of people to adopt clean heating and cooling technologies such as heat pumps, community solar, or electric vehicles, or enroll in demand response programs. The distribution of action grants has shifted over time, reflecting changes in the types of campaigns communities have completed. In 2021 and 2022, more communities received grants for completing Community Solar Campaigns, while that number declined in 2023. In contrast, Clean Heating and Cooling Campaign grants became more common in 2022 and 2023 (Table 10).

Table 10. Action Grants Awarded Between 2021-2023[a]

Grant Type	Community Size	2021	2022	2023	Total
Community Solar Campaign	Small Community	26	32	8	**66**
	Large Community	4	6	1	**11**
Clean Heating and Cooling Campaign	Small Community	3	22	24	**49**
	Large Community	0	4	4	**8**
NYStretch	Small Community	13	21	1	**35**
	Large Community	0	5	0	**5**
Demand Response Campaign[b]	Small Community	13	6	0	**19**
	Large Community	2	2	0	**4**
Electric Vehicle Campaign	Small Community	0	9	3	**12**
	Large Community	0	0	2	**2**
Total	**Small Community**	**55**	**90**	**36**	**181**
	Large Community	**6**	**17**	**7**	**30**

[a] The table only provides data from 2021 to 2023 since action grants were not available in 2019, and program data indicate no action grants were awarded in 2020.
[b] Demand Response Campaigns were removed as an HIA in 2023, which is why no grants were distributed for this action in that year.

Total Program Impacts

Overall, grant projects produced annual savings of 30,351 MWh and 70,030 MMBtu for the designated time period. Table 11 below provides the total indirect savings achieved for the

Program for the evaluated period 2019-2023. For additional information on the grants project types and energy impacts, see Appendix B.

Table 11. Total Energy Impacts for 2019-2023

Energy Metric	HIAs	Grants	Total Indirect Energy Impacts
Efficiency MWh Savings annual	244,741	30,351	275,092
Natural Gas MMBtu Savings annual	219,651	70,030	289,681
Fuel Oil MMBtu Savings annual	28,873	213	29,086
Propane MMBtu Savings annual	751	23	774
Renewable MW Generation annual	400	0.33	400.33
Renewable MWh Generation annual	317,323	2,812	320,135
Gasoline MMBtu Savings annual	25,758	11,094	36,852
Diesel MMBtu Savings annual	212	40	252
Beneficial Electrification MWh annual	8,369	955	9,324
MTCO2e annual	1,367,830	30,327	1,398,157

Total MMBtu's = 356,645
***Total TBTus = 0.356

4 Findings and Recommendations

Based on the results of the Market Assessment, the Contractor team offers the following key findings and recommendations.

Finding 1

The Contractor team estimated indirect impacts for the 2019-2023 reporting period of 356,645 MMBtus, 275,092 MWh of indirect energy savings and 320,135 MWh of Renewable Generation. These impacts are an indication of the CEC program successes in assisting local governments take actions towards a clean energy economy, and progressing NYS towards achievement of the Clean Energy Standard.

Recommendation 1: There is no recommendation for this finding.

Finding 2

The CEC Program provides valuable resources and support for municipalities to execute clean energy activities. Without the assistance of the CEC Program, over half of NYS communities would lack the capacity, or have only limited ability, to carry out such activities independently. This underscores the continued relevance of the CEC Program, highlighting that the barriers it was designed to overcome remain significant challenges for many communities across the state. There is no recommendation provided for this finding.

Recommendation 2: There is no recommendation for this finding.

Finding 3

DAC communities have lower engagement and participation in the CEC Program compared to non-DAC communities. A key contributing factor may be their less frequent interaction with CEC Coordinators, one of the Program's most valued and commonly used resources. While Coordinators play a critical role in supporting municipalities, representatives from DAC communities report fewer interactions than their non-DAC counterparts. Notably, one-third of DAC representatives indicate they do not engage regularly with their Coordinators, which means they may not be fully aware of the range of available guidance and resources that a CEC Coordinator can provide.

Recommendation 3: When communities engage with their Coordinator, it often greatly improves their knowledge and awareness of clean energy. To boost CEC Program activity in DACs, the Contractor Team recommends that Coordinators make explicit efforts to connect with municipal representatives in the DAC communities within their territories over the next 12 months. Once connected, Coordinators can educate community representatives about the resources available through the CEC Program and Coordinators.

- **NYSERDA Response to Recommendation 3:** Implemented. Although the data indicates there is less outreach support to DAC communities than market, NYSERDA has made it a priority to support DAC communities through the Program and Coordinator network. However, once the next program is launched, NYSERDA will take additional steps to prioritize DAC support.

Finding 4

The recurring additions of HIAs to the Program offerings ensure that the options evolve with the changing energy landscape, keeping the CEC Program relevant. The frequency with which various HIAs are completed shows that the HIAs offered for a longer time have been utilized by more communities than the recently added HIAs. Updates to the Program's HIA list provide communities with new options, which likely helps maintain their continued involvement. The introduction of new HIAs gives communities a reason to engage regularly with the CEC Program, promoting long-term participation. There is no recommendation provided for this finding.

Recommendation 4: There is no recommendation for this finding.

Based on the results of the Grants Analysis, the Contractor team offers the following key findings and recommendations.

Finding 5

The recurring additions of HIAs to the Program offerings ensure that the Program offerings evolve with the changing energy landscape, keeping the CEC Program current with the market. Updates to the Program's HIA list provide communities with new options, helping to maintain the Programs continued to respond to market changes. The introduction of new HIAs gives communities a reason to engage regularly with the CEC Program, promoting long-term participation.

Recommendation 5: There is no recommendation for this finding.

Finding 6

The documentation format for CEC-funded grant projects limits the Program's ability to effectively track and report on energy impacts. This is because the existing format and instructions for providing project information do not always yield sufficient detail to determine the specific activities and measures funded by CEC grants. The documentation format also prevents the ability to know if a community used grant funding to support completion of an HIA. Simple administrative changes can greatly improve the tracking of grant funds and determine their energy impacts.

Recommendation 6: The Contractor team recommends that when CEC Program staff review the project description in grant applications, they confirm that the description presents sufficient details to know what energy-saving (or energy-producing) measures will be implemented as part of the project. If the project description lacks sufficient details, then they should request the community add them.

- **NYSERDA Response to Recommendation 6:** Implemented. The program team will revise the grant application to provide additional clarity and capture benefits for the 2026 program.

Recommendation 7: The Contractor team recommends the CEC Program add a question to the grant project application that asks communities if they plan to use the grant funding to support the completion of an HIA, and if so, list the HIA.

- **NYSERDA Response to Recommendation 7:** Implemented. In the new program, the team will capture additional information, including if a grant will be used for the completion of an HIA.

5 Evaluation Methods

Market Assessment Methods

To conduct this market assessment, the Contractor Team used a combination of CEC Program data, secondary data, and survey data. These data sources allowed the Team to measure the number of completed HIAs. The team completed surveys with 106 municipalities and analyzed the data to estimate the indirect impacts of the CEC Program from 2019 to 2023. The sections below describe these market assessment research methods in more detail. Methods for the grants analysis and leveraged funds analysis are included in Appendix B and Appendix C.

5.1 Sampling

The Contractor Team used a list of all 1,596 municipalities in NYS to create a stratified sample to contact for a phone survey. The goal of the sample design was to create a statewide representative sample that would allow extrapolation of survey findings to the population. At the same time, it was important to ensure adequate representation of smaller segments in the sample without dividing them into too many subgroups, which could result in findings based on insufficient sample sizes. The team's first step was to segment the population by DAC classification (defined by whether 50% or more of the community population resided in a 2010 DAC Census Tract) and community size (large and small, determined by whether the 2010 census population was above or below 40,000 people). This situation called for a stratified sample such that the smaller segments were over-represented (proportionally) and the larger segments were under-represented. Appendix G shows the resulting sampling frame and the final sample of surveyed communities. After data collection concluded, the team weighted the sample strata to develop estimates of the numbers of communities in the population reported in this report, as described in Section 4.3, Data Analysis.

5.2 Data Collection

During Winter 2024 and Spring 2025, the Contractor Team contacted 1,407 municipalities in NYS and completed surveys with 106 for an overall response rate of 8%. Outreach to all 1,596 communities was not possible due to missing or invalid contact information. The Contractor team emailed and called municipal representatives up to four times to collect the necessary data and spoke with up to two representatives per municipality who were most knowledgeable about their community's clean energy efforts. Survey lengths ranged from 15 to 50 minutes.

The survey included questions about the extent to which municipalities have made progress toward implementing each of the HIAs that Program data indicated were incomplete. The Team did not ask community representatives about an HIA if they met one of two criteria:

- If the community submitted documentation to the CEC Program indicating they had completed the HIA, or
- If the community was ineligible for an HIA due to their jurisdictional authority/responsibilities.[12]

For these reasons, the number of community representatives answering the survey questions varies. If a community reported they had completed an HIA in the survey, the Contractor Team asked them what influenced their decision to complete the action in order to determine whether the CEC Program's resources or other participating communities motivated the completed action. The full survey instrument is linked in Appendix H.

5.3 Data Analysis

The Contractor Team analyzed the data collected from the sample of surveyed municipalities using *Statistical Software for the Social Sciences* (*SPSS)* and extrapolated the results from the sample to the population of all NYS municipalities. The extrapolated results provide estimates for the performance metrics. The final sample size achieved 90/8 Confidence/Precision with the results.

The Contractor Team applied post-stratification weights to the data so the sample could be extrapolated to the population. Table 12 shows the weights used.

Table 12. Weighting Scheme

DAC Classification	Community Size	Population	Sample	Weight
DAC	Large (40,000+)	19	4	4.75
	Small (<40,000)	189	20	9.45
Non-DACs	Large (40,000+)	74	11	6.73
	Small (<40,000)	1,314	71	18.51

[12] For example, counties are not responsible for permitting processes or energy code enforcement, and therefore cannot adopt the Unified Solar Permit or participate in code compliance training.

5.4 Determining Counts for Performance Metrics

This section explains the methods used to measure completed HIAs, assess CEC Program influence, and estimate which HIAs are becoming standard practice in NYS.

5.4.1 Completion of HIAs

To obtain the number of communities that completed one or more HIAs, the Contractor Team determined the number of HIAs a community completed between 2019 to 2023 using a combination of Program data and survey data. Then the team grouped the communities into categories of having completed at least one HIA, at least two HIAs, at least three HIAs, and at least four HIAs (please note that these are nonexclusive categories). For example, all the communities in the group that had completed at least four HIAs were also members of the groups completing at least one, at least two, and at least three HIAs.

5.4.2 Assessing Program Influence

The goal of the market survey was to identify completed HIAs that were not reported to the CEC Program, but that were influenced by it. Community representatives were asked about what influenced their decision to complete an HIA if the Program data indicated the HIA was incomplete, but the survey questioning determined it was complete.

The survey asked about the following influences: (1) Resources from the CEC Program, such as its website, step-by-step guides, or Program Coordinator; (2) prior experience with the CEC Program; or (3) observing another community's success with the same activity. The Contractor Team member asked the community representative to rate each of those factors from 1 to 7, where "1" meant "not at all influential" and "7" meant "very influential." If they rated an item a "5," "6," or "7," then the Team counted the completed HIA as having been influenced by the CEC Program.

If a representative said another municipality's success with the same HIA influenced them, the Team confirmed the other community had completed that HIA in the relevant timeframe before attributing influence**.**

5.4.3 Assessing Standard Practice

To assess whether HIAs have become standard practice in NYS, communities were initially asked to estimate the percentage of other communities they were familiar with that had completed the HIAs included in the survey. However, many respondents were unable to provide a specific

percentage. In response to this challenge, the Contractor Team revised the question to ask how common each action was, with interviewers prompting respondents to answer "Common" if they believed more than 50% of communities, they were familiar with had completed the HIA, and "Not Common" if fewer than 50% had. During analysis, any numeric responses were standardized: percentages of 50% or higher were coded as "Common," and those below 50% as "Not Common."

5.4.4 Calculating Indirect Impacts from 2019–2023

The Contractor Team identified HIAs completed by each community in 2019–2023. The HIA-specific savings were calculated for each community that completed it and were grouped into DAC versus non-DAC communities. The survey-identified completed HIAs followed the same approach but were weighted using the weights to represent the population. The savings from the survey-identified HIAs completed, these Program-identified HIAs were added to the final energy impacts for 2019–2023, shown in 11.

Grants Methods

The NYSERDA CEC Program team provided a grants database, a grant project database, and 674 individual grant project application files. The Contractor team combined data from these sources to create the "grants analysis database" used in this evaluation. Table 13 outlines the specific information contained in each NYSERDA-provided source.

Table 13. Information Included in Grant Data Sources

NYSERDA-Provided Data Source	Variable							
	CEC ID	Community Name	Grant Amount	Grant Type	Project Cost	Project Description	Project Type	Project Approval
Grants database	✓	✓	✓	✓				
Project database	✓	✓			✓	✓		✓
Grant project application files	✓	✓	✓		✓	✓	✓	

The Contractor team extracted data from 674 grant project application files, which contained information on the applicant community, project type, and requested funding. Since there was no unique identifier linking the grant project database to the grant project application files, the Contractor team used CEC identification numbers, grant amounts, and dates to match projects. This approach allowed the team to filter for project applications that were accepted and funded by NYSERDA. Once matched, project data was further linked to individual grant records by analyzing project descriptions and matching dates and amounts.

In cases where multiple potential matches existed across the three data sources, project synopses and grant descriptions were compared to confirm accurate matches.

After merging the datasets, the Contractor team cleaned and analyzed the data in Excel. Pivot tables summarized and revealed trends across grant types, funding levels, project types, and community characteristics. For 5K grant projects, which typically did not include an assigned project category in the project application files, the Contractor team categorized project activities by analyzing keywords in the project descriptions (Table 14).

Table 14. Keywords Used to Categorize 5K Project

Project Description	Keywords
Clean Energy Upgrades	• "rooftop solar" / "solar array" • "solar PV" / "solar photovoltaic" • "building envelope" • "insulation" • "building efficiency" • "building upgrades"/ "Clean Energy Upgrades" • "interior lighting" / "exterior lighting" • "water heater" • "heat pump" / "heat-pump" • "ASHP" / "GSHP"
Charging Stations	• "charging station" • "EV charger" • "EVSE" • "dual port" / "dual-port" • "level 2" / "level two" • "DC fast charger"
LED Streetlight Conversions	• "streetlights" / "street lights" / • "cobra head" / "cobrahead"/ "cobra-head"
Electric Landscaping Equipment	• "landscaping" • "landscape equipment" • "mower" • "electric blower" / "leaf blower" • "trimmer"
Electric Vehicles	• "Electric Vehicle" • "Fleet" • "replace gas vehicle" • "EUV" / "PEV" / "PHEV" / "BEV" • "hybrid vehicle" / "hybrid electric vehicle" • "plug-in" / "plug in"

To estimate energy impacts from CEC grant-funded projects, the Contractor team used the grants analysis database and linked the grant projects to the identified per-unit savings. The following section describes the process used to determine energy impacts for each of the four project types (5K, Custom, Pre-Approved, and Unclassified).

For the 5K projects, the Contractor team reviewed the grants' project description to determine whether: (1) the project matched an HIA, (2) did not match an HIA but was a project that should provide impacts, or (3) did not match an HIA and should not provide energy impacts. For ten

projects that were expected to produce energy impacts but did not match an HIA, the average savings from all other 5K projects, weighted by population, was applied.

For the 81 projects that were not expected to produce energy impacts and were not linked to an HIA, no savings were added to the total. To further explain, the majority of them (35) had no description of the grant project, 23 described a measure that would not *directly* save energy (such as bike racks, bus shelters, tree-planting programs, recycling containers, or educational speakers), and another 23 described support for a plan that had no details on energy-saving projects or measures.

To estimate energy impacts from 94 pre-approved project types, the Contractor team verified the known HIA assignments in the grants database. For 13 projects where HIA assignments were unknown, the Contractor team applied average savings of all other pre-approved projects.

For the nine custom projects the Contractor team reviewed the project descriptions and determined whether the projects would realistically result in energy impacts. All six projects the Contractor team determined to produce energy impacts.

For the 20 Unclassified projects, the Contractor team reviewed the available information in the project files to determine if the project would likely produce energy impacts, then matched to an HIA. Once matched to an HIA, the per-unit savings were utilized for 14 of the projects. One project was determined to produce CO2e savings, so the team applied an average savings weighted against the population. For the five projects that could not be matched to HIA and were determined to not produce savings, no savings were applied.