

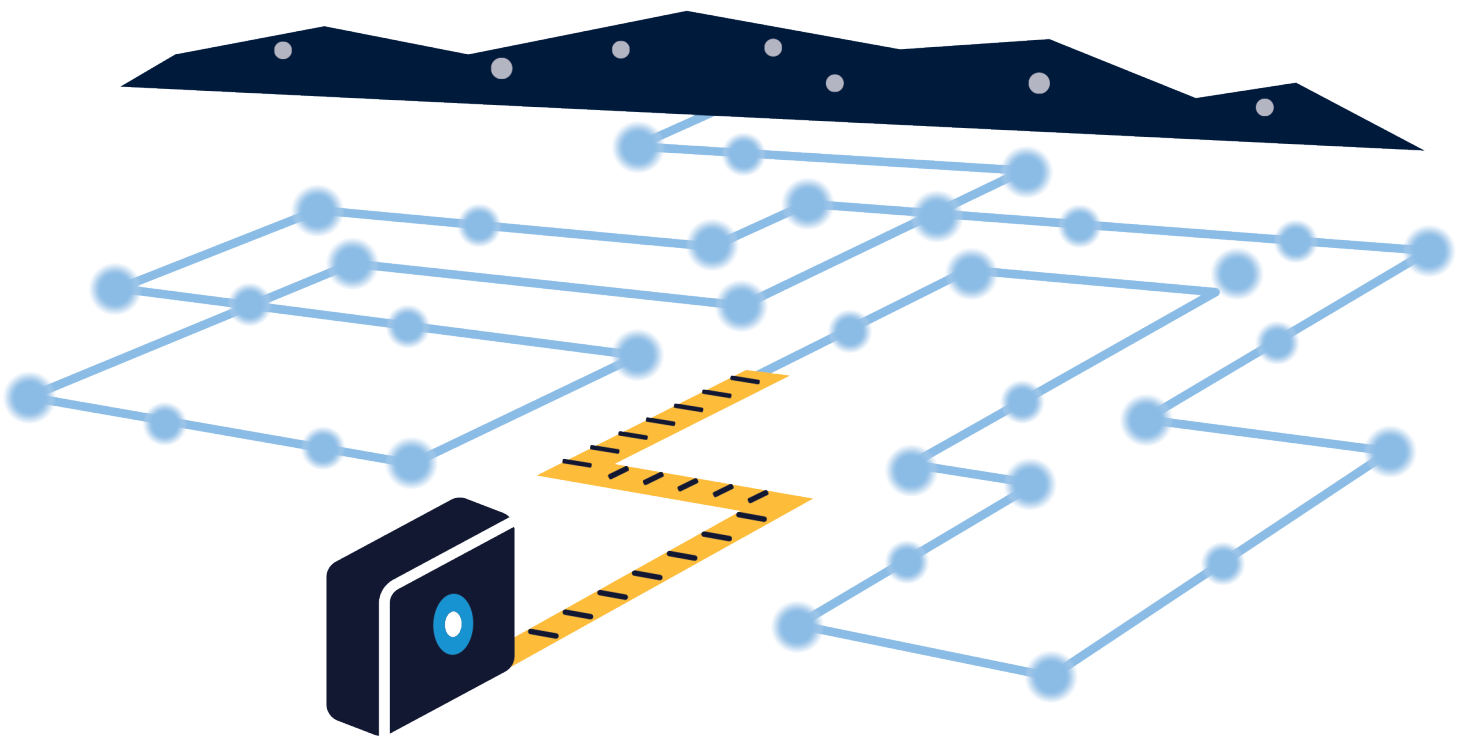


Opinion **Dynamics**



Assessment of Local Government Partnerships

CPUC Contract Group B: Deliverable 22A Year 2 Study



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Abstract

Local Government Partnerships (LGPs), which are organized at the local government level, offer programs that help local governments, and their constituents promote and install energy efficiency (EE) upgrades in public, commercial, and residential facilities.

The main objective of this evaluation was to understand and measure the impacts of the selected LGPs' 2017-2018 non-resource activities on California's EE portfolio. The focus of this study was on the impacts of non-resource activities on municipal facilities in five LGPs spanning California's four investor-owned utilities (IOUs), including Redwood Coast Energy Watch, Santa Barbara Energy Watch, Emerging Cities Partnership, Ventura County Partnership, and the Western Riverside Partnership. The evaluation team employed several methods to understand program design and how LGPs function in the market. This included an evaluability assessment of LGP data; a channeling analysis to identify matches of non-resource activity participants in the CPUC and IOU resource program databases; depth interviews with IOU and Program Administrator staff; a web survey of municipality staff to define EE actions taken; and an engineering-based estimate of savings.

The channeling analysis found that 20% of the LGP non-resource participants identified in the non-resource datasets took part in a PA resource program after engaging in an LGP non-resource activity. To identify EE equipment and behavioral changes that municipal customers carried out after engaging in the LGP non-resource activities, the evaluation team conducted a participant web survey. The participant survey found that LGP non-resource activities were successful at influencing municipalities' decisions to install EE equipment and engage in energy saving behaviors. For EE upgrades, the average influence scores of LGP non-resource activities versus other factors ranged from 5.3 to 8.3 out of 10, with an overall average of 6.3 among respondents. Regarding energy savings behaviors, the average influence scores of LGP non-resource activities versus other factors ranged from 5.0 to 7.2 out of 10, with an overall average of 6.2 among respondents. The survey responses were then used to arrive at an engineering-based estimate of savings that resulted due to engagement in LGP non-resource activities. For the five LGPs studied in this evaluation, we estimate the first-year net electric savings attributable to LGP non-resource activities to be 95 MWh and first-year net gas savings to be 1,572 therms.

1. Executive Summary

The Opinion Dynamics evaluation team, with Tierra Resource Consultants as its sub-contractor, is pleased to present to the California Public Utilities Commission (CPUC) this Year 2 Assessment of Local Government Partnerships (LGPs). LGPs, which are organized at the local government level, offer programs that help local governments, and their constituents promote and install energy efficiency (EE) upgrades in public, commercial, and residential facilities. Each LGP is made up of one or more city governments, county agencies, and/or other regional governing and coordinating bodies known as member or partner governments. The local government or third-party organization that holds the contract with the utility for LGP administration is often referred to as the implementing partner.¹ A single city or county, a council of governments, a Joint Powers Authority (JPA), a private company, or another type of association can serve as an implementing partner.

LGP Overview and Study Purpose

The main objective of this evaluation was to understand and measure the impacts of the selected LGPs' non-resource activities on California's EE portfolio, specifically those offered during the 2017 and 2018 program years. The CPUC defines a non-resource program as one that "has no directly attributed energy savings but that supports the EE portfolio through activities such as marketing or improved access to training and education".² In contrast, EE programs that are intended to achieve and report quantified energy savings (e.g. MW, GWh and MMTh) are classified as resource programs.

This study broadens the focus from non-resource *programs* to non-resource *activities* since oftentimes Program Administrators (PAs) engage in discrete activities, as opposed to formally defined programs, that are meant to promote participation in their resource programs. These activities do not produce energy savings, but may contribute indirectly.

At the outset of this research, the Energy Division and the evaluation team agreed to focus this study on the impacts of non-resource activities of the following five LGPs spanning California's four investor-owned utilities (IOUs):

- Redwood Coast Energy Watch (RCEW)
- Santa Barbara Energy Watch (SBEW)
- Emerging Cities Partnership (ECP)
- Ventura County Partnership (VCP)
- Western Riverside Partnership (WRP)

The evaluation team selected LGPs not recently evaluated, and the selection was designed to provide coverage that is representative of California's diversity of population, local government structures, span of influence (i.e., cities engaged), and other select market metrics such as energy burden, housing burden and median household income.

¹ Some IOUs use different terminology. For instance, PG&E calls these organizations Lead Local Partners.

² The CPUC definition of non-resource programs can be found on the CPUC's EE Shareholder Incentive Mechanism page: <https://www.cpuc.ca.gov/General.aspx?id=4137>

Redwood Coast Energy Watch (RCEW)

The Redwood Coast Energy Watch (RCEW) program is a partnership among Pacific Gas and Electric Company (PG&E), local governments, and energy service providers that serve the County of Humboldt, including the cities of Arcata, Blue Lake, Eureka, Ferndale, Fortuna, Rio Dell, and Trinidad. Redwood Coast Energy Authority administers RCEW and provides a variety of non-resource activities to small and medium businesses, local governments and special district agencies, local educational agencies, non-profits, and charitable organizations, as well as residential customers. Non-resource activities in 2017 and 2018 included, but were not limited to, benchmarking, climate energy planning, and codes & standards. Many of these activities focus on rural and hard-to-reach market sectors.

Santa Barbara Energy Watch (SBEW)

The Santa Barbara Energy Watch (SBEW) program is a joint partnership among the County of Santa Barbara, PG&E, and the Southern California Gas Company (SCG). SBEW serves Northern Santa Barbara County including Buellton, Guadalupe, Santa Maria, Solvang, and the County of Santa Barbara. The program generates energy savings through identification of municipal EE projects and direct install³ projects for businesses. The SBEW Partnership programs emphasize outreach to the Cities and Special Districts within Northern Santa Barbara County to assist them in improving the EE of their facilities and integrating EE throughout the local communities. Non-resource activities in 2017 and 2018 included, but were not limited to auditing workshops, staff luncheons, direct mailers, and special district talks. The program also provides education, training, marketing, and outreach supporting utility core programs.

Emerging Cities Partnership (ECP)

San Diego Gas & Electric's (SDG&E) Emerging Cities Local Government Partnership supports smaller cities with integrated facility audits and technical assistance that empower emerging cities to achieve efficiency in their own facilities. The ECP is unique in that it collaborates closely with SDG&E's San Diego Association of Governments (SANDAG) partnership to provide a full set of services to cities in San Diego County while also serving cities in Orange County, which SANDAG does not serve. In San Diego County, the ECP program is responsible for driving projects and results related to ordinances, climate action planning and outreach, whereas SANDAG is responsible for the energy engineering of non-resource activities that resulted in resource projects for these cities.

ECP includes the cities of Carlsbad, Coronado, Del Mar, El Cajon, Encinitas, Escondido, Imperial Beach, La Mesa, Lemon Grove, National City, Oceanside, Poway, San Marcos, Santee, Solana Beach, and Vista. In addition, ECP serves the Orange County cities of Capistrano Beach, Dana Point, Laguna Beach, Laguna Hills, Laguna Niguel, Mission Viejo, Rancho Mission Viejo, Rancho Santa Margarita, San Clemente, and San Juan Capistrano.

³ Direct install projects are simple, low-cost EE upgrades that are often provided to customers at no cost through a utility rebate program. The target audience for these types of projects tend to be middle-low-income residential customers or small businesses. Examples of direct install EE upgrades include light bulbs, low-flow showerheads and faucet aerators, water heater wraps, water pipe insulation, furnace filters, refrigerator/freezer thermometers, and setback thermostats.

Ventura County Partnership/Ventura Energy Leader Partnership (VCP)

The Ventura County Local Government Partnership Program works in collaboration with Southern California Edison (SCE) and SCG. The Ventura County Regional Energy Alliance (VCREA) functions as the Local Government implementing partner for the VCP Program. VCREA works to coordinate efforts among public agencies, including local jurisdictions, schools, and special districts, as well as businesses and residents of Ventura County. The LGP's focus is to undertake EE projects, offer EE training, support residents through education and outreach, and consider opportunities for long-term strategic EE planning. Non-resource activities in 2017 and 2018 included, but were not limited to Codes & Standards, developing and implementing EE ordinances, technical assistance and training for Title 24, energy and climate action planning support, and various EE outreach events such as Lunch & Learns, and EE through Energy Resiliency workshops⁴. Note that resource claims for the VCP are reported to the CPUC as two distinct programs: the SCG-funded Ventura County Partnership and the SCE-funded Ventura Energy Leader Partnership. For this evaluation we assessed data provided from both IOU programs, but aggregated results for both IOU programs and refer to this collectively as the VCP.

Western Riverside Energy Partnership/Energy Leader Partnership (WRP)

The Western Riverside Local Government Partnership is a collaboration among SCE, SCG, and Western Riverside Council of Governments. WRP serves the cities of Calimesa, Canyon Lake, Corona, Eastvale, Hemet, Lake Elsinore, Menifee, Moreno Valley, Murrieta, Norco, Perris, San Jacinto, Temecula, and Wildomar. The purpose of WRP is to assist its members to identify and implement EE projects in municipal facilities and to provide sustainable best practices to the communities. Non-resource activities in 2017 and 2018 included, but were not limited to, informing member agencies about existing EE and demand response (DR) programs, helping municipalities identify, implement, and fund EE retrofits in their facilities, and developing specialized EE offerings including strategic planning activities like climate action planning, code compliance, and reach codes. Note that resource claims for the WRP are reported to the CPUC as two distinct programs: the SCG-funded Western Riverside Energy Partnership and the SCE-funded Western Riverside Energy Leader Partnership. For this evaluation we collectively assessed data provided from both IOU programs, and aggregated results for both IOU programs and refer to this collectively as the WRP.

Overview of Evaluation Approach

As part of this second-year assessment of LGPs, the evaluation team conducted a variety of tasks. The team first submitted data requests to acquire non-resource activity datasets and supporting program materials to help identify which datasets contained the most complete and robust information. In response to year one feedback from the IOUs, we modified the year two data request to be more concise. Specifically, the year two request focused on all available non-resource and resource-tracking databases to be delivered in a useable data analysis file format, as well as supporting background materials such as data-tracking processes, budgets, and marketing materials.

We next conducted an evaluability assessment of the data received from the LGPs to determine if the datasets contained the information necessary to locate participants of non-resource activities in the CPUC program database. The team then used the evaluability assessment to determine which non-resource activity datasets

⁴ As part of the Inland Cities Outreach Project, 2 Energy Efficiency through Energy Resiliency workshops were hosted by the San Diego Regional Green Business Network covering EE, SDG&E Programs & Services, Wildfire Preparedness, and Resiliency through Energy Storage.

the team could use to support additional evaluation activities. The evaluation team conducted in-depth interviews with selected LGPs and IOU staff to confirm our understanding of their resource and non-resource activities, data collection protocols, and foreseeable changes to program design.

As noted in the year one study, LGP programs across the state are currently undergoing significant changes to their program design as detailed in the 2018 adopted IOU business plans and the recent annual budget advice letters (ABALs). Based on these, as well as a review of policy and program design changes, the year two study again focuses on activities that led to EE upgrades and behavioral changes in municipal facilities. Accordingly, we did not evaluate how non-resource activities led to program impacts in the residential or other commercial markets, such as direct install activities in the small commercial market, because these initiatives are generally being phased out going forward as the LGP portfolio focuses specifically on activities supporting public sector facilities. The evaluation team then used channeling analysis to determine how many municipal customers went on to participate in resource programs after their interaction with LGP non-resource activities. This channeling analysis defined the set of customers who engaged in LGP non-resource activities and identified the subset who subsequently participated in a PA-sponsored EE program that resulted in energy savings, as discussed in Section 5.

To identify the EE equipment and behavioral changes municipal customers carried out after engaging in the LGP non-resource activities, the evaluation team conducted a participant web survey. The evaluation team used a census approach and contacted LGP municipal customers who had contact information (i.e., email address) identified in the channeling analysis. Prior to launching the survey, staff at each IOU were provided with the list of contacts to review and approve. SCG was the only IOU to request the removal of some contacts from the list, and these removals were limited to the Ventura County and Western Riverside Partnerships. The IOUs were also encouraged to contact customers to remind them to respond to the survey. SDG&E and SCG staff indicated that they reviewed the contact list and would engage customers once the survey launched. The evaluation team reached out to 177 municipal LGP non-resource activity participants (out of a population of 314) to complete surveys with 23 respondents completing the entire survey (see **Error! Reference source not found.**). The sample size and response rate varied among the selected LGPs because of the quality and quantity of non-resource activity data received, variations in the number of municipal non-resource activity participants, and different levels of survey outreach support provided by the IOUs.

Table 1. LGP Participant Survey Sample Composition

LGP	Population N	Sample n	Survey Completes n
Redwood Coast Energy Watch	38	38	7
Santa Barbara Energy Watch	171	71	7
Emerging Cities Partnership	40	40	5
Ventura County Partnership	26	14	2
Western Riverside Partnership	39	14	2
Total	314	177	23

All survey participants were asked about whether they recalled participating in an LGP non-resource activity, and if they did not, their survey was terminated. Survey participants were then asked to recall the EE actions they took through resource programs since their interaction with an LGP non-resource activity. Participants were also asked to recall EE actions they took outside of resource programs since their interaction with an LGP non-resource activity. In addition, survey participants were questioned about the degree to which the non-resource activities they participated in influenced their decision to install EE equipment.

The survey responses were used to arrive at an engineering-based estimate of savings that resulted due to engagement in LGP non-resource activities, also referred to as an attribution analysis. As part of this process, we compared our results to other data sources. While the survey response rate was low, the savings estimates based on the analysis of survey responses was reviewed in the context of 1) resource databases provided by the utilities, and 2) our analysis of LGP related projects report in CEDARS, as presented in Appendix E, Resource Tracking Data Observations. When these various analysis and data sets were cross compared, we did not see major inconsistencies in the savings estimates developed from our survey of non-resource participations who reported completing projects accounted for in resource programs. The engineering analysis provided estimated first-year gross and net electric and gas savings for the equipment that municipal non-resource activity participants installed and the attribution analysis allowed us to more accurately determine what amount of savings is attributable to the non-resource activity itself.⁵

The evaluation team used two approaches to estimate gross savings. The first approach was used for EE upgrade categories where individual upgrade attributes could be defined. For these EE upgrades, the team analyzed the participant responses and calculated forecasted (i.e. ex-ante) energy savings by applying predetermined savings values using either the Electronic Technical Resource Manual (eTRM) or the Database of Energy Efficiency Resources (DEER). When unable to utilize either the eTRM or DEER as the analysis source, the evaluation team utilized approved workpapers or other widely used industry sources such as the Measure Input Characterization System data from the CPUC Potential and Goals Study.

A second analysis approach was used for lighting as well as heating, ventilation, and air conditioning (HVAC) EE upgrades where the evaluation team used several data points to assess savings. These EE upgrades were analyzed separately from the categories where individual EE upgrade attributes could be defined because lighting and HVAC tend to have facility level impacts and are best analyzed as energy savings intensities (kWh/ft²-yr). First, web survey responses were analyzed to assess which projects reported by respondents could be matched to IOU tracking databases based on address information provided by survey respondents. The team then estimated savings intensities for these projects and used these savings intensities to estimate annual forecasted gross savings for the facility spaces that survey respondents indicated had been retrofit. In addition to the analysis of survey responses and program tracking data, and consistent with the engineering analysis approach used in the year one evaluation, the team also estimated savings intensities based on a review of gross savings from custom projects reported by program administrators (PA) during program year 2018. These estimates of savings intensities were used to verify the accuracy of the evaluation teams analysis of lighting and HVAC savings provided by the IOU tracking databases.

The evaluation team used data collected from web surveys of non-resource activity participants who had also completed EE projects to calculate customer-level ratios that represent the degree of influence their non-resource activities had on the customer's decision to install EE equipment. Once we calculated these ratios, we applied them to the customer-level forecasted (i.e. ex-ante) gross calculated in the engineering analysis to estimate the proportion of savings attributable to the LGPs' non-resource activities, as detailed in Finding 4 of the next section.

⁵ Gross energy savings represent the change in energy consumption and/or demand that results directly from program-related actions taken by participants in an efficiency program, regardless of why they participated and unadjusted by any factors. Net energy savings are the total energy savings that are attributable to the energy efficiency program.

Evaluation Findings and Recommendations

This section outlines findings and recommendations that came out of the research. Note that not all findings have an associated recommendation.

Overarching Findings and Recommendations

Finding #1: Based on the evaluability assessment of select LGPs' non-resource activity data, the evaluation team found the quality and completeness of the non-resource program data provided by the IOUs to be much improved compared to the year one study with many of the datasets containing fields mergeable with CPUC and IOU resource databases (e.g., contact name, address, phone number, email). However, the organization and quantity of data provided varied among LGPs relative to the non-resource activities they listed in their response to the data request and other planning documents. Our in-depth interviews and review of data request materials also revealed that there are not any established protocols pertaining to non-resource tracking, which explains the lack of standardized tracking found in both this year and last year's study. It is important to note that the evaluation team didn't expect for the year 1 data collection protocol recommendations to have been implemented and reflected in our year 2 study due to the timing of the studies.

- **Recommendation:** The ongoing transition to third-party implementation, which is significantly impacting the design of LGPs going forward, should be leveraged to improve non-resource data collection protocols and reporting. Newly selected LGP implementers should adopt processes that facilitate the collection of non-resource participant information including, at a minimum, tracking customer names, phone numbers, email addresses, service addresses, dates of participation in the non-resource activity, and type of non-resource activity participated in (e.g., audit, technical assistance, benchmarking, etc.). We also recommend the collection of any associated customer IDs used by the PAs in their data-tracking systems. As data quality and completeness improve, evaluators can more fully capture the attributable energy savings from non-resource activities. Analysis of this sort goes far to demonstrate the benefits of non-resource activities and the unique value that LGPs provide. This would improve the evaluability of non-resource activities and future evaluations. Additionally, data systems should be designed to track non-resource participants over a multi-year time frame to better understand how ongoing engagement with LGPs drives program participation. This is especially important in the public sector as these projects typically take longer to install than similar projects in the commercial sector, so the ability to track activities over multiple program cycles is especially important for the public sector.
- **Finding #2:** By identifying matches in the CPUC and IOU resource program databases, the channeling analysis found that 20% (85 out of 430) of the LGP non-resource participants identified in the non-resource datasets took part in a PA resource program after engaging in an LGP non-resource activity. An additional 13% (56 out of 430) of LGP non-resource participants identified in the non-resource datasets were found to have participated in a non-resource activity the same year they participated in a resource program. Although it is unclear if many of these projects were influenced by the non-resource activity because of the time it takes to complete a project, it is possible that some portion of them may have been influenced. Still, this was a great improvement compared to the year one study, and in large part could be attributable to more complete non-resource data. In addition, the provision of IOU resource tracking datasets greatly helped to improve the channeling analysis by enabling the evaluation team to fill some gaps across various reports and more easily match participants to resource programs.

- **Recommendation:** To further improve future channeling analyses, LGPs should clearly identify the date in which each customer participates in a non-resource activity in their non-resource tracking datasets, and also provide the capacity to enter project records, such as claim IDs, should these participants go on to complete projects through a PA program. This will improve the accuracy of matching non-resource and resource databases.
- **Finding #3:** Reinforcing the year one study findings, the LGP non-resource activities evaluated in this year's study were more successful at influencing municipalities' decisions to install EE equipment and engage in energy saving behaviors. For EE upgrades, the average influence scores of LGP non-resource activities versus other factors ranged from 5.3 to 8.3 out of 10, with an overall average of 6.3 among respondents. Regarding energy savings behaviors, the average influence scores of LGP non-resource activities versus other factors ranged from 5.0 to 7.2 out of 10, with an overall average of 6.2 among respondents.
- **Finding #4:** Based on the results of the engineering and attribution analysis, the evaluation team found that the success of LGPs in driving customers to install EE equipment was mixed. For the five LGPs studied in this evaluation, we estimate the net electric savings attributable to LGP non-resource activities to be 95 MWh (summarized in Table 2 below and further detailed in Section 8.2). Based on survey participants' responses of which EE upgrades were rebated, approximately 55% of those savings are accounted for in the CPUC and IOU resource program databases. In the case of natural gas, of the attributable first-year net therm savings from EE equipment installations (1,572 therms), approximately 60% resulted from installing EE equipment outside of a PA resource program. As discussed in finding 1, these savings are representative of the quality and quantity of data collected by the LGPs and provided to the evaluation team.

Table 2. Attributable Electric and Natural Gas First-Year Savings by LGP

Non-Resource Activity	First-Year Net Electric Savings (kWh)	First-Year Net Gas Savings (Therms)	First-Year Net Solar Savings (kWh)
RCEW	14,835	380	101,760
SBEW	17,196	623	26,400
ECP	17,808	-	25,200
VCP	43,782	568	-
WRP	2,093	-	-
Total	95,715	1,572	153,360

LGP Specific Findings and Recommendations

PG&E's Redwood Coast Energy Watch (RCEW)

- **Finding #5:** RCEW's single comprehensive non-resource tracking dataset was a significant improvement compared to the disparate databases provided by the LGPs studied in the year one evaluation, and by other LGPs for this year's evaluation. The single dataset improved the evaluation team's ability to conduct the channeling analysis for RCEW's non-resource activities. The majority of non-resource tracking data fields were sufficiently populated and of good quality for our channeling analysis. This is likely why the channeling analysis was able to identify a significantly higher percentage

(74%) of municipal customers who went on to participate in a resource program after engaging in a RCEW non-resource activity compared with the percentages identified for the other LGPs in this study. A comparison of non-resource activities tracked in RCEW's database to the non-resource activities listed in the various marketing, education and outreach (ME&O) materials provided to the team for review indicates that RCEW is very comprehensive in the number of total possible non-resource activities being tracked. The quality of RCEW's non-resource activity tracking data puts it in a much better position to receive full credit for these tracked activities.

- **Finding #6:** Among LGPs included in this study, RCEW's non-resource activities had the highest average influence score versus that of other factors for both municipal EE upgrades (8.3 out of 10) and behavioral changes (7.2 out of 10).

PG&E and SCG's Santa Barbara Energy Watch (SBEW)

- **Finding #7:** SBEW provided significantly more municipal records (171) of unique contact information in their non-resource databases than the other LGPs evaluated, accounting for 55% of the total municipal records in this year's study. The evaluation team also found a number of non-resource activities targeting municipalities that were listed in SBEW's narrative description of its non-resource activities but did not have associated tracking databases. Despite SBEW providing the most non-resource municipal records, the inconsistency of data collection across its non-resource activities limited the extent to which the evaluation team could assess the benefits of SBEW's non-resource activities.
 - **Recommendation:** SBEW should expand its collection of customer data to include as many of its non-resource activities as possible. This will enable future evaluations to better examine and quantify the impact of these activities, thereby capturing the value of their non-resource activities more comprehensively.
 - **Recommendation:** Considering that the Energy Division seems to be increasingly interested in the value of PA non-resource activities, other LGPs and programs offering non-resource activities, including SBEW, should follow RCEW's standardized approach to tracking these types of activities using a single comprehensive and high-quality database as discussed previously in Finding #5.
- **Finding #8:** Three of SBEW's five non-resource-tracking databases were lacking phone numbers and email addresses, which can be used to match non-resource data to resource databases. This likely limited the number of municipal customers identified in the channeling analysis as having gone on to participate in a resource program after engaging in a SBEW non-resource activity (14%).
 - **Recommendation:** SBEW should establish data collection protocols that ensure consistent collection of non-resource activity participant email addresses and phone numbers.

SDG&E's Emerging Cities Partnership (ECP)

- **Finding #9:** Prior to the data request response, SDG&E staff indicated that the ECP's contributions to EE savings in San Diego County are primarily through reach code ordinances and climate action planning and cautioned that ECP's non-resource activities would likely have limited corresponding resource activities represented in the resource databases. Additionally, many of their non-resource activities outside of Orange County are conducted in partnership with their SANDAG LGP and were captured in those tracking databases. SDG&E policy and program staff recommend that savings be calculated with methods similar to those that Codes and Standards uses in order to measure the impact of these activities. However, given the evaluation team's limited budget, timeline, and focused

scope, it was not feasible to develop a new methodology for quantifying the impacts of reach code ordinances and climate action planning support. The evaluation team did receive a limited set of ECP non-resource databases useable for the channeling analysis and participant survey from SDG&E's data request response, including jurisdictions that received ordinance/climate action planning support. Although the channeling analysis did not identify any municipal customers as having gone on to participate in a resource program after engaging in a ECP non-resource activity (0%), we did find that 17% of ECP non-resource participants participated in a resource program the same year.

- **Recommendation:** ECP should expand its collection of customer data to include as many of its non-resource activities as possible. This will enable future evaluations to better examine and quantify the impact of these activities, thereby capturing the value of their non-resource activities more comprehensively.
- **Recommendation:** Considering that the Energy Division seems to be increasingly interested in the value of PA non-resource activities, other LGPs and programs offering non-resource activities, including ECP, should follow RCEW's standardized approach to tracking these types of activities using a single comprehensive and high-quality database as discussed previously in Finding #5.
- **Recommendation:** During the year two LGP study implementation staff and local municipalities raised the importance of LGP's supporting local reach code ordinances and climate action planning in in-depth interviews and participant surveys. Staff across LGPs and IOU territories raised concern that there may become a gap in funding for CAP support going forward if LGPs reduce funding for these types of activities. Similar sentiments were also mentioned by LGPs interviewed in year 1 which leads us to believe this is a widespread concern across local governments. The CPUC should consider a study to develop a methodology for quantifying the impacts of reach code ordinance/climate action planning support using methods similar to those used for the Codes and Standards program, especially if new third-party, public-sector implementers choose to continue to offer this non-resource activity.

SCE's Ventura County Energy Leader / SCG's Ventura County Partnership (VCP)

- **Finding #10:** The evaluation team found the non-resource data provided by VCP to be sufficient in completeness and quality. It contained enough fields mergeable with CPUC and IOU resource databases (e.g., contact name, phone number, email, etc.) to conduct the channeling analysis. In total, however, VCP provided only two non-resource related tracking databases. One originated from SCE and one from SCG (in PDF file format), which consisted of lists of the partnership's primary local government contacts. In SCE's VCP response to Question 3 of our data request, which asked for all non-resource tracking databases, they stated that "SCE does not track customer level information from LGP non-resource activities." The implementing partner did provide a list of 59 VCP events between 2017–2019, which detailed the type of event (e.g., outreach, training, or workshop), and the city where the event took place, but did not list customer tracking data. This limited the team's ability to conduct this study's channeling and surveying tasks. Consequently, a limited number of municipal customers were identified in the channeling analysis as having gone on to participate in a resource program after engaging in a VCP non-resource activity (10%).
- **Recommendation:** We recommend expanding customer tracking to include non-resource activities and using a single database to record both customer contact information and details on the types of non-resource activities in which each contact participates.

SCE's Western Riverside Energy Leader Partnership / SCG's Western Riverside Energy Partnership (WRP)

- **Finding #11:** Similar to VCP, WRP provided only three non-resource related tracking databases, two of which were generic contact lists. This limited the team's ability to conduct this study's channeling and surveying tasks.
- **Recommendation:** We recommend expanding customer tracking to include non-resource activities and using a single database to record both customer contact information and details on the types of non-resource activities in which each contact participates.
- **Finding #12:** Many of the email addresses and phone numbers provided in WRP's non-resource-tracking databases were not complete. This made it more difficult to perform the channeling analysis and participant survey. Despite these issues, the channeling analysis did find that 31% of municipal customers listed in their non-resource databases went on to participate in a resource program after engaging in a WRP non-resource activity. This was the second highest percentage among the LGPs assessed in this evaluation and leads us to believe that with improved data collection protocols, an even higher percentage of customers may have been found.

Recommendation: SCE and SCG should establish data collection protocols that ensure consistent collection of non-resource activity participant email addresses and phone numbers. As noted previously, the evaluation team didn't expect for the year 1 data collection protocol recommendations to have been implemented and reflected in our year 2 study due to the timing of the studies.

2. LGP Overview and Study Purpose

Since 2002, the CPUC has approved local governments to contract with the IOUs to form LGPs, enabling them to leverage their unique relationships with constituents and municipal facilities to drive EE upgrades. LGPs were initially tasked with transforming California's local governments into "leaders in using EE to reduce energy use and global warming emissions both in their own facilities and throughout their communities."⁶ Accordingly, each LGP program has developed its own set of goals and offerings tailored to meet local or regional needs.

Each LGP is made up of one or more city governments, county agencies, and/or other regional governing and coordinating bodies known as member (partner) governments. The local government or third-party organization that holds the contract with the IOU for LGP administration is often referred to as the Implementing Partner (IP).⁷ This implementing partner can be a single city or county, a council of governments, JPA, a private company, or another type of association. This implementing partner typically manages administrative aspects of the partnership, including, but not limited to, serving as the main point of contact with the IOU(s), setting LGP goals, managing budgets, arranging recurring meetings with the member governments, and maintaining tracking databases. They also conduct a variety of activities in coordination with IOU program managers and their local government members. The core activities typically undertaken by an LGP can be categorized as follows:

- **Municipal retrofits.** Meeting regularly with local partner staff—either one-on-one or in groups—to discuss their pipeline of municipal facility projects, provide technical assistance, influence the decision-making process to install more efficient equipment, and hand-off the project to the most appropriate IOU program (which may be an LGP program if it has a resource component) for project approval, equipment purchases, and incentive payments.
- **Strategic planning.** Working with member local governments to define their energy goals, as well as identify gaps, and provide funding as needed to support accomplishing the related tasks. Common examples of strategic planning activities include Energy/Climate Action Planning, benchmarking, greenhouse gas inventories, and hosting trainings on energy related topics.
- **Core program coordination.** Assisting and outreaching to LGP customers to promote IOU EE programs. Common examples include residential and commercial audits, direct installs, and marketing of core programs at community events.

The Energy Division indicated an interest in examining the effects of LGP non-resource activities on the EE portfolio with a focus on the 2017 and 2018 program operating years. Accordingly, the objectives of this evaluation are to understand the impacts of LGP non-resource activities on EE resource programs offered by the PAs and to assess the impacts on EE actions and behaviors in general. The intent of this second-year evaluation is to cover the 2017–2018 program years. We also seek to understand how things have changed from past program cycles, and how these programs have been changing since 2017. Considering the large number of LGP programs within each distinct IOU model, EE and the evaluation team decided to study the influence of non-resource activities for a select number of LGPs.

⁶ CPUC, California Long Term EE Strategic Plan, September 2008, p. 89.

⁷ Some IOUs use different terminology. For instance, PG&E calls these organizations Lead Local Partners.

2.1 Year 2 LGP Selection Process

The large number of LGPs implemented over the past decade, as well as the diversity of motivations, budgets, demographics, and government priorities and resources, present evaluation challenges that are unique to the local government market segment. Therefore, just as in the year one LGP study, the evaluation team proposed to evaluate five LGPs in year two. In proposing which LGPs to evaluate this year, we considered the following:

- Evaluating LGPs that haven't been evaluated by a recent LGP study (e.g., the year one study or the previous Evergreen report);
- Selecting a cohort of LGPs that is distributed broadly throughout different regions of California;
- Selecting a cohort of LGPs that includes a range of budget allocations; and
- Other program-specific unique characteristics.

Consistent with the year one sample methodology, part of our selection process includes examining the characteristics of the communities being served by any LGPs that might potentially be selected for evaluation further expanded upon in Appendix A. LGP Selection Characteristic Definitions, shows select characteristics for the areas being served for each proposed and alternative LGP. The categories of characteristics examined include:

- **Community Characteristics.** Community characteristics allow us to understand various attributes of the constituents being served by an LGP and allow for a comparison of the LGPs selected for evaluation to other LGPs not being evaluated in year two.
- **Economic Burden Characteristics.** Economic burden characteristics provide economic burden metrics for the selected LGPs. Three out of four of these metrics originate from the California Communities Environmental Health Screening Tool (CalEnviroScreen). CalEnviroScreen is a tool used by the California Environmental Protection Agency to define disadvantaged communities. These metrics are useful in defining LGP interactions with disadvantaged and low-income communities.
- **Program Delivery Capacity.** Program delivery capacity metrics are useful in defining access to funding for constituents within an LGP operations area.

Table 4 provides additional details on the source of per capita funding, indicating both the total LGP Delivery Funding per capita, as well as the total per capita funding for PAs focused on local programs (i.e., LGPs, RENS, and CCAs receiving PPFs). This table is based on 2019 ABAL information and population size data for the cities or counties being served. County and city population size data is provided by the American Community Survey. Note that these tables were created based on the jurisdictions listed in each LGP's Program Implementation Plan on CEDARS.

Based on these considerations, the evaluation team, in coordination with the Energy Division evaluation manager, preliminarily selected to evaluate the Redwood Coast Energy Watch (RCEW) Partnership, (northern) Santa Barbara Energy Watch (SBEW) Partnership, Ventura County Partnership (VCP), Desert Cities Partnership, and the Emerging Cities Partnership (ECP). At the inaugural LGP PCG meeting, the evaluation team reviewed the selection process and preliminarily selected LGPs with IOU staff. The IOUs were generally supportive of the selected LGPs. At the request of SCG, the evaluation team and the Energy Division evaluation manager agreed to revise the sample to include the Western Riverside Partnership (WRP) in place of the Desert Cities Partnership.

Table 3. Evaluation Year 2 Program Selection Metrics

	Programs Initially Recommended					Alternatives Recommended		
Electric Utility	SCE/SCG	SCE/SCG	PG&E	PG&E	SDG&E	SCE/SCG	PG&E	SDG&E
LGP Name	Ventura County Energy Leader/ EE Partnership	Desert Cities Energy Leader/Desert Cities Energy Partnership	Redwood Coast Energy Watch Partnership	Santa Barbara Energy Watch Partnership	Emerging Cities Partnership	San Joaquin Valley Energy Leader/SJV Energy Partnership	Northern San Joaquin Valley Energy Watch Partnership	County of San Diego Partnership
Community Characteristics								
Jurisdiction	Ventura County	Eastern Riverside "Desert" Cities	Humboldt County	Santa Barbara County	San Diego County	Tulare/Kings County	Merced, San Joaquin, Stanislaus County	Unincorporated San Diego
Covered Population	859,073	405,523	136,002	453,457	3,337,456	627,496	1,594,345	504,330
Number of Jurisdictions	11	13	8	9	19	14	25	1
CEC Climate Zone	9	10	1	5	7	13	12	7
Total 2017 per capita usage Net of Load Serving Entities	6,426	6,584	6,110	6,173	5,797	9,203	9,011	1,045
% of 2017 GWh Non-Res	67%	52%	51%	72%	65%	71%	67%	65%
HTR and Burden Characteristics								
Average of CalEnviroScreen 3.0 Score	20	29	16	15	19	38	43	19
CES 3.0 Average of Poverty Percentile	39	56	65	48	33	75	67	33
CES 3.0 Average of Housing	41	49	51	45	19	45	48	19

	Programs Initially Recommended					Alternatives Recommended		
Burden Percentile								
CES 3.0 Combined Poverty and Housing Burden Score	100	134	132	108	72	158	158	72
CARE Eligibility—% Households	25%	35%	45%	36%	29%	50%	41%	29%
LINA Modified Energy Burden Category "High"	8%	12%	6%	2%	5%	20%	6%	5%
Economic and Delivery Capacity								
ACS Total households - Median household Income (dollars)	\$78,593	\$57,972	\$42,685	\$65,161	\$66,529	\$45,015	\$51,971	\$66,529
Est. per capita Public Purpose Funds \$ Paid	\$64.26	\$56.22	\$56.14	\$77.04	\$67.71	\$93.16	\$121.33	\$82.38
Total Per Capita LGP Delivery Funding	\$2.21	\$0.41	\$9.02	\$1.34	\$0.08	\$0.80	\$0.62	\$2.30

Table 4. Source of Delivery Capacity Funds

LGP Name	Ventura County Energy Leader/Ventura County EE Partnership	Desert Cities Energy Leader/Desert Cities Energy Partnership	Redwood Coast Energy Watch Partnership	Santa Barbara Energy Watch Partnership	Emerging Cities Partnership	San Joaquin Valley Energy Leader/SJV Energy Partnership	Northern San Joaquin Valley Energy Watch Partnership	County of San Diego Partnership
REN Name	3C-REN	SoCalREN	-	3C-REN	-	SoCalREN	-	-

LGP Name	Ventura County Energy Leader/Ventura County EE Partnership	Desert Cities Energy Leader/Desert Cities Energy Partnership	Redwood Coast Energy Watch Partnership	Santa Barbara Energy Watch Partnership	Emerging Cities Partnership	San Joaquin Valley Energy Leader/SJV Energy Partnership	Northern San Joaquin Valley Energy Watch Partnership	County of San Diego Partnership
PG&E—2019 Requested Budget \$/Capital	\$0.00	\$0.00	\$9.02	\$1.34	\$0.00	\$0.00	\$0.62	\$0.00
SCE—2019 Requested Budget \$/Capita	\$2.01	\$0.36	\$0.00	\$0.27	\$0.00	\$0.61	\$0.00	\$0.00
SCG—2019 Requested Budget \$/Capita	\$0.19	\$0.05	\$0.00	\$0.17	\$0.00	\$0.19	\$0.00	\$0.00
SDGE—2019 Requested Budget \$/Capita	\$0.00	\$0.00	\$0.00	\$0.00	\$0.08	\$0.00	\$0.00	\$2.30
Total Per Capita LGP Delivery Funding	\$2.21	\$0.41	\$9.02	\$1.78	\$0.08	\$0.80	\$0.62	\$2.30
REN PPF	\$3.98	\$1.29	\$0.00	\$3.98	\$0.00	\$1.29	\$0.00	\$0.00
Total Per Capita Delivery Funding	\$6.19	\$1.70	\$9.02	\$5.22	\$0.08	\$2.09	\$0.62	\$2.30

2.2 Non-Resource Activities Offered by LGPs Covered in this Study

LGPs are ratepayer-funded IOU EE programs that conduct a variety of non-resource activities including marketing and outreach, technical assistance, workshops and trainings, energy audits, and/or referrals to other programs. As noted earlier, the CPUC describes a non-resource program as one that has no directly attributed energy savings but serves to support the EE portfolio through activities such as marketing or improved access to training and education.⁸

This study broadens the focus from non-resource programs to non-resource activities since oftentimes PAs engage in discrete actions, as opposed to formally defined programs, that are meant to promote participation in resource offerings, but do not in and of themselves produce energy savings. Energy audits serve as a prime example of a non-resource activity. Audits do not generate savings, but instead provide customers with recommendations to improve EE, perhaps through the installation of new equipment that requires less energy to operate or through behavioral changes. If customers subsequently decide to purchase rebated energy-efficient equipment through a resource program, the non-resource activity (the audit) indirectly led to energy savings that contributed to California's EE portfolio.

Each of the selected LGPs engage in non-resource activities, though the number of non-resource activities varies based on the structure of the IOU's LGPs and each LGP's unique program design. To understand the non-resource activities the selected LGPs engaged in during 2017 and 2018, the evaluation team reviewed documentation of their activities as presented in the IOUs' Annual Reports, Semi-Annual Strategic Plan Report workbooks, data request response materials, and in-depth interviews with IOU and IP staff. These documents communicate the notable strategies employed by LGPs to encourage EE actions in general and participation in IOU EE resource programs. The evaluation team reviewed these strategies and found that they fit the definition of non-resource activities.

Our review shows that the selected LGPs engaged in several types of non-resource activities with the intention of promoting PA resource programs. For example, LGPs conduct periodic one-on-one or group meetings with local jurisdictions to understand the various projects these municipalities have planned in the pipeline or wish they could complete; identify potential opportunities to install more efficient equipment; provide technical assistance or planning support; and connect municipal projects with the appropriate PA program based on the needs of the jurisdiction. Typically, the LGPs identify a local sustainability lead—sometimes referred to as an “Energy Champion”—who acts as the primary point of contact for the jurisdiction. This lead plays a key role in disseminating this information to the relevant municipality staff (e.g., public works staff, city planner, etc.) and bringing them to the table to discuss potential EE projects with LGP, IOU, and/or implementer staff. These meetings do not produce energy savings, but rather connect the most appropriate municipal staff for a project with resources and technical assistance to which they often would not have access to otherwise. This can lead public sector customers towards participation in PA rebate programs that result in claimed savings or completing EE projects outside of the PA portfolio.

Other non-resource activities that LGPs engaged in are not specifically tied to the promotion of a PA resource program, such as marketing and outreach to its customers more generally about the LGP's mission, the services it offers, as well as providing marketing materials for various PA programs. For example, many of the LGPs send out eNewsletters, attend community events, and host webinars/workshops that provide

⁸ Energy Efficiency Shareholder Incentive Mechanism, CPUC. <https://www.cpuc.ca.gov/General.aspx?id=4137>

information about sustainable communities, EE, and EE programs that offer rebates for energy-saving equipment. Additionally, it is equally as common for LGPs to support municipal planning efforts by offering a mixture of certification trainings, building benchmarking, Energy/Climate Action Plan funding or assistance, energy audits, and/or technical assistance.

2.3 Key Research Questions

The study objective for this assessment is to understand the effects of the non-resource activities offered by LGPs on the overall EE portfolio during 2017–2018. The following are the research questions the team addressed in this report as defined in the research plan:

- What non-resource activities are most successful in channeling customers into PA resource programs and behaviors that reduce energy usage?
- How many participants learned about EE resource programs through participation in LGP non-resource activities and how many of those participants went on to participate in resource programs?
- What savings can be attributed to the influence of LGP non-resource activities?
- What types of EE actions do LGP non-resource program participants take that occur outside PA EE resource programs and how much additional energy savings are generated from these behaviors?
- To what degree did the selected LGPs engage with local government agencies/departments and what resulted from these interactions?
- How might LGPs be improved to become more effective?

In addition to these research questions, the team gathered insights into additional questions based on the findings made in the year one report. These are ongoing topics of interest that the evaluation team may also research in year three of the evaluation, but we began to explore these areas and provide initial findings in the Findings and Recommendations section of this report. These additional research questions include:

- What are the PAs' existing and emerging data collection practices and protocols, particularly involving non-resource activities?
 - What types of data systems (e.g. Access, Excel, customer relationship management systems, etc.) are in place for tracking non-resource activities?
 - How are non-resource activity tracking databases currently being used? Are they being leveraged to channel customers into rebate programs?
- How can PAs and IPs improve the evaluability of non-resource activities?
- What changes to LGP program design are anticipated to occur with the transition to third-party implementation?

3. Overview of Evaluation Approach

This section first describes the research tasks the evaluation team carried out to address the key research questions presented in Section 2.3. A description of the data collection and analytical methods used to accomplish the research tasks follows.

3.1 Research Tasks

As part of the year one assessment of LGPs, the evaluation team conducted the following tasks presented in Table 5.

Table 5. Research Tasks for First-Year Assessment of LGPs Study

Evaluation Tasks	Description
Data Request	Submitted a data request to PG&E, SCE, SCG, and SDG&E to acquire non-resource activity tracking data including participant names, contact information, and dates of participation.
Materials/Data Review	Reviewed responses to the data request to learn about the marketing and outreach campaigns, types of non-resource activities, and resource programs offered by the selected LGPs.
In-Depth Interviews with IOU and LGP IP Staff	Conducted in-depth interviews with staff at the IOUs and the IPs of the covered LGPs to gain insights about how they conduct their non-resource activities, how they are funded, and whether they are part of resource programs they offer.
Evaluability Assessment	Conducted a review of the resource and non-resource tracking data provided by PG&E, SCE, SCG, and SDG&E to determine whether the datasets included information needed to evaluate the benefits of these activities.
Channeling Analysis	Identified non-resource activity participants of the selected LGPs who subsequently participated in a PA resource program and those who did not. Used this information in the development of the survey sample.
LGP Non-Resource Activity Participant survey	Conducted a participant web survey with the selected LGPs' municipal non-resource activity participants to assess whether they installed rebated or non-rebated EE equipment and/or changed their energy-using behaviors after participating in an activity. The survey also assessed the degree to which the non-resource activity influenced participants' subsequent equipment installation and behavior. Prior to fielding the survey, the IOUs were provided with a list of their customers that we intended to contact and were allowed to request any revisions. At that time, the IOUs were also urged to support the surveying efforts by reaching out separately and encouraging customers to participate in the survey.
Engineering/Attribution Analyses	Used the information gathered from the participant web survey to estimate the energy savings from the installation of EE equipment that occurred after engagement with an LGP non-resource activity and attributed the portion of savings coming from the influence of non-resource activities.

3.2 Methodology

This section outlines the methodologies used to complete the year two evaluation, including:

- The evaluability assessment of the data provided by PG&E, SCE, SCG, and SDG&E.

- The channeling analysis to determine which RCEW, SBEW, ECP, VCP, and WRP municipal non-resource participants went on to participate in PA EE resource programs.
- The LGP non-resource activity participant web survey.
- The engineering analysis used to estimate the ex-ante gross and net first-year savings from EE installations by RCEW, SBEW, ECP, VCP, and WRP municipal non-resource participants.
- The attribution analysis used to determine the influence of RCEW, SBEW, ECP, VCP, and WRP's non-resource activities on municipal customers' decisions to purchase EE equipment, some of which were claimed towards California's EE portfolio goals.

3.2.1 Evaluability Assessment

We reviewed data provided by the IOUs in response to data requests sent in February 2019 to determine whether the evaluation team could use the non-resource activity data collected by the selected LGPs for the channeling analysis and to develop a sample for its survey efforts. In March 2019, the evaluation team received the following program materials and data in response to the data requests sent to the IOUs:

- Annual reports, meeting minutes and agendas, marketing brochures, and other materials used to inform customers about each LGP's program offerings;⁹
- LGP non-resource and EE resource program databases;
- Available data and information supporting the engagement and accomplishment metrics reported in the LGPs' Semi-Annual Strategic Plan Report workbooks;
- Program and project-level budget documents, scopes of work, and final reports from LGP activities; and
- Documents detailing data collection protocols and practices.

In addition to the data and materials received from the IOUs, the evaluation team also gained access to CPUC's program data, some of which is publicly available through CEDARS.¹⁰

The evaluation team reviewed the program materials and tracking databases to understand the types of non-resource activities and resource programs the selected LGPs offer their customers. We also intended to understand the goals of the LGPs program offerings; the size of the programs based on participation records; and the availability of program participant information for the channeling analysis, survey sample

⁹ While program implementation plans, as well as program theory and logic models, were requested in these data requests, these documents were ultimately collected from CEDARS and various past evaluation reports, and then reviewed with IOU staff to confirm their relevance to the LGPs' 2016 and 2017 program design.

¹⁰ The CPUC program database contains data about savings claims with more granularity than what is publicly available. This database contains individual savings claims from all PA resource programs including associated customer information and measures installed.

development, and other evaluation tasks.¹¹ Data completeness, quality, and the feasibility of conducting channeling analyses using LGP data and CPUC program data were the primary focus of the evaluability assessment. The LGP Evaluability Assessment section of this report presents detailed results of the evaluability assessment and recommendations for non-resource activity data tracking.

3.2.2 Channeling Analysis

The evaluation team conducted a channeling analysis to acquire the set of customers who engaged in a selected LGP non-resource activity in 2017–2018 and subsequently participated in an EE program offered by one of the California PAs. The premise of the channeling analysis is that customers who participated in a PA resource program may have been influenced by the LGP non-resource activity in which they participated. The channeling analysis provides a list of the customers who may have been influenced by the non-resource activity. The degree of influence, if any, cannot be determined through this analysis.

We recognize that the LGPs' non-resource activity participants may have chosen to install EE equipment outside of PA resource programs as well. The channeling analysis does not capture this information. The team did implement a survey with the LGPs' non-resource activity participants, however, to understand what EE equipment and behavioral changes were made both inside and outside of PA resource programs, and what influence the non-resource activity had on their decision.

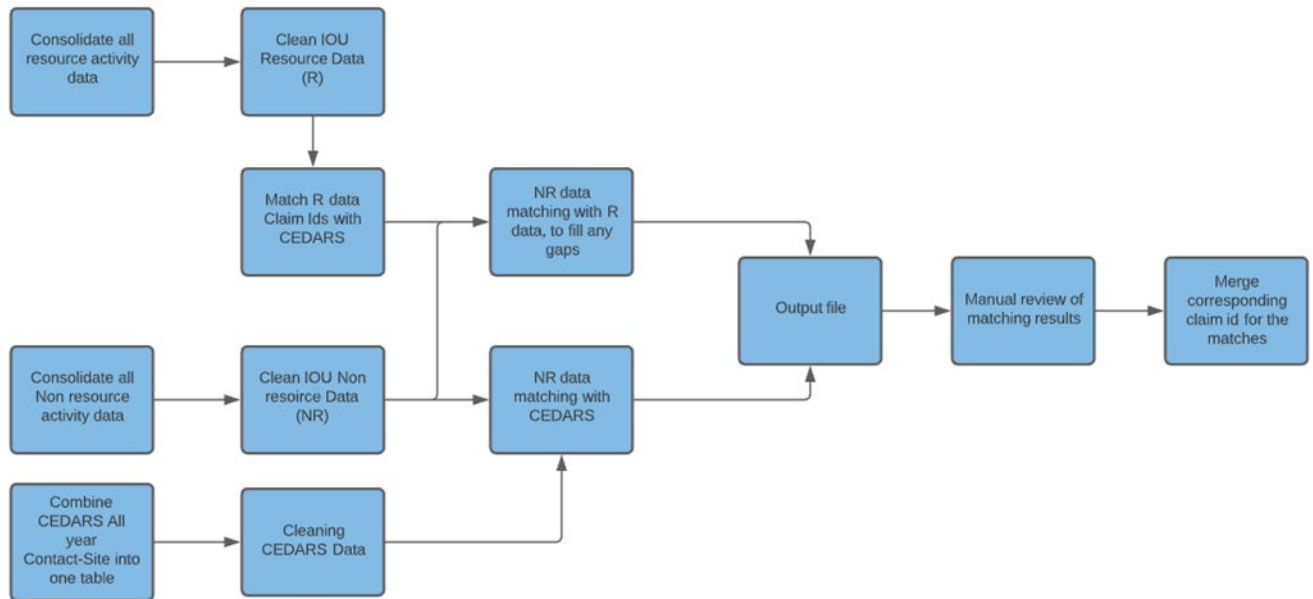
The evaluation team needed two main sources of information to conduct the channeling analysis:

- A list of LGP non-resource activity participants with customer identifying information, type of non-resource activity in which the customer participated, and date of participation. This list was created using the non-resource-tracking databases collected from the IOUs through this year's data request.
- A list of PA resource program participants with customer identifying information and dates of participation so that the evaluation team could confirm that participation occurred after non-resource activity participation. This list was created using a combination of resource-tracking databases collected from the IOUs through this year's data request and CPUC program data from CEDARS.

The two lists ideally should contain a common identifier, such as a customer ID that is included in both datasets. However, this information was only present on occasion. The evaluation team therefore had to rely on other ways to match non-resource activity participants to resource records in the CPUC and IOU tracking data such as matching customer name, email address, phone number, and/or mailing address. Figure 1 illustrates the process flow of the channeling analysis.

¹¹ The evaluation team conducted a high-level review of the selected LGP programs' commercial and residential sector-focused activities during the evaluability assessment. However, this data was excluded from the evaluability assessment. The evaluation team's review of the recent business plans and ABALs, as well as discussions with IOUs, Implementing Partners, and Energy Division staff indicated that generally these activities are in the process of being phased out of the LGP portfolio, with a renewed focus on supporting the public sector. As such, the evaluation team narrowed its review of LGP non-resource activities to those targeting the public sector.

Figure 1. Channeling Analysis High-Level Process Flow



To prepare the datasets for the channeling analysis, the evaluation team:

- Combined all the non-resource files into one file. As there were many attributes in all the files with different IOUs having different structures, we consolidated customer information such as name, address, email, phone, etc., and created our own unique ID to map original raw data to the new structured data.
- Combined resource files from all the IOUs into a single file. As there were many attributes in all the files with different IOUs having different structures, we consolidated customer information such as name, address, email, phone, etc. with unique ID for reference.
- Extracted CEDARS data containing resource information from the 2017, 2018, and 2019 database using SQL query and combined it together.
- Added unique identifiers to all the original raw files, so the records could be traced back to each IOU's file.

Next, the evaluation team cleaned and transformed the data, which consisted of:

- Converting each non-resource participant tracking dataset into a standardized format,
- Standardizing variable names,
- Cleaning the data in a standardized manner, and
- Retaining the following fields for each record, where populated: name, premise address, phone, email address, and dates of non-resource activity participation.

The next step in this process was to employ a fuzzy matching algorithm to identify duplicate records.¹² For this the evaluation team used the Python Record Linkage Toolkit which provides a robust set of tools for linking data records and identifying duplicate records in data. Its capabilities include:

- Defining the types of matches for each column based on the column data types,
- Using “blocks” to limit the pool of potential matches,
- Providing ranking of the matches using a scoring algorithm,
- Measuring string similarity using multiple algorithms, and
- Multiple data cleaning methods.

The evaluation team then conducted a record comparison between the non-resource and resource lists. Phone numbers were matched on an exact basis, while text matching for email address, customer name, and premise address were done using 'Jaro-Winkler' method.¹³ A score between 0 and 5 was then generated for each potential non-resource and resource record matched based on the number of matched attributes. These attributes include phone number, email ID, full email address, contact name, and full premise address. For example, if two records, one a non-resource and one resource record, matched on both phone number and customer name but not full email address, email ID, and full premise address, it would receive a score of 2.

Once we had the match file where non-resource records were matched to IOU resource records and CEDARS records, and scored based on the number of matching attributes, the evaluation team performed a manual check to validate matches that scored 3 or below. As the data was inconsistent, 70% of matches had a score of 3 or below. However, we followed an approach where the records are considered a good match if the score is due to phone or full email address match. Contact name and premise address matches were fuzzy text matches and needed to be manually validated. There were also duplicate matches due to resource records associated to multiple claim IDs which were removed before sharing the final file.

Because of the lack of data fields in the non-resource participation lists and the inconsistent nature of what is available, the data generally did not match very well to the CPUC tracking data and required too many assumptions, partial data fields, and fuzzy logic for records to match with certainty. The lack of data resulted in insufficient information to make good matches. In addition, the inconsistent nature of the data (where one record has email address only, another has phone, another has name but no premise address) causes the matching rules to be complicated and can produce matches that are not easy to explain. Ultimately, this type of analysis is limited by the quality and quantity of the non-resource data received from the IOUs.

This year's channeling analysis yielded much better results than the year one study, as detailed in Section 5. Channeling Analysis Results. This is in large part due to the significantly cleaner tracking data we received. This year's channeling analysis also benefited from receiving the IOU's LGP resource-tracking databases. However, there is still much to be improved on the data collection and tracking of non-resource activities as detailed in Section 4.

¹² Fuzzy matching is a computer science-based technique used to link records, particularly when there are less than 100% identical field values across sources.

¹³ In computer science and statistics, the Jaro-Winkler distance is a string metric for measuring the edit distance between two sequences.

3.2.3 LGP Non-Resource Activity Participant Survey

As part of the assessment of LGPs, the evaluation team conducted a computer-assisted web interviewing survey of IOU customers who engaged with non-resource program activities conducted by the selected LGPs, as part of their EE programs and/or their general marketing and outreach campaigns.

Sample Design

The evaluation team conducted this web survey to identify the EE equipment upgrades and behavioral changes municipal customers carried out in public facilities after engaging with LGP non-resource activities. Surveys were sent to municipal customers identified in the tracking datasets provided by the IOUs in response to our data request. These customers included:

- LGP non-resource activity participants located in the CPUC program database. These participants are associated with claims that occurred after engaging in an LGP non-resource activity.
- LGP non-resource activity participants not found in the CPUC database.

The evaluation team reached out to 177 LGP contacts across the five selected LGPs to complete surveys and received 23 completes. Prior to launching the survey, staff at each IOU were provided with the list of contacts to review and approve. SCG was the only IOU to request the removal of some contacts from the list, and these removals were limited to the Ventura County and Western Riverside Partnerships. The IOUs were also encouraged to contact customers to remind them to respond to the survey. SDG&E and SCG staff indicated that they reviewed the contact list and would engage customers once the survey launched. As shown in Table 6, the sample size and response rate varied among the selected LGPs because of the quality and quantity of non-resource activity data received, variations in the number of municipal non-resource activity participants, and different levels of survey outreach support provided by the IOUs.

Since sample points for some of the different non-resource activities are limited, the evaluation team used a census approach and contacted all customer groups described previously who had contact information (i.e., email address). As in the year one report, surveying efforts were limited to LGP interactions with municipalities given the anticipated changes to LGP program design.

Table 6. LGP Participant Survey Sample Composition

LGP	Population		Sample ¹⁴		Survey Completes	
	N	Percent (N=314)	n	Percent (n=177)	n	Percent (n=23)
Redwood Coast Energy Watch	38	12%	38	21%	7	30%
Santa Barbara Energy Watch	171	55%	71	40%	7	30%
Emerging Cities Partnership	40	13%	40	23%	5	22%
Ventura County Partnership	26	8%	14	8%	2	9%
Western Riverside Partnership	39	12%	14	8%	2	9%

¹⁴ The Sample consisted of the Population adjusted for all contacts SCG requested not be surveyed and for which the evaluation team did not have email addresses.

LGP	Population		Sample ¹⁴		Survey Completes	
	N	Percent (N=314)	n	Percent (n=177)	n	Percent (n=23)
Total	314	N.A.	177	N.A.	23	N.A.

Survey Fielding, Disposition, and Response Rate

The evaluation team fielded the web survey between December 4, 2020 and January 15, 2021 and contacted LGP non-resource activity participants by email. Table 7 provides the survey dispositions for the participant survey.

Table 7. Participant Survey Disposition

Disposition Code	Disposition Category	Number of Customers
Complete	I	23
Partial complete—survey eligibility confirmed	N	9
Partial complete—survey eligibility unknown	U1	26
Refused	U1	0
No response	U1	99
Ineligible to participate	X1	7
Bounced email	X2	14
Total		177

Table 8 presents the response rate (RR) for the participant survey, which was calculated using the standards and formulas set forth by the American Association for Public Opinion Research (AAPOR), as described in Appendix D. Survey Response Rate Methodology.

Table 8. Participant Survey Response Rate

AAPOR Rate	Percent
RR3	17.2%

3.2.4 Engineering Analysis

The main objective of the engineering analysis was to estimate the first-year ex-ante gross and net energy impacts of the EE equipment installed by surveyed customers—who initially participated in the selected LGPs’ non-resource activities—either through a PA resource program or on their own.¹⁵ The evaluation team used the data from the participant survey, which was fielded to non-resource activity participants within the IOUs’ service territories. The survey received a total of 32 participant responses, including 23 participants who completed the entire survey and another nine participants who partially completed the survey. Of these 32

¹⁵ Gross savings are defined as the change in energy consumption and/or demand that results directly from program-related actions taken by participants in an efficiency program, regardless of why the customer participated and unadjusted by any factors. Net savings are the total change in electric or gas consumption and/or demand that is attributable to an energy efficiency program.

survey participants, 22 provided enough information about the EE retrofits they completed for use in the engineering analysis.

The evaluation team used two approaches to estimate gross savings. The first analysis approach to assess gross savings was used for measure categories where individual measure attributes could be defined. For these measures, the evaluation team identified sub-measures that contributed to the measure category level savings. For every sub-measure, we analyzed the participant responses and calculated the ex-ante energy savings by applying the deemed savings values using either the California eTRM or the READI program. Measures analyzed using this approach include

- Office Equipment,
- Refrigeration,
- Solar, and
- Water Heating.

The eTRM and the READI allow users to examine the ex-ante measure information based on DEER stipulations. Users can access measure-specific information such as:

- Ex-ante data tables,
- Existing DEER and non-DEER measure definitions,
- Deemed energy impacts associated with measures in tables and graphs, and
- Measure-specific net-to-gross ratios (NTGRs).

The eTRM and the READI also provide an option for the user to download data tables. The evaluation team used these deemed savings values in conjunction with pertinent survey data on measure quantities, specifications, etc., to determine the first-year ex-ante gross savings for both rebated and non-rebated EE equipment. When unable to utilize the eTRM or DEER as the analysis source, the evaluation team utilized approved workpapers or other widely used industry sources such as the ENERGY STAR® Calculator.¹⁶ Table 9 summarizes the assumptions and sources used to calculate the gross and net savings for each measure category under this approach.

Table 9. Measure Specific Assumptions and Sources

Measure Category	Sub-Measure	Analysis Source/ Assumptions		
		Unit Energy Savings	Measure Qty	NTGR
Office Equipment	Advanced Power Strips	DEER	Survey Data	DEER Support Tables
	Computer Power Management Software	DEER	Survey Data	DEER Support Tables

¹⁶ ENERGY STAR® and the ENERGY STAR mark are registered trademarks owned by the US Environmental Protection Agency.

Measure Category	Sub-Measure	Analysis Source/ Assumptions		
		Unit Energy Savings	Measure Qty	NTGR
	Energy Savings desktop or Laptop	ENERGY STAR Calculator	Survey Data	DEER Support Tables
	ENERGY STAR Printer	ENERGY STAR Calculator	Survey Data	DEER Support Tables
Water Heating	Storage Water Heater, Commercial	eTRM	Survey Data	DEER Support Tables
	Boiler, Commercial	eTRM	Survey Data	DEER Support Tables
	Boiler tune-up	Unable to quantify due to insufficient data	-	-
	Hot Water Tank Insulation, Nonresidential	eTRM	Survey Data	DEER Support Tables
	Demand Control for Centralized Water Heater Recirculation Pump, Multifamily & Commercial	eTRM	Survey Data	DEER Support Tables
	Low-Flow Pre-rinse Spray Valve	eTRM	Survey Data	DEER Support Tables
	Domestic Hot Water Loop Temperature Controller, Multifamily & Commercial	eTRM	Survey Data	DEER Support Tables
Refrigeration	Reach-In Refrigerator or Freezer, Commercial	eTRM	Survey Data	DEER Support Tables
Other	Solar Panels	Itron's PV Watts Simulation Model	Survey Data	DEER Support Tables
	Energy Storage	Unable to quantify due to insufficient data	-	-
	Pump Motor VFD	Unable to quantify due to insufficient data	-	-
	New Wiring, Switches, and Wall Plugs	Unable to quantify due to insufficient data	-	-

A separate analysis approach was used for lighting and HVAC measures where the evaluation team employed several analytic approaches to assess savings. These measures were analyzed separately from measure categories where individual measure attributes could be defined because lighting and HVAC tend to have facility level impacts and are best analyzed utilizing energy savings intensities (kWh/ft²-yr) using the following equation:

$$\text{Gross Annual First-Year Ex-Ante Savings} = \text{Project Size (ft}^2\text{)} \times \text{Energy Savings Intensities (kWh/ft}^2\text{-yr)}$$

To define project size, the evaluation team analyzed survey responses to assess how many facilities had lighting and HVAC projects installed and how much facility area (square feet) had been impacted. Seventeen respondents reported having completed a total of 30 lighting projects and 17 HVAC projects, and of these,

thirteen respondents provided project street address information for 25 lighting projects, and 15 street address information for HVAC projects. Address information allowed the team to determine that lighting projects were completed on 1,170,000 square feet of facility space, while HVAC projects were completed on 929,800 square feet of facility space.

Once the total project size was determined, the team used two analytic methodologies to determine Gross Annual First-Year Ex-Ante Savings:

1. Analysis of program tracking data
2. Analysis of similar projects evaluated through the 2018 Custom Industrial, Agricultural, and Commercial Impact (CIAC) evaluation¹⁷

Analysis of Program Tracking Data

The team reviewed survey responses and matched address information to program tracking data on four sites, totaling 146,000 square feet of conditioned space with savings of 27,083 kWh. Survey responses indicated that both lighting and HVAC projects had been completed at all four sites. Table 10 shows the estimated savings intensities for these projects, ranging from 0.13 to 0.91 kWh/ft²-yr, with average and median savings intensity of 0.39 and 0.28 kWh/ft²-yr, respectively. The team used the median savings intensity¹⁸ of 0.28 kWh/ft²-yr to estimate annual ex-ante gross savings of 326,461 kWh for the estimated 1,170,000 total square feet of facility space that survey respondents indicated had been retrofitted. The team did not estimate gas savings for HVAC projects because none of the projects linking web responses to the IOU tracking database reported any positive gas savings.

Table 10. Savings Intensities from Survey Responses Matched to IOU Program Tracking Data

Tracking Data Project Number	Estimated Project Area (ft ²)	kWh	kW	Therms	Savings Intensity (kWh/ft ² -yr)
1	18,000	5,550	0.0	0	0.31
2	23,000	4,312	1.1	0	0.19
3	5,000	4,556	1.0	0	0.91
4	100,000	12,665	4.5	-19	0.13
Total	146,000	27,083	6.6	-19	-
Average	36,500	6,771	1.7	-4.75	0.39
Median	20,500	5,053	1.1	0	0.28

¹⁷ 2018 Custom Industrial, Agricultural, and Commercial Impact Evaluation, Report Group D – D11.01. SBW. April 1, 2020

¹⁸ Median intensity of lighting and HVAC savings combined

Analysis of CIAC Evaluation Data

In addition to the analysis of program tracking data, and consistent with the engineering analysis approach used in the year one evaluation, the team also estimated savings from lighting and HVAC measures using estimates of project size previously defined and savings densities (kWh/ft²-yr) for projects recently evaluated by the CPUC CIAC evaluation. This provided a second methodology that allowed the team to assess the reasonableness of the analysis of LG program tracking data.

To develop estimates of savings intensities, the team analyzed savings from projects evaluated through the CIAC evaluation that have similar measures and facility operating parameters to the LG projects for which participant survey respondents provided data. The CIAC review included 19 lighting installations and 12 HVAC installations. Table 11 shows the estimated savings intensities used in the year two report, and also intensities used in the year one report based on the same methodology. Lighting savings intensities were increased for the year two evaluation and held constant across utilities. HVAC savings intensities were reduced in the year two evaluation based on findings reported in the CIAC report. In addition, the year two methodology defined separate HVAC savings intensities for each IOU compared to a single value used in the year one report.

Table 11. Average Savings Intensities from the CIAC Analysis

Report Yr	Savings Intensities (kWh/ ft ² -yr)			
	Yr 1	Yr 2		
IOU	All	SDGE	PGE	SCE
Lighting	0.081	0.088	0.088	0.088
HVAC	0.470	0.160	0.226	0.315

Because the CIAC analysis provided separate savings densities for lighting and HVAC, the team was able to estimate 102,987 kWh of savings from lighting projects and 290,626 kWh of savings from HVAC projects, totaling an estimated annual ex-ante gross savings of 393,613 kWh as presented in Table 12.

Table 12. Annual Ex-ante Gross Savings by Measure from the CIAC Analysis

Measure	Area (ft ²)	Savings Intensity (kWh/ ft ² -yr)	Savings (kWh)
Lighting	1,170,000	0.088	102,987
HVAC	929,800	0.160 to 0.315	290,626
Total			393,613

Comparison of Results

Table 13 shows total first-year ex-ante gross savings of 326,461 kWh based on program tracking data estimates, and 393,613 kWh based on the CIAC analysis methodology. Program savings were determined based on survey responses, including consideration of where respondents indicated that lighting and/or HVAC measures had been installed. Savings from the program tracking data analysis methodology were used in the attribution analysis and are the basis for the year two report gross annual first-year kWh savings. Savings ranged significantly across programs, driven by several factors, including:

- Our savings analysis of Ventura County Energy Leader Partnership (VCP) reflects that the survey responses provided information for several large locations where both lighting and HVAC projects had been completed. This is in contrast to survey responses for Western Riverside Partnership (WRP) which yielded only one small project that could be linked to non-resource activity. This disparity is likely related to the poor quality of WRP's non-resource data as discussed in Findings #11 and #12.
- The Redwood Coast Energy Watch (RCEW) program covers a small population compared to other programs evaluated but achieved relatively high savings given the limited size of the public facilities market. For example, Humboldt County has a population 136,002, roughly 30% of the population of 453,457 being served by the Santa Barbara Energy Watch (SBEW) program; yet, our analysis indicates RCEW achieved 83% of savings achieved by SBEW. This largely reflects Findings #5 and #6 that RCEWP does a comprehensive job tracking non-resource activities and maintaining data that supports the evaluability of non-resource activities.

Table 13. First-Year Gross Electric Savings by Program, Net of Attribution

Program	Program Tracking Data (kWh)	CIAC Analysis (kWh)
ECP	45,837	39,676
RCEW	35,224	31,102
SBEW	42,230	20,319
VCP	198,117	296,909
WRP	5,053	5,607
Grand Total	326,461	393,613

3.2.5 Attribution Analysis

Based on data collected from selected LGPs' non-resource activity participants, the evaluation team calculated customer-level ratios that represent the degree of influence the non-resource activities had on the customer's decision to install EE equipment, whether it be through an EE resource program or on their own. Once we calculated this ratio, we applied it to the customer-level ex-ante gross and net energy savings calculated in the engineering analysis to estimate the proportion of savings attributable to the LGPs' non-resource activities.

Attribution Survey Questions

The evaluation team developed customer-level attribution ratios based on responses to the following survey questions:

IN1a. On a scale of 0 to 10, where 0 is "Not at All Influential" and 10 is "Extremely Influential", how influential was the EE related <NR activity> in your decision to install energy saving equipment?

IN2a. Now we would like to ask you about the importance of <LGP> program in your decision to install energy saving equipment compared to other factors that may have influenced your decision.

If you were given a TOTAL of 10 points to rate the importance of the <LGP> program in your decision to install energy saving equipment and you had to divide those 10 points between all your overall interactions with (1)

the **<NR activity>**, and (2) any OTHER factors, how many points would you give to the importance of your interaction with the **<LGP>** program? Your best estimate is fine.

[ASK IF IN2a-2 > 2]

IN3a. Please list up to three other factors that influenced your decision to install energy saving equipment.
[OPEN END – ALLOW FOR UP TO THREE RESPONSES]

IN4a. Now please think about the actions you would have taken with regard to installing energy saving equipment if you hadn't interacted with the **<LGP>** program.

Using a scale from 0 to 10, where 0 is "Not at all likely" and 10 is "Extremely likely", if you had not interacted with the **<LGP>** Program, including the **<NR activity>**, what is the likelihood that you would have installed EXACTLY the same ENERGY SAVING equipment either at the same time or later?

[ASK IF IN4a>0]

IN5. Using the same scale from 0 to 10, if you had NOT interacted with the **<LGP>** program including the **<NR activity>**, what is the likelihood that you would have installed exactly the same energy saving equipment **within 12 months of when you did it?**

[ASK IF IN5>0]

IN5a. When do you think you would have installed the energy saving equipment had you not interacted with **<LGP>** Program? Please answer relative to the date that you **actually** installed the energy saving equipment:

- 0. At the same time
- 1. Within 6 months
- 2. More than 6 months up to 1 year later
- 3. More than 1 year up to 2 years later
- 4. More than 2 years up to 3 years later
- 5. More than 3 years up to 4 years later
- 6. More than 4 years later
- 8. Not sure

[ASK IF IN5a=6]

IN6a. Why do you think it would have been over 4 years later? **[OPEN END]**

Attribution Ratio Algorithm

Based on the responses to the questions above, the evaluation team calculated customer-level attribution ratios using Equation 1:

Equation 1. Attribution Ratio Formula

Attribution Ratio = Average (Non-Resource Relative Influence, Adjusted No Non-Resource Activity)

Where:

Non-Resource Relative Influence = (IN2a score/10)

*Adjusted No Non-Resource Activity = 1 - (IN4a score/10) * Timing adjustment*

Timing adjustment = [1 - (# months expedited from IN5a - 6)/42]

We used the values in Table 14 to represent the # of months expedited since the survey responses provided ranges from which respondents could select:

Table 14. Attribution Timing Adjustments

Responses to IN5	Month Value	Timing Adjustment
0. At the same time	0	1
1. Within 6 months	0	1
2. 6 months to a year	9	0.93
3. More than 1 years up to 2 years later	18	0.71
4. More than 2 years up to 3 years later	30	0.43
5. More than 3 years up to 4 years later	42	0.14
6. More than 4 years later	48	0
8. Not sure	Not sure	If IN4 = 8, 9, or 10, then Timing Adjustment = 0 If IN4 < 8, then Timing Adjustment = 0.5

4. LGP Evaluability Assessment

On behalf of the evaluation team, the Energy Division submitted data requests to PG&E, SCE, SCG, and SDG&E on April 16, 2020. All responses were received by the evaluation team by May 15, 2020. In response to the data request, the evaluation team received LGP non-resource activity related data for the RCEW, SBEW, ECP, VCP, and WRP. These data requests were extensive and asked for a wide range of documents, databases, and other program records including:

- Applicable program staff names and contact information so the evaluation team could set up in-depth interviews to learn about each LGP's unique program design as well as their non-resource and resource activities;
- Program materials including marketing brochures, program and project-level budget documents, scopes of work, final reports from LGP activities, and materials used to inform customers about non-resource activities and resource program offerings;
- All internal resource and non-resource program databases with fields that allow records to merge to the CPUC program database of claimable EE savings. Ideally, these program databases would include, at a minimum, the following fields: customer name, address, phone number, email address, type of non-resource activity in which customer participated, date of participation, utility customer account ID, electric and gas service account IDs, premise ID, and/or other unique identifiers that allow for merging;
- Information on the more granular activities claimed in the LGPs' Annual Reports, as well as the LGPs' Semi-Annual Strategic Plan Report workbooks;
- Documentation and accomplishments related to non-resource activities, including but not limited to, technical assessments, energy audits, marketing and outreach, educational trainings and workshops, as well as examples of social media engagement; and
- Documents detailing data collection protocols and practices.

4.1 PG&E's Redwood Coast Energy Watch Non-Resource Activity Tracking Data

Unlike the other LGPs evaluated in this study, RCEW provided a single comprehensive non-resource tracking database useable for the channeling analysis and participant survey. This non-resource-tracking database was a single tab of an Excel workbook file containing key customer contact information including customer name, primary address, city, zip code, phone number, email address, and date of initial participation during the program period, as well as a field flagging the types of non-resource activities in which the customers participated. Table 15 lists the RCEW non-resource activity flags recorded in the database along with a description of the activities based on the evaluation team's review of the various program materials also provided in the data request.

Table 15. RCEW Non-Resource Activity Tracking Data Descriptions

Types of Non-Resource Activities Tracked	Description	# of Unique Customers Served
Benchmarking	RCEW's 2017 and 2018 benchmarking services were a continuation of historic benchmarking efforts by PG&E's	21

Types of Non-Resource Activities Tracked	Description	# of Unique Customers Served
	LGPs. Efforts include safeguarding Portfolio Manager data in case ENERGY STAR is defunded or if the scope is reduced, identifying a potential alternative, account maintenance and updates, the completion of new benchmarks and review of data on behalf of local government partners.	
Climate and Energy Action Planning	RCEW is committed to developing, adopting, and updating Climate Action Plans. A significant component of the Climate and Energy Action Planning support provided to local government partners was in generating new greenhouse gas inventories.	9
Codes and Standards	RCEW supported the development of codes and standards for the City of Arcata.	1
Energy Management	RCEW's energy management activities included reviewing multiple energy management software packages and implementing energy management software for city utility accounts.	19
Innovative Pilots	In this program cycle, PG&E supported and provided grants for LGPs to jumpstart innovative non-resource pilot programs in an ever-changing EE marketplace. In 2017, RCEW provided a local school district with funding for an innovative pilot program.	1
Prop 39 Assistance	Prop 39 Assistance provides life-cycle support to Humboldt County LEAs taking on Proposition 39 funded energy related projects.	22

The databases received and the results of the evaluation team's review of RCEW data is summarized in Table 16 below. As shown in the table, the evaluation team received RCEW tracking data for a variety of non-resource activities contained within a single workbook database. The majority of non-resource tracking data fields were sufficiently populated and of good quality for our channeling analysis, with the exception of phone numbers which could be improved in terms of consistency. Additionally, the RCEW non-resource tracking dataset included all of the common fields used in our channeling analysis to match with CPUC and IOU resource data (e.g. customer name, full address, phone number, and email address).

Table 16. PG&E's RCEW Partnership Data Review Summary

RCEW Non-Resource Activity Tracking Data Fields	Data Completeness ^a	Data Quality ^b	Mergeable with Resource Data ^c
RCEW Non-Resource Activity Tracking Dataset			
Customer Name	✓	✓	✓
Primary Address	✓	✓	✓
City	✓	✓	✓
Zip Code	✓	✓	✓
Phone	✓	Not all valid	✓
Email Address	✓	✓	✓

RCEW Non-Resource Activity Tracking Data Fields	Data Completeness ^a	Data Quality ^b	Mergeable with Resource Data ^c
Type of Non-Resource Activity (Benchmarking, Climate and Energy Action Planning, Codes & Standards, etc.)	✓	✓	Not in CPUC Database
Date of Initial Participation during Program Period (2017–2018)	✓	✓	Not in CPUC Database
Date of Initial Participation during Program Period (2019)	✓	✓	Not in CPUC Database

^a A check (✓) indicates that the data field is populated sufficiently for each participant record in the dataset for conducting a channeling analysis.

^b Refers to the quality of data in each field (i.e., standardized format across all records, spelling, consistency in entries within each field, etc.). A check (✓) indicates that the data is of generally good quality for each participant record in the dataset for conducting a channeling analysis.

^c A check (✓) indicates that there is a similar field in the CPUC program database and that it is possible to merge program data with CPUC program data using the fields marked.

RCEW's single comprehensive non-resource-tracking dataset was a significant improvement compared to the disparate databases provided in the year one evaluation and by other LGPs for this year's evaluation. The single dataset improved the evaluation team's ability to conduct the channeling analysis for RCEW's non-resource activities. The evaluation team strongly recommends that all PG&E LGPs, as well as other IOUs adopt a similar format for recording and reporting non-resource activities in a single concise and easy to interpret database.

The quality of RCEW's non-resource activity tracking data puts it in a much better position to receive full credit for these tracked activities including their Benchmarking, Climate and Energy Action Planning, Codes and Standards, Energy Management, Innovative Pilots, and Prop 39 Assistance activities. A further look at the list of non-resource participants in the database reveals only 29 unique customer names (i.e., the name of the participating jurisdictions such as school, water, and community service districts) and 38 unique email addresses and phone numbers representing unique individuals. A large percentage (51%) of these participants, were also education related.

A comparison of RCEW's non-resource activities listed in the tracking database to the non-resource activities discussed in our in-depth interviews and listed in the data request materials seem to indicate that RCEW's data is comprehensive in terms of the number of total possible non-resource activities they track. The fact that their non-resource tracking is both comprehensive and high-quality yet has a relatively small number of unique municipal non-resource participants shows that compared to other sectors (e.g., residential and commercial), the public sector has a much more concentrated customer base. Future evaluations should take this into account, especially in terms of survey sampling size expectations.

4.2 PG&E's and SCG's Santa Barbara Energy Watch Non-Resource Activity Tracking Data

The evaluation team received six SBEW non-resource databases useable for the channeling analysis and participant survey. Table 17 describes SBEW non-resource activity databases reviewed by the evaluation team. SBEW provided significantly more municipal records (171) of unique contact information in these databases than the other LGPs evaluated, accounting for 55% of the total municipal records in this year's study. (A full accounting of the number of unique municipal records for each LGP can be found in Section 5).

The evaluation team also found a number of non-resource activities targeting municipalities listed in SBEW's narrative description of its non-resource activities, but did not appear to have associated tracking databases. For instance, SBEW noted it provided several cities with benchmarking as well as other EE assistance. SBEW identified the cities that received this assistance, but did not provide the evaluation team with any databases detailing the contact information for these activities. Another example was the 2017 Energy Efficiency and Sustainability Summit, which SBEW organized and held at the Santa Maria Fairpark. The event featured key presenters from across the state to discuss EE, water, and sustainability. SBEW again noted in their narrative response to the data request that the event was attended by municipalities, agencies, and members of the public, totaling 100+ people from across the state. Again, no tracking database was provided for this activity. Despite SBEW providing the most non-resource municipal records, the inconsistency of data collection across its non-resource activities limited the extent to which the evaluation team could assess the benefits of SBEW's non-resource activities. We recommend that SBEW and other LGPs collect customer data across as many non-resource activities as possible, to enable more comprehensive examination and quantification of the impact of these activities, thereby demonstrating their value.

Table 17. SBEW Non-Resource Activity Tracking Data Descriptions

Non-Resource Activity Tracking Data	Description
Auditing Workshop February 2017	Energy Auditing Techniques workshop to train different professionals in the energy industry (engineers, consultants, developers, designers) in effective energy auditing techniques.
Top Staff Luncheon 2017	An informational luncheon in which staff from municipalities across the region were provided Partnership updates as well as information about CivicSpark and the Beacon Program.
Special Districts Talk 2019	Presentation and EE workshop to the California Special Districts Association regarding EE and utility company resources.
School District Luncheon 2019	K-12 luncheon workshop to provide school districts in North Santa Barbara County with information and resources for EE projects. Utility company programs and information was highlighted.
North SBEW Partnership Contacts	Partner local government contacts including staff who regularly attend recurring LGP meetings.
SBEW Partnership Municipal & County Staff Contacts	Partner local government contacts including staff who regularly attend recurring LGP meetings.

The data received and the results of the evaluation team's review of the SBEW data are summarized in Table 18. The evaluation team found the meeting attendance data for the Workshops and Luncheons were somewhat sufficient for purposes of the channeling analysis and survey sample development. The tracking data provided from these activities were mostly limited to contact name and city/organization. This information, while useable in the channeling analysis, is less likely to be traceable to resource activity records due to the limited number of fields provided that are mergeable. Including additional specific fields such as standardized phone number, address, email, etc. would greatly improve the ability to reliably merge the data provided with resource program data.

To improve reliability and the ability accurately merge LGP data with resource program data, the evaluation team recommends adopting a standardized set of data collection fields for meeting attendance tracking that, at a minimum, includes:

- First Name
- Last Name
- Email Address
- Phone Number
- Organization/Municipality Name

Additional fields that would also improve the mergeability of attendance tracking data with CPUC and IOU resource data, include complete service and/or mailing addresses (including street address, city, and zip code) and unique identifiers (i.e., service account numbers). While it has traditionally been difficult to obtain this information for one-off meetings and events using sign-in sheets, event organizers may consider incorporating online event registration tools to collect this data. As for recurring meetings with generally the same group of attendees, collecting this information may be more manageable as the LGP would only need to solicit this information once when there are new attendees. Additionally, consolidating multiple discrete non-resource tracking databases into a single database would help address this issue and encourage consistent tracking of the same fields across unique non-resource activities. A simple method for implementing this would be through a shared excel workbook, allowing staff to input contacts from SBEW's various activities. A more advanced approach might include using a customer relationship management system. Although much more expensive, this would enable LGPs to demonstrate their value more clearly by linking their non-resource activities to outcomes such as completed EE projects. It also creates an internal pipeline of potential resource project participants, which can be used to follow up and track points of engagement overtime, thus improving channeling of non-resource activity participants into resource programs.

Table 18. PG&E SBEW Partnership Data Review Summary

SBEW Non-Resource Activity Tracking Data Fields	Data Completeness ^a	Data Quality ^b	Mergeable with Resource Data ^c
Auditing Workshop February 2018			
Last Name – Registrant Account	✓	✓	✓
First Name – Registrant Account	✓	✓	✓
Company – Registrant Account	Not Complete	✓	Not in CPUC Database
Position – Registrant Account	Not Complete	✓	Not in CPUC Database
Top Staff Luncheon 2017			
Municipality/Agency	✓	✓	Not in CPUC Database
Name	✓	✓	✓
Title	✓	✓	Not in CPUC Database
Date Invited	✓	✓	Not in CPUC Database
Response Yes/No	Not Complete		Not in CPUC Database
Special Districts Talk 2019			
Number	Not Complete		Not in CPUC Database
Cash	Not Complete		Not in CPUC Database
Check	Not Complete		Not in CPUC Database
Attendee	✓		✓
Guest	Not Complete		Not in CPUC Database

SBEW Non-Resource Activity Tracking Data Fields	Data Completeness ^a	Data Quality ^b	Mergeable with Resource Data ^c
Agency	✓	✓	Not in CPUC Database
Position	Not Complete	✓	Not in CPUC Database
RSVP	Not Complete	✓	Not in CPUC Database
School District Luncheon 2019			
Attendee	✓		✓
Organization	✓		Not in CPUC Database
Title	Not Complete		Not in CPUC Database
Contact Info	✓	✓	✓
Telephone	✓		✓
Contacts			
Agency/Jurisdiction	✓	✓	Not in CPUC Database
Last Name	✓	✓	✓
First Name	✓	✓	✓
Title	✓	✓	Not in CPUC Database
Email	✓	✓	✓
Phone	✓		✓

^a A check (✓) indicates that the data field is populated sufficiently for each participant record in the dataset for conducting a channeling analysis.

^b Refers to the quality of data in each field (i.e., standardized format across all records, spelling, consistency in entries within each field, etc.). A check (✓) indicates that the data is of generally good quality for each participant record in the dataset for conducting a channeling analysis.

^c A check (✓) indicates that there is a similar field in the CPUC program database and that it is possible to merge program data with CPUC program data using the fields marked.

4.3 SDG&E's Emerging Cities Partnership Non-Resource Activity Tracking Data

The evaluation team received a limited set of ECP non-resource databases useable for the channeling analysis and participant survey from SDG&E's data request response. Table 19 describes ECP non-resource activity databases reviewed by the evaluation team. Prior to the data request response, SDG&E staff indicated that the ECP's contributions to EE savings in San Diego County are primarily through reach code ordinances and climate action planning and cautioned that ECP's non-resource activities would likely have limited corresponding resource activities represented in the resource databases. Additionally, many of their non-resource activities outside of Orange County are conducted in partnership with their SANDAG LGP and were captured in those tracking databases. SDG&E policy and program staff recommend that savings be calculated with methods similar to those that Codes and Standards uses in order to measure the impact of these activities. However, given the evaluation team's limited budget, timeline, and focused scope, it was not feasible to develop a new methodology for quantifying the impacts of reach code ordinances and climate action planning support. The evaluation team did receive a limited set of ECP non-resource databases useable for the channeling analysis and participant survey from SDG&E's data request response, including jurisdictions that received ordinance/climate action planning support.

Table 19. SDG&E ECP Non-Resource Activity Tracking Data Descriptions

Non-Resource Activity Tracking Data	Description
Inland Outreach Project (10/24/2019)	SDG&E's Inland Cities Energy Collaborative conducts a series of workshops on a variety of EE programs. This database contains a list of attendees at workshop #2 on the subject of "Energy Resiliency through EE."
Inland Outreach Project (08/13/2019)	SDG&E's Inland Cities Energy Collaborative conducts a series of workshops on a variety of EE programs. This database contains a list of attendees at a workshop held on August 13.
ECP Contact Information	Partner contacts including staff who regularly attend recurring LGP meetings.

We still recommend collection of customer data across a wider range of LGP non-resource activities; however, to allow future evaluations to examine and quantify the impact of their non-resource activities more comprehensively. For instance, ECP noted in its data request response that in addition to ordinance work, they also performed a significant amount of CAP outreach and development, as well as provided scholarships for city staff to attend the Statewide Energy Efficiency Collaborative. Although some of the participants may be captured in their contact information list, it is impossible to interpret the discrete activities they participated in using the existing tracking databases. In addition, while many materials were provided on these activities, no customer databases were provided, so they could not be included in the study's survey or channeling analysis. Like SBEW, we recommend that ECP keep a single database to compile an ongoing list of non-resource participant contact info and associated non-resource activities in which they have participated.

Based on a detailed review of the data provided by ECP (Table 20), the evaluation team found the program data collected in these databases to be sufficient for conducting a channeling analysis with CPUC and IOU resource program data, and for developing a small sample for the participant survey. In line with the recommendations for the previously discussed LGPs, the evaluation team recommends consistent tracking of fields such as property name, property contact name, street address, city, zip, email address, and phone number. We also recommend including utility service account numbers and site identification numbers in data tracking when feasible, as these fields are found in resource program databases and can facilitate more precise matching between non-resource and resource activities. In addition, we recommend that tracking data always be maintained in an easily accessible file format for data analysis. As stated earlier, ECP provided a variety of documents supporting their non-resource activities. When documents with data mergeable with resource records are only available in text format, however, they are more likely to be excluded from channeling analyses. This is either because evaluators are unable to locate the data within the files or unable to efficiently extract tracking data into a file type useable for analysis.

Table 20. ECP Partnership Data Review Summary

RCEW Non-Resource Activity Tracking Data Fields	Data Completeness ^a	Data Quality ^b	Mergeable with Resource Data ^c
Inland Outreach Project Tracking			
First Name	✓	✓	✓
Last Name	✓	✓	✓
Organization	✓	✓	Not in CPUC Database
Email Address	✓	✓	✓

RCEW Non-Resource Activity Tracking Data Fields	Data Completeness ^a	Data Quality ^b	Mergeable with Resource Data ^c
Registration type/invitee reply	✓	✓	Not in CPUC Database
Checked in	✓	✓	Not in CPUC Database
Contacts			
First Name	✓	✓	✓
Last Name	✓	✓	✓
Email Address	✓	✓	✓
Company Title/Position	✓	✓	Not in CPUC Database
Organization	✓	✓	Not in CPUC Database

^a A check (✓) indicates that the data field is populated sufficiently for each participant record in the dataset for conducting a channeling analysis.

^b Refers to the quality of data in each field (i.e., standardized format across all records, spelling, consistency in entries within each field, etc.). A check (✓) indicates that the data is of generally good quality for each participant record in the dataset for conducting a channeling analysis.

^c A check (✓) indicates that there is a similar field in the CPUC program database and that it is possible to merge program data with CPUC program data using the fields marked.

4.4 SCE's Ventura County Energy Leader and SCG's Ventura County EE Partnership Non-resource Activity Tracking Data

- The evaluation team found the non-resource data provided by VCP to be sufficient in completeness and quality. It contained enough fields mergeable with CPUC and IOU resource databases (e.g., contact name, phone number, email, etc.) to conduct the channeling analysis (Table 21). However, we also received a limited set of VCP non-resource databases useable for the channeling analysis and participant survey. Most program data provided in response to our data request were text files (e.g., MS Word and PDF documents) detailing the nature and scope of VCP's non-resource activities, but lacking customer data from non-resource activity participants. In fact, in SCE's response to our request for all VCP non-resource tracking databases, they stated, "SCE does not track customer level information from LGP non-resource activities." The implementing partner did provide a list of 59 VCP events between 2017–2019 which detailed the type of event (e.g., outreach, training, or workshop) and the city where the event took place, but did not list customer tracking data. In total, only two non-resource related tracking databases were provided, one from SCE and one from SCG (in PDF file format), which consisted of lists of the partnership's primary local government contacts. This limited the evaluation team's ability to conduct the channeling analysis and participant surveying. Consequently, a limited number of municipal customers were identified in the channeling analysis as having gone on to participate in a resource program after engaging in a VCP non-resource activity. We recommend expanding customer tracking to include non-resource activities and using a single database to record both customer contact information and details on the types of non-resource activities in which each contact participates.

Table 21. VCREA Partnership Data Review Summary

VCREA Non-Resource Activity Tracking Data Fields	Data Completeness ^a	Data Quality ^b	Mergeable with Resource Data ^c
VCREA Program Staff Names			
First Name	✓	✓	✓
Last Name	✓	✓	✓
City/Organization/IOU	✓	✓	✓
Job Title	✓	✓	Not in CPUC Database
Email Address	✓	✓	✓
Phone Number	✓	✓	✓
Ventura Contacts			
City	✓	✓	Not in CPUC Database
Contact Name	✓	✓	✓
Title	✓	✓	Not in CPUC Database
Phone Number	✓	✓	✓
Email Address	✓	✓	✓

^a A check (✓) indicates that the data field is populated sufficiently for each participant record in the dataset for conducting a channeling analysis.

^b Refers to the quality of data in each field (i.e., standardized format across all records, spelling, consistency in entries within each field, etc.). A check (✓) indicates that the data is of generally good quality for each participant record in the dataset for conducting a channeling analysis.

^c A check (✓) indicates that there is a similar field in the CPUC program database and that it is possible to merge program data with CPUC program data using the fields marked.

4.5 SCE's Western Riverside Energy Leader Partnership and SCG's Western Riverside Energy Partnership Non-Resource Activity Tracking Data

The evaluation team found a limited set of WRP non-resource databases useable for the channeling analysis and participant survey. Most program data provided in response to our data request were text files (e.g., MS Word and PDF documents) detailing the nature and scope of WRP non-resource activities, but lacking customer data from non-resource activity participants. In total, only two types of non-resource related tracking databases were provided, described in Table 22 below. We recommend expanding customer tracking to include non-resource activities and using a single database to record customer contact information and the associated non-resource activities they participate in.

Table 22. WRP Non-Resource Activity Tracking Data Descriptions

Non-Resource Activity Tracking Data	Description
Building Operator Certificate Training	The Building Operator Certifications Training provides no-cost Building Operator Certifications training scholarships for municipal employees. Tracking data consists of a list of city employees who participated in the trainings.

Non-Resource Activity Tracking Data	Description
Contacts	Partner contacts, including staff who regularly attend recurring LGP meetings. WRP provided two different contact-tracking databases.

The databases received and the results of the evaluation team's review of WRP data is summarized in Table 23 below. Many of the email addresses and phone numbers provided in WRP's non-resource tracking databases were incomplete. This made it more difficult to perform the channeling analysis and participant survey. In addition, these tasks were limited by the number of non-resource tracking data provided, resulting in a small sample size for WRP.

Table 23. WRP Partnership Data Review Summary

WRP Non-Resource Activity Tracking Data Fields	Data Completeness ^a	Data Quality ^b	Mergeable with Resource Data ^c
Building Operator Certificate Training			
First Name	✓	✓	✓
Last Name	✓	✓	✓
Job Title	Not Complete	✓	Not in CPUC Database
Company	✓	✓	Not in CPUC Database
Email Address	Not Complete	✓	✓
Supervisor's First and Last Name	Not Complete	✓	✓
Supervisor's Phone Number	Not Complete	✓	✓
Supervisor's Email Address	Not Complete	✓	✓
Partnership	✓	✓	Not in CPUC Database
WRP Program Staff Names			
First Name	✓	✓	✓
Last Name	✓	✓	✓
City/Organization/IOU	✓	✓	✓
Job Title	✓	✓	Not in CPUC Database
Email Address	✓	✓	✓
Phone Number	Not Complete	✓	✓
WRP Contacts			
First Name	✓	✓	✓
Last Name	✓	✓	✓
City	✓	✓	Not in CPUC Database
Job Title	✓	✓	Not in CPUC Database
E-mail Address	✓	✓	✓
Phone Number	Not Complete	✓	✓

^a A check (✓) indicates that the data field is populated sufficiently for each participant record in the dataset for conducting a channeling analysis.

^b Refers to the quality of data in each field (i.e., standardized format across all records, spelling, consistency in entries within each field, etc.). A check (✓) indicates that the data is of generally good quality for each participant record in the dataset for conducting a channeling analysis.

^c A check (✓) indicates that there is a similar field in the CPUC program database and that it is possible to merge program data with CPUC program data using the fields marked.

5. Channeling Analysis Results

The evaluation team conducted a channeling analysis to determine the proportion of LGP non-resource activity municipal participants who subsequently participated in a PA resource program. We conducted this analysis by looking for records in the non-resource activity datasets and matching them to records in the CPUC and IOU program databases, if the records indicating participation in a PA resource program did not occur in a year prior to the participant's non-resource interaction with the LGP. The result was that out of 430 public sector non-resource records, the channeling analysis located 141 records (33%) of the selected LGPs' non-resource participants in either the CPUC program data or the IOU resource data. Based on a post processing comparison of the resource project year and the non-resource activity year, 85 records (20%) of non-resource participants in either the CPUC program data or the IOU resource data occurred in a year prior to the resource project. 56 records (13%) occurred in the same year as the resource project. Table 24 below shows the number and percent of these records located in the CPUC or IOU resource databases.

Table 24. LGP Non-Resource Municipal Participant Channeling Analysis Results

LGP	Number of Unique Municipal Records	Participated in Non-Resource Activity Prior to Resource Participation	Participated in Non-Resource Activity the Same Year as Resource Participation	Participated in Non-Resource Activity the Same Year or Prior to Resource Participation
Redwood	38	28 74%	4 11%	32 84%
Santa Barbara	203	29 14%	27 13%	56 28%
Western Riverside	61	19 31%	9 15%	28 46%
Ventura	86	9 10%	9 10%	18 21%
Emerging Cities	42	0 0%	7 17%	7 17%
Total	430	85 20%	56 13%	141 33%

6. Participant Survey Results

6.1 Survey Respondent Background

The evaluation team conducted a web survey to identify the EE equipment upgrades and behavioral changes customers carried out in public facilities after engaging with LGP non-resource activities. Surveys were sent to municipal customers identified through the channeling analysis of the non-resource tracking datasets provided by the IOUs. These customers included:

- LGP non-resource activity participants located in the CPUC and IOU resource program databases. These participants are associated with claims that occurred after engaging in an LGP non-resource activity.
- LGP non-resource activity participants not found in the CPUC and IOU resource databases.

The evaluation team fielded the survey among 177 LGP municipal contacts between December 4, 2020 and January 15, 2021 and received 23 completed and 9 partially completed surveys in which the eligibility of the survey participant was confirmed, for a total of 32 total respondents. Table 25 shows the number of surveys completed and eligible partial completes by LGP, as well as the number of completes and eligible partial completes as a percentage of all survey respondents. VCP and WRP likely received a lower number of respondents relative to the other LGPs due to the limited amount of non-resource activity tracking data received, as discussed previously in section 4, LGP Evaluability Assessment.

Table 25. Participant Survey Respondents

Program	RCEW	SBEW	ECP	VCP	WRP	Total
Number of Completes	7	7	5	2	2	23
Completes as a Percentage of All Respondents	22%	22%	16%	6%	6%	72%
Number of Eligible Partial Completes	3	3	2	1	0	9
Eligible Partial Completes as a Percentage of All Respondents	9%	9%	6%	3%	0%	28%
Total Number of Respondents	10	10	7	3	2	32
Percentage of All Respondents	31%	31%	22%	9%	6%	100%

The following sections present the results of the participant survey. It is important to note that not all respondents answered each question, and for some designated questions respondents provided multiple responses. Consequently, it is common for a question's sample to not equal the total number of respondents as presented in Table 25.

6.2 Survey Respondent Energy Related Activities

Of the 32 respondents, 69% (n=22) indicated completing at least one EE equipment upgrade in their municipal facility since interacting with an LGP non-resource activity. Figure 2 shows that four respondents' municipalities did not install EE equipment, while another six respondents were unsure if their municipality installed energy-efficient equipment.

Figure 2. Respondents Implementing Energy Saving Equipment Upgrades by LGP

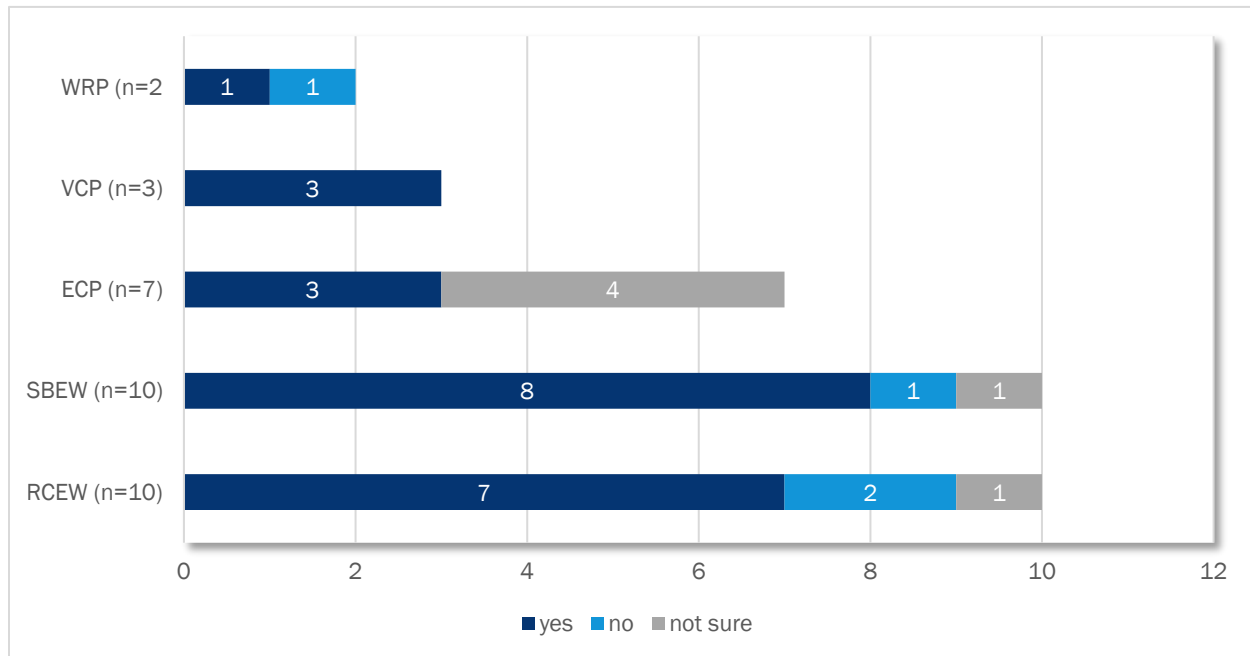


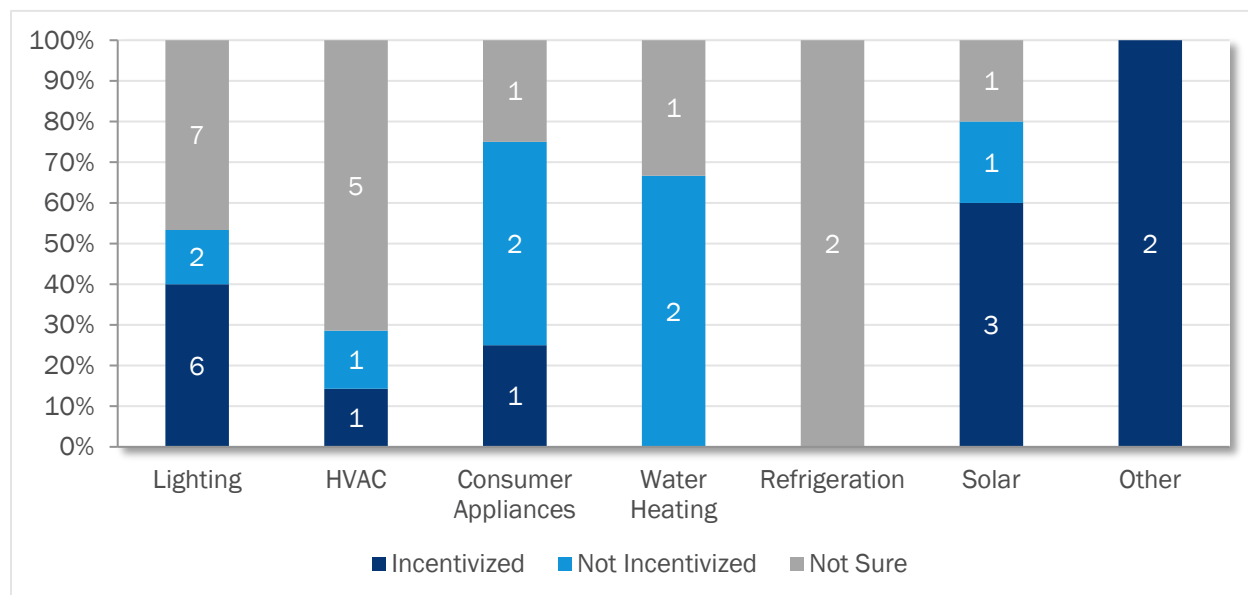
Table 26 shows the percentage of respondents who indicated that their municipality installed equipment from various measure categories. A large majority of survey respondents indicated that their municipality installed lighting equipment (95%), followed by HVAC (55%) and solar (41%).

Table 26. Types of Participant Energy Equipment Upgrades of Those Who Installed EE Equipment

LGP	Lighting	HVAC	Consumer Appliances	Water Heating	Refrigeration	Solar	Other
RCEW (n=7)	86%	57%	14%	29%	29%	57%	14%
SBEW (n=8)	100%	50%	38%	25%	13%	38%	25%
ECP (n=3)	100%	67%	0%	0%	0%	67%	0%
VCP (n=3)	100%	33%	33%	33%	0%	0%	0%
WRP (n=1)	100%	100%	0%	100%	0%	0%	0%
Total (n=22)	95%	55%	23%	27%	14%	41%	14%

The 22 respondents who indicated their municipality installed EE equipment were asked a series of more detailed questions focused on up to three categories of installed energy saving equipment. As shown in Figure 3, lighting (40%) and solar (60%) were the most often incentivized categories of equipment upgrades. Note that Figure 3 does not distinguish whether the EE equipment was incentivized through a PA resource program or not. Examples of non-PA incentives include those provided by local water districts and California Energy Commission programs. Twenty of the 22 respondents provided a total of 38 responses. Of these 38 responses, 34% (n=13) indicated that they received an incentive for a given measure category, 21% (n=8) indicated they did not receive an incentive, and 45% (n=17) were unsure.

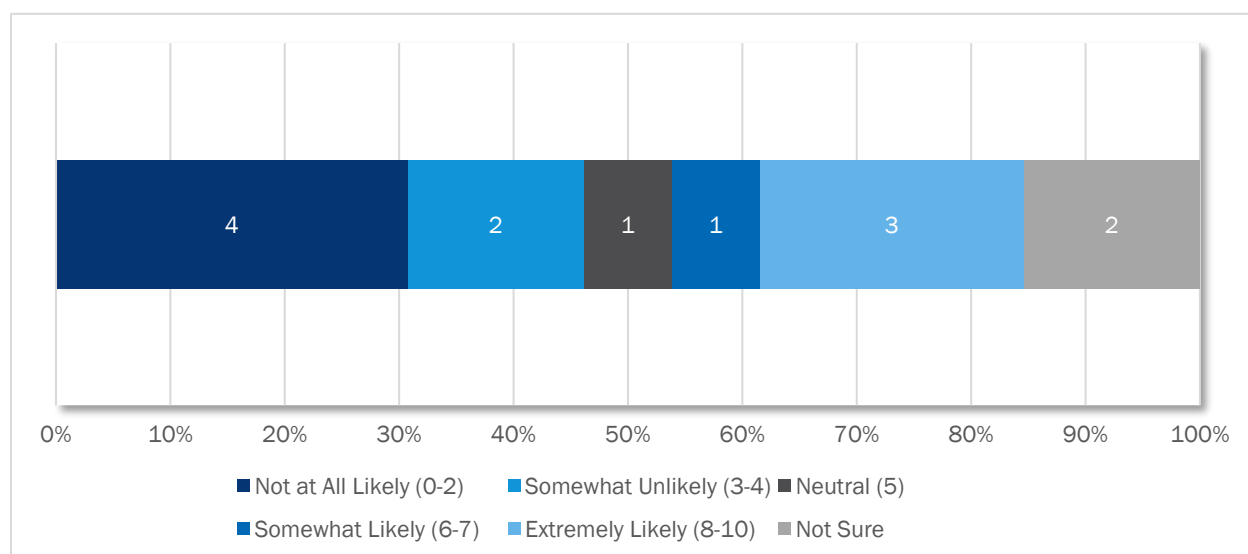
Figure 3. Energy Saving Equipment Upgrades Incentivized by Measure Category (Multiple Responses Allowed)



For each measure category that respondents received an incentive for installing (n=13), they were asked to rank the likelihood that their municipality would have installed exactly the same energy saving equipment without the rebates they had received. .

Figure 4 shows that 46% (n=6) of responses indicated their municipality was either “not at all likely” or “somewhat unlikely” to have installed the same energy saving equipment without the rebate, while 31% (n=4) stated that their municipality was either “extremely likely” or “somewhat likely” to have still installed the same energy-efficient equipment without the rebate.

Figure 4. Likelihood of Municipalities Installing the Same Energy Saving Equipment without Incentives (Multiple Responses Allowed)



For each measure category that respondents indicated they did not receive an incentive for installing (n=8), they were asked to identify the main reason their municipality did not receive rebates from a list of options that included,

- Equipment did not qualify,
- Was in a hurry to purchase new equipment,
- Too much of a hassle to apply for the rebate.
- Did not know if one existed, and
- Something else [with the option to specify via a text field].

The eight responses unanimously selected the “did not know if one existed” option.

6.3 Factors Influencing Energy Saving Equipment Upgrades

To assess whether LGP non-resource activities influenced customers’ actions toward saving energy, survey respondents identified all the LGP non-resource activities they recalled participating in prior to their municipality completing EE upgrades.

Figure 5 shows the percentage of respondents who participated in LGP non-resource activities, as well as the percentage of respondents that participated both in non-resource activities and installed EE measures (multiple responses allowed). Community events/workshops (72%), recurring meetings (69%), and email messaging (66%) were the non-resource activities with the highest participation rates among respondents. Project technical assistance (34%), social media messaging (31%), and EE training or certification (6%) had the lowest participation rates. As shown in Figure 6, however, all non-resource activities except for recurring meetings had 60% or more of their participants report completion of an EE Project. Although EE training or certification had the lowest participation rates among respondents, this non-resource activity had the highest percentage of its participants complete an EE Project (85%), followed by social media messaging (75%) and climate action planning/greenhouse gas inventorying (70%).

Figure 5. LGP Non-Resource Activity Participants Who Installed EE Equipment Upgrades (Multiple Responses Allowed, n=31)

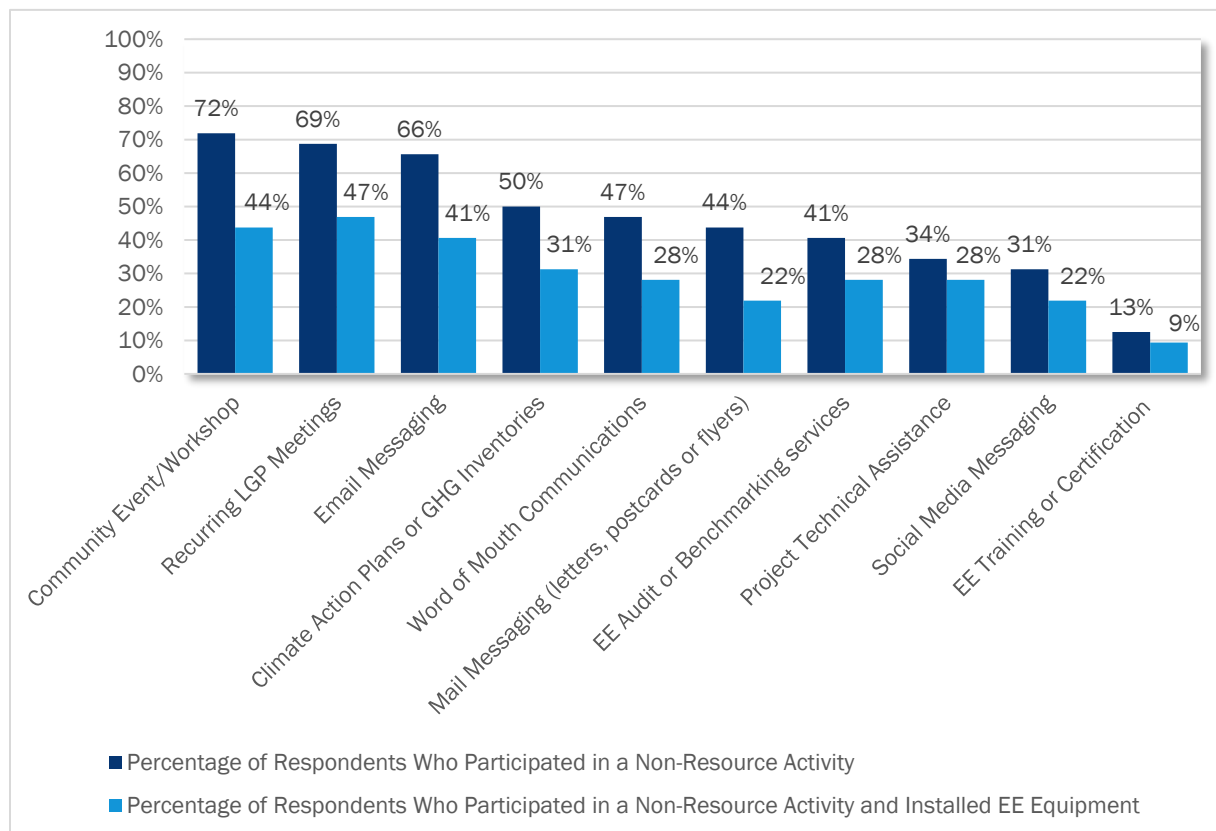
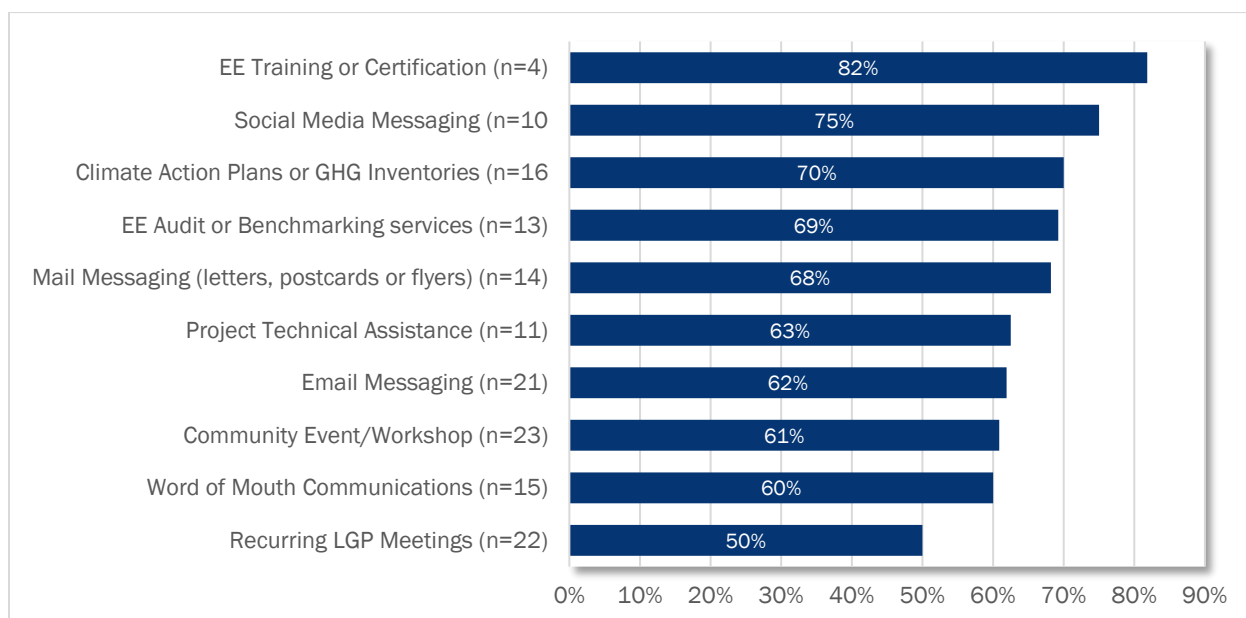
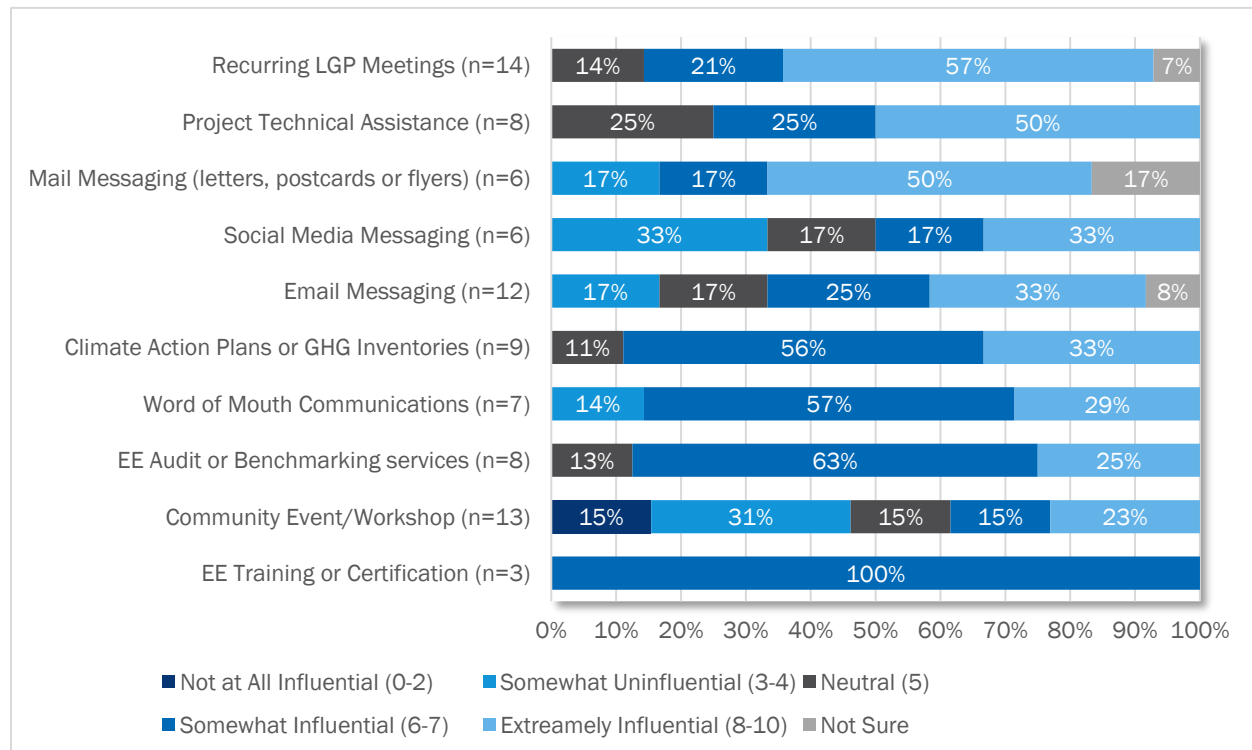


Figure 6. Percentage of Non-Resource Activity Participants that Completed an EE Project (Multiple Responses Allowed, n=31)



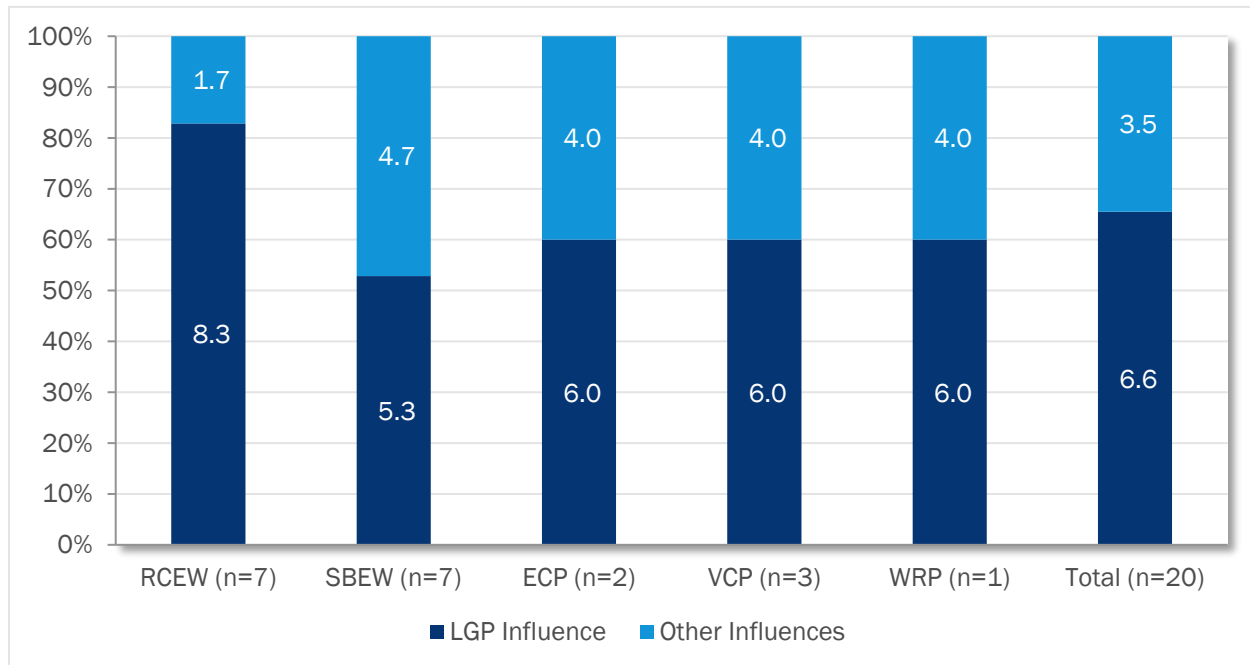
To further assess the influence of LGP non-resource activities on municipal customers' decisions to install energy saving equipment, survey respondents were asked to rate the influence of non-resource activities on a scale of 0 to 10, where 0 is "not at all influential" and 10 is "extremely influential." Respondents were asked about each of the non-resource activities in which they engaged (i.e., to provide multiple responses). As shown in Figure 7, the top three non-resource activities rated "extremely influential" were recurring LGP meetings (57%), project technical assistance (50%), and mail messaging such as letters, postcards, and flyers (50%). Of the ten types of non-resource activities, only community events/workshops received ratings of "Not at All Influential" (15%).

Figure 7. Influence of LGP Non-Resource Activities on Municipalities Installing Energy Saving Equipment Upgrades (Multiple Responses Allowed, n=19)



In addition to assessing the level of influence specific LGP non-resource activities had on participants' decisions to install energy-efficient equipment, the evaluation team asked respondents to rate the overall importance of LGP non-resource activities relative to other factors that may influence energy saving equipment upgrade decisions. Figure 8 illustrates the average influence scores of LGP non-resource activities versus other factors' influence on municipalities' decisions to install energy saving equipment. RCEW respondents who engaged in non-resource activities reported that LGP non-resource activities are significantly more influential than other factors, with the highest influence score (8.3) relative to the other LGPs included in this study. ECP, VCP, and WRP participants reported that the influence of LGP non-resource activities (6.0) are more important than other influences, while SBEW participants reported LGP non-resource activities influence (5.3) as being nearly equal to other influences. Importantly, the average non-resource activity influence score across all respondents was higher (6.55) than that of other factors (3.45). Together, Figure 7 and Figure 8 show that LGP non-resource activities appear to positively influence municipalities' decision to carry out energy saving upgrades.

Figure 8. Average Influence Scores of LGP Non-Resource Activities versus Other Factors on EE Upgrades



6.4 Factors Influencing Energy Saving Behavioral Actions

The survey also asked respondents if their municipality implemented energy saving actions or behavioral changes after engaging with LGP non-resource activities. As shown in Figure 9, over 60% of VCP and SBEW respondents reported moderate energy savings from behavioral changes or enhancements made after engaging with LGP non-resource activities. Moreover, 50% of WRP and 40% of ECP respondents reported moderate energy savings. RCEW was the only partnership studied to have a respondent report significant energy savings from behavioral actions after engaging with LGP non-resource activities, but it also had the lowest combined moderate or higher savings at 30%.

As shown in Table 27, the most common behavioral actions undertaken by respondents after engaging with LGP non-resource activities were optimizing lighting system run hours and implementing HVAC equipment scheduling or space temperature changes. In general, survey responses indicated that their municipalities did not perform domestic hot water changes or take more complex behavioral actions such as cooling tower optimization, economizer and ventilation control changes, and chiller/chilled water system changes.

Figure 9. Respondents Implementing Energy Saving Behavioral Actions

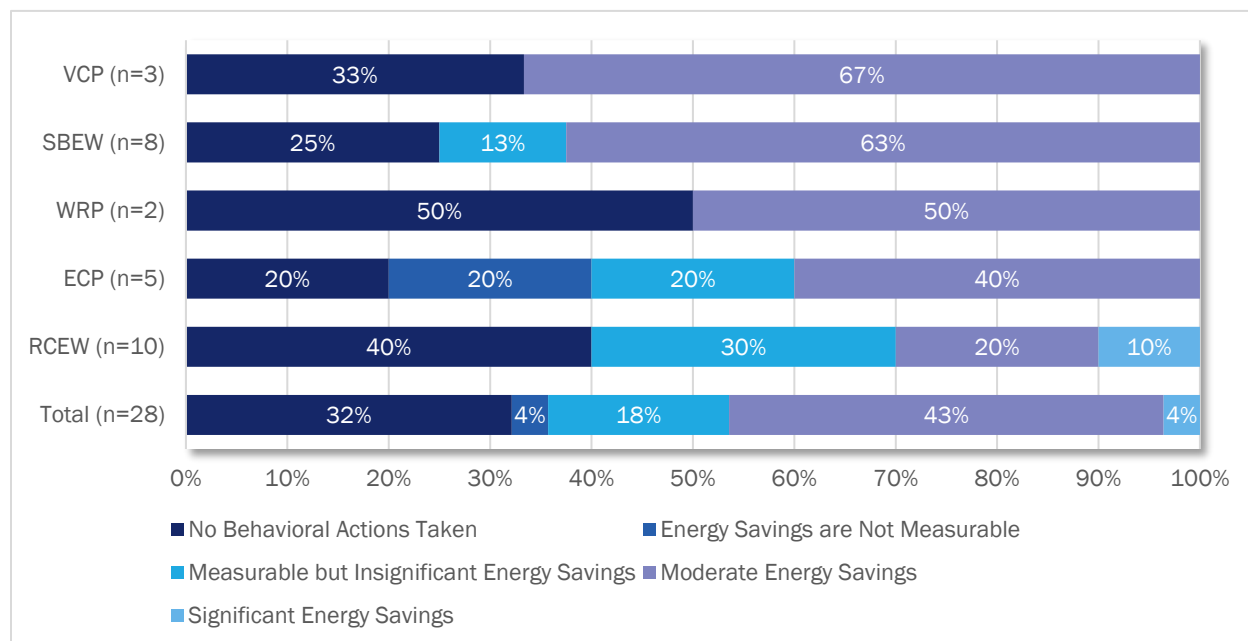
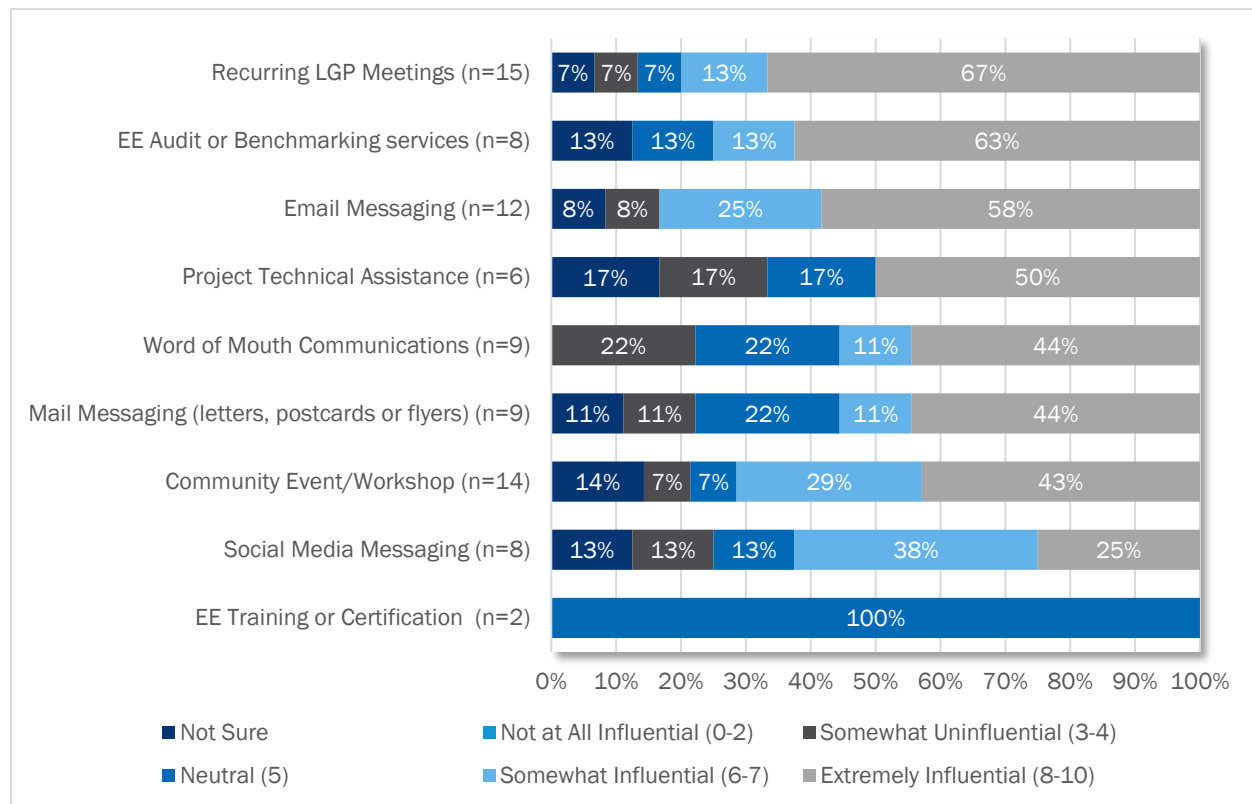


Table 27. Percent of Respondents Implementing Behavioral Activities After Engaging with LGP (Multiple Responses Allowed)

Behavioral Activity	RCEW (n=10)	SBEW (n=10)	ECP (n=7)	VCP (n=3)	WRP (n=2)	Total (n=32)
Boiler / Hot Water / Steam System Changes	10%	10%	0%	33%	50%	13%
Chiller / Chilled Water System Changes	0%	10%	0%	0%	0%	3%
Cooling Tower Optimization	0%	0%	0%	0%	0%	0%
Domestic Hot Water Changes	0%	10%	0%	0%	0%	3%
Economizer and Ventilation Control Changes	10%	10%	14%	0%	0%	9%
HVAC Equipment Scheduling or Space Temperature Changes	40%	30%	0%	0%	50%	25%
Fan Optimization / Air Distribution Upgrades	10%	20%	0%	0%	50%	13%
Optimize Lighting System Run Hours	50%	40%	0%	0%	50%	31%
Water Pump Optimization Changes	20%	0%	0%	0%	0%	6%
Package / Split-System HVAC Changes	30%	10%	0%	0%	50%	16%

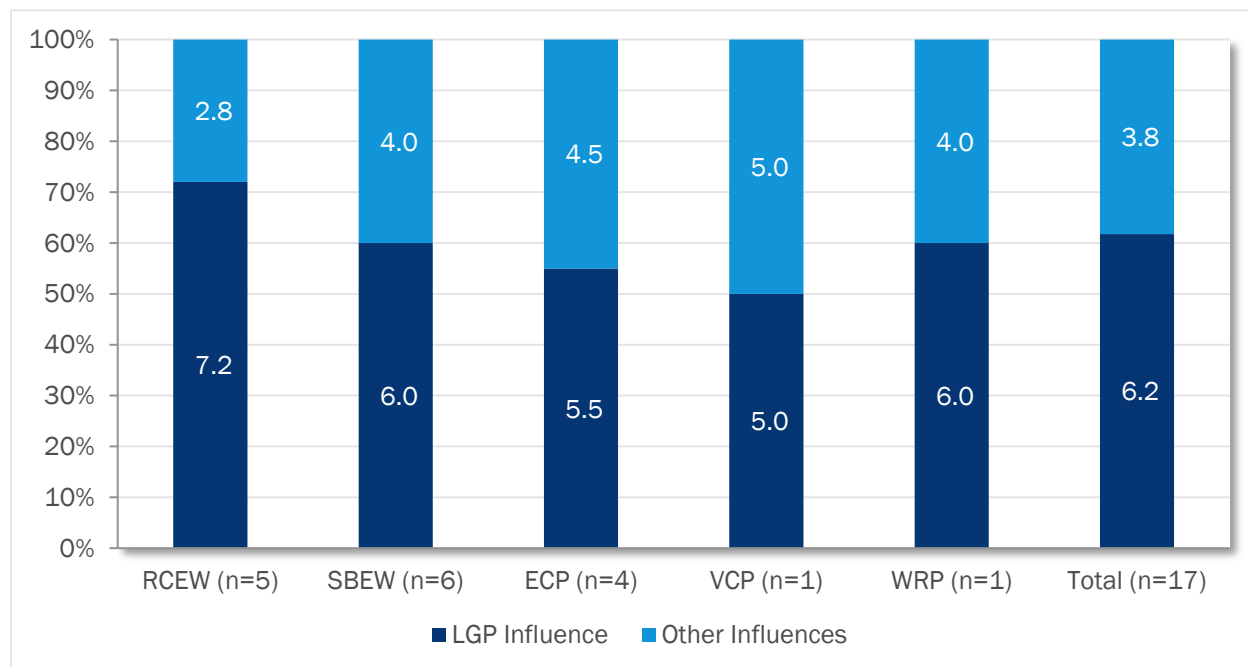
When asked to rate how influential LGPs' non-resource activities are on municipal actions or behaviors toward saving energy, a majority of respondents reported that that all non-resource activities, except for EE training or certification, was either somewhat or extremely influential (Figure 10). Similar to responses about the influence of non-resource activities on installing energy saving equipment, recurring LGP meetings (67%) and email messaging (58%) were two of the three highest rated influential non-resource activities on municipal behavior. In addition, EE audit or benchmarking services (63%) was also rated as one of the top three most influential non-resource activities on behavior.

Figure 10. Influence of LGP Non-Resource Activities on Municipalities' Energy Saving Behaviors (Multiple Responses Allowed, n=19)



Further, when asked to rank how important the various LGP non-resource activities were in their municipalities' decisions to undertake energy saving actions or behaviors relative to other influencing factors, the majority of respondents from all surveyed LGPs indicated that LGP non-resource activities were more influential (Figure 11). RCEW respondents who engaged in non-resource activities reported that LGP non-resource activities were significantly more influential than other factors, and again had the highest influence score (7.2 out of 10) relative to the other LGPs included in this study. SBEW and WRP participants reported that the influence of LGP non-resource activities (6.0) was more important than other influences; while ECP and VCP participants reported LGP non-resource activities influence on behavioral activities was nearly equal (5.5) and equal (5.0) to other influences, respectively. Importantly, the average non-resource activity influence score across all respondents was higher (6.2) than that of other factors (3.8). Accordingly, non-resource activities appear to influence municipalities' decision to engage in energy saving behaviors or actions.

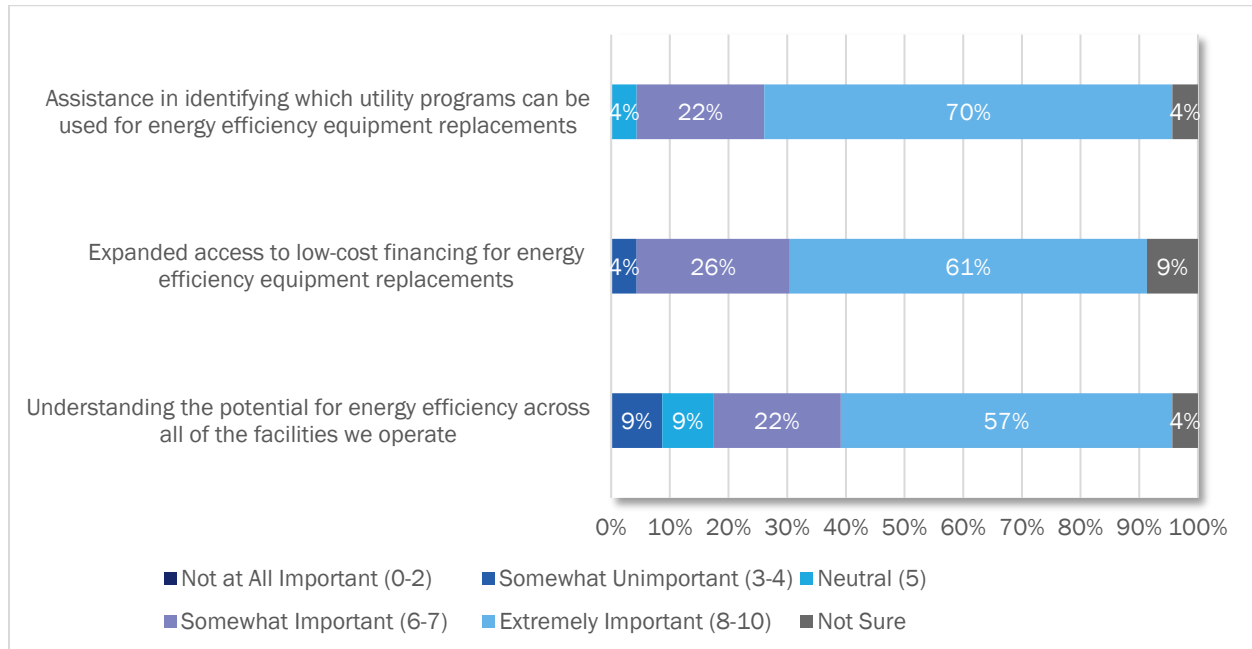
Figure 11. Average Influence Scores of LGP Non-Resource Activities versus Other Factors on Energy Saving Behavior



6.5 Drivers to Program Participation

To assess what drives municipalities to participate in EE programs, respondents were asked to rate various actions that would encourage their municipality to install or upgrade energy saving equipment through their utility from 0 to 10, where 0 is “Not at all important” and 10 is “Extremely important.” Figure 12 shows that most respondents across all surveyed LGPs ranked the listed drivers to program participation as somewhat or extremely important. Respondents indicated that identifying utility programs for EE equipment replacements is slightly more important (70% extremely important) than expanded access to low-cost financing (61% extremely important) and understanding facility energy use (57% extremely important).

Figure 12. Importance of Drivers to Program Participation (n=23)



When respondents were asked about what would encourage their municipality to install or upgrade energy saving equipment through their utility or energy service provider, valuable write-in answers included:

- Offering low-cost funding for upgrades and support convincing the mayor and city manager that this will reduce operating costs and has a proven track record in public and private sector buildings.
- Making it as easy as possible to implement the project without impacting city budget.
- Reducing greenhouse gas emissions, checking off measures towards climate action plan goals, and fulfilling other long term jurisdictional goals.
- Providing financial support to cover the cost of installation, including rebates, grants, or other State/Federal funding.
- One respondent elaborated on the challenges faced by smaller communities, stating that “As a small City, we do not have the discretionary resources to make system improvements just for the sake of energy savings; we have to wait until systems need to be replaced in order to make upgrade investments.” Further, this respondent stated, “Grant programs/rebates offer the best opportunity to invest in EE. Although upgrades will pay off over the long run, many small communities cannot make the upfront cash investment.”

7. Engineering Analysis Results

This section presents gross and net energy savings associated with the surveyed municipal customers who installed EE and solar equipment after interacting with the selected LGPs through non-resource activities. In the following tables, electric savings from solar are separated from EE electric savings. The evaluation team separated solar and EE savings in this analysis because typically solar is not classified as an EE measure and the survey respondents reported much greater electricity savings from solar than from EE measures. For these tables, the sum of EE electric savings and solar electric savings (kWh) represents the total electric savings estimated by the evaluation team's engineering analysis.

Table 28 presents the electric and natural gas first-year savings by LGP. The gross savings from the installation of EE equipment that occurred after municipal staff interacted with an LGP through at least one non-resource activity are 329,897 kWh and 7,290 therms, while gross solar savings are 696,000 kWh. Total gross electric savings from both EE and solar is 1,025,897 kWh. The net EE electric savings are equal to 284,646 kWh and net therm savings are 4,374 therms, while net solar savings are 417,600 kWh. Total net electric savings from both EE and solar are 702,246 kWh.

Table 28. Overall Electric and Natural Gas First-Year Savings by LGP

LGP	First-Year Gross Electric Savings (kWh)	First-Year Net Electric Savings (kWh)	First-Year Gross Gas Savings (Therms)	First-Year Net Gas Savings (Therms)	First-Year Gross Solar Savings (kWh)	First-Year Net Solar Savings (kWh)
RCEW	35,849	30,865	1,408	845	424,000	254,400
SBEW	44,870	38,139	3,778	2,267	160,000	96,000
ECP	45,837	39,677	-	-	112,000	67,200
VCP	198,287	171,592	2,104	1,263	-	-
WRP	5,053	4,374	-	-	-	-
Total	329,897	284,646	7,290	4,374	696,000	417,600

Table 29 presents the first-year gross and net savings from the installation of rebated and non-rebated EE and solar equipment installed by LGP non-resource activity participants. This disaggregation of rebated versus non-rebated equipment is based on whether customers reported to have received a rebate from one of the California PAs for the EE equipment they installed. Also included are savings for customers who are not sure whether they received a rebate from a PA. The majority of gross EE electric savings (67%) came from the installation of EE equipment where incentives were provided by PA resource programs (219,400 kWh), while 4% (12,050 kWh) came from the installation of EE equipment where respondents indicated that no incentive was provided. Approximately 30% (98,440 kWh) of gross savings originated from survey respondents who were not sure whether they had received an incentive. No respondents indicated that they had received a rebate for projects installing natural gas equipment. The majority of therm savings (52%) are associated with respondents who were unsure if they had received an incentive, while 48% indicated that they did not receive an incentive. LGPs also had significant net electric savings from solar system installations with system accounting for 97% of gross generation receiving a PA rebate (672,000 kWh).

Table 29. Rebated and Non-Rebated Electric and Natural Gas First-Year Savings by LGP

Non-Resource Activity	First-Year Gross Electric Savings (kWh)	First-Year Net Electric Savings (kWh)	First-Year Gross Gas Savings (Therms)	First-Year Net Gas Savings (Therms)	First-Year Gross Solar Savings (kWh)	First-Year Net Solar Savings (kWh)
Rebated Measures						
RCEW	4,556	3,944	-	-	400,000	240,000
SBEW	16,729	14,448	-	-	160,000	96,000
ECP	-	-	-	-	112,000	67,200
VCP	193,064	167,116	-	-	-	-
WRP	5,053	4,374	-	-	-	-
Rebated Measures Total	219,400	189,880	-	-	672,000	403,200
Non-Rebated Measures						
RCEW	4,312	3,732	1,409	845	19,200	11,520
SBEW	2,517	1,510	-	-	-	-
ECP	-	-	-	-	-	-
VCP	5,223	4,476	2,104	1,263	-	-
WRP	-	-	-	-	-	-
Non-Rebated Measures Total	12,050	9,719	3,513	2,108	19,200	11,520
Unsure if Rebated Measures						
RCEW	26,982	23,189	-	-	4,800	2,880
SBEW	25,625	22,181	3,778	2,267	-	-
ECP	45,837	39,677	-	-	-	-
VCP	-	-	-	-	-	-
WRP	-	-	-	-	-	-
Unsure Rebated Measures Total	98,440	85,047	3,778	2,267	4,800	2,880

8. Attribution Analysis Results

This section presents average attribution ratios for the non-resource activities offered by the LGPs selected for in-depth examination in this study. It also presents the total first-year gross and net electric and gas savings attributable to each LGPs' non-resource activities, as well as disaggregates the savings coming from the installation of rebated and non-rebated EE equipment.

8.1 Average Attribution Ratios for Non-Resource Activities

The evaluation team calculated average attribution ratios for each LGP's collection of non-resource activities we asked participants about in the participant survey. As shown in Table 30, the influence of SBEW's non-resource activities has the lowest average attribution ratio at 0.40 while those offered by RCEW have the highest attribution ratios of 0.50. VCP and ECP had average attribution ratios near SBEW's with 0.41 and 0.42, respectively. WRP has average attribution ratios near RCEW's with 0.48.

Table 30. Average Attribution Ratios for Non-Resource Activities by LGP

LGP	Attribution Ratio for Non-Resource Activities
RCEW	0.50
WRP	0.48
ECP	0.42
VCP	0.41
SBEW	0.40
All Respondents	0.44

The evaluation team chose to provide simple averages for the attribution ratios rather than weighted ratios to generally illustrate the influence of each of the LGPs' non-resource activities. In our calculations of savings attributable to each of the LGPs presented in the next sub-section, the team relied on customer-level attribution ratios and savings values.

8.2 Savings Attributable to Non-Resource Activities

This section presents attributable gross and net energy savings associated with the surveyed municipal customers who installed EE and solar equipment after interacting with the selected LGPs through non-resource activities. In the following tables, electric savings from solar are separated from EE electric savings. For these tables, the sum of attributable EE and solar electric savings (kWh) represents the total attributable electric savings estimated by the evaluation team's engineering analysis.

To estimate the electric and gas first-year savings attributable to the non-resource activities, the evaluation team applied customer-level attribution ratios to their first-year savings calculated from the engineering analysis. We then summed the savings for customers who participated in the different non-resource activities to arrive at the electric and gas savings attributable to each of the non-resource activities. The application of customer-level attribution ratios to the savings estimated from the engineering analysis allows us to gain an understanding about how influential the different LGPs' collection of non-resource activities is on municipalities' decisions to install EE equipment.

Based on the results of the engineering and attribution analysis, the evaluation team found that the success of LGPs in driving customers to install EE equipment was mixed. Table 31 presents the attributable electric and natural gas first-year gross and net EE savings by LGP in order of magnitude of first-year gross electric savings. The gross electric EE savings attributable to LGP non-resource activities are 111,003 kWh and the net savings are 95,751 kWh. Moreover, gross therm EE savings attributable to LGP non-resource activities are 2,620 therms and the net savings are 1,572 therms. Just as in the engineering analysis, LGPs also had net electric savings from solar panel installations with gross savings of 255,600 kWh and net savings of 153,360 kWh. Total gross electric savings from both EE and solar attributable to LGP non-resource activities are 366,603 kWh and net savings are 249,075 kWh.

Table 31. Overall Attributable Electric and Natural Gas First-Year Savings by LGP

Non-Resource Activity	first-year Gross Electric Savings (kWh)	First-Year Net Electric Savings (kWh)	First-Year Gross Gas Savings (Therms)	First-Year Net Gas Savings (Therms)	First-Year Gross Solar Savings (kWh)	First-Year Net Solar Savings (kWh)
RCEW	17,261	14,835	634	380	169,600	101,760
SBEW	20,147	17,196	1,039	623	44,000	26,400
ECP	20,573	17,808	-	-	42,000	25,200
VCP	50,604	43,782	947	568	-	-
WRP	2,418	2,093	-	-	-	-
Total	111,003	95,715	2,620	1,572	255,600	153,360

Table 32 presents the attributable first-year gross and net savings from rebated and non-rebated EE as well as solar equipment installed by LGP non-resource activity participants. This analysis provides information about the impacts of the LGPs' activities that do not directly lead to claimed savings. Particularly important are the savings from EE equipment installations that were not carried out through a PA resource program, as these savings would not necessarily be accounted for in the California EE portfolio.

The net electric EE savings coming from non-rebated measures are equal to 4,409 kWh. This represents about 5% of the total net EE electric savings attributable to the non-resource activities examined for this study. Net therm EE savings coming from non-rebated measures are equal to 948 therms, representing about 60% of the total net therm savings attributable to the non-resource activities examined for this study. The net electric savings from non-rebated solar are equal to 4,608 kWh. This represents about 3% of the total net electric solar savings attributable to the non-resource activities examined for this study. Based on the results of this analysis, the selected LGPs have unclaimed energy savings that are in part attributable to LGP non-resource activities. This finding is also supported qualitatively by many survey participants and IP staff, who stated that misalignments between government agency operations and existing program processes are often a barrier to municipal participation in EE resource programs. However, the finding that attributable savings from non-rebated EE equipment is greater than rebated EE equipment also shows that LGPs have been successful in building at least some local jurisdictions' capacity to implement EE equipment upgrades without rebates.

Table 32. Attributable Electric and Natural Gas First-Year Savings by LGP

Non-Resource Activity	First-Year Gross Electric Savings (kWh)	First-Year Net Electric Savings (kWh)	First-Year Gross Gas Savings (Therms)	First-Year Net Gas Savings (Therms)	First-Year Gross Solar Savings (kWh)	First-Year Net Solar Savings (kWh)
Rebated Measures						
RCEW	1,822	1,577	-	-	160,000	96,000
SBEW	8,698	7,520	-	-	44,000	26,400
ECP	-	-	-	-	42,000	25,200
VCP	48,253	41,768	-	-	-	-
WRP	2,418	2,093	-	-	-	-
Rebated Measures Total	61,191	52,958	-	-	246,000	147,600
Non-Rebated Measures						
RCEW	2,156	1,866	634	380	7,680	4,608
SBEW	881	529	-	-	-	-
ECP	-	-	-	-	-	-
VCP	2,351	2,014	947	568	-	-
WRP	-	-	-	-	-	-
Non-Rebated Measures Total	5,387	4,409	1,581	948	7,680	4,608
Unsure if Rebated Measures						
RCEW	13,283	11,392	-	-	1,920	1,152.00
SBEW	10,568	9,148	1,039	623	-	-
ECP	20,573	17,808	-	-	-	-
VCP	-	-	-	-	-	-
WRP	-	-	-	-	-	-
Unsure Rebated Measures Total	44,424	38,348	1,039	623	1,920	1,152

It is important to keep in mind that the net electric and gas savings from the installation of EE equipment outside of PA resource programs are not accounted for in the California EE portfolio, unless they are incidentally incorporated into spillover analyses conducted of the IOU resource programs.

9. Findings and Recommendations

This section outlines findings and recommendations that came out of the research. Note that not all findings have an associated recommendation.

Overarching Findings and Recommendations

Finding #1: Based on the evaluability assessment of select LGPs' non-resource activity data, the evaluation team found the quality and completeness of the non-resource program data provided by the IOUs to be much improved compared to the year one study with many of the datasets containing fields mergeable with CPUC and IOU resource databases (e.g., contact name, address, phone number, email). However, the organization and quantity of data provided varied among LGPs relative to the non-resource activities they listed in their response to the data request and other planning documents. Our in-depth interviews and review of data request materials also revealed that there are not any established protocols pertaining to non-resource tracking, which explains the lack of standardized tracking found in both this year and last year's study. It is important to note that the evaluation team didn't expect for the year 1 data collection protocol recommendations to have been implemented and reflected in our year 2 study due to the timing of the studies.

- **Recommendation:** The ongoing transition to third-party implementation, which is significantly impacting the design of LGPs going forward, should be leveraged to improve non-resource data collection protocols and reporting. Newly selected LGP implementers should adopt processes that facilitate the collection of non-resource participant information including, at a minimum, tracking customer names, phone numbers, email addresses, service addresses, dates of participation in the non-resource activity, and type of non-resource activity participated in (e.g., audit, technical assistance, benchmarking, etc.). We also recommend the collection of any associated customer IDs used by the PAs in their data-tracking systems. As data quality and completeness improve, evaluators can more fully capture the attributable energy savings from non-resource activities. Analysis of this sort goes far to demonstrate the benefits of non-resource activities and the unique value that LGPs provide. This would improve the evaluability of non-resource activities and future evaluations. Additionally, data systems should be designed to track non-resource participants over a multi-year time frame to better understand how ongoing engagement with LGPs drives program participation. This is especially important in the public sector as these projects typically take longer to install than similar projects in the commercial sector, so the ability to track activities over multiple program cycles is especially important for the public sector.
- **Finding #2:** By identifying matches in the CPUC and IOU resource program databases, the channeling analysis found that 20% (85 out of 430) of the LGP non-resource participants identified in the non-resource datasets took part in a PA resource program after engaging in an LGP non-resource activity. An additional 13% (56 out of 430) of LGP non-resource participants identified in the non-resource datasets were found to have participated in a non-resource activity the same year they participated in a resource program. Although it is unclear if many of these projects were influenced by the non-resource activity because of the time it takes to complete a project, it is possible that some portion of them may have been influenced. Still, this was a great improvement compared to the year one study, and in large part could be attributable to more complete non-resource data. In addition, the provision of IOU resource tracking datasets greatly helped to improve the channeling analysis by enabling the evaluation team to fill some gaps across various reports and more easily match participants to resource programs.

- **Recommendation:** To further improve future channeling analyses, LGPs should clearly identify the date in which each customer participates in a non-resource activity in their non-resource tracking datasets, and also provide the capacity to enter project records, such as claim IDs, should these participants go on to complete projects through a PA program. This will improve the accuracy of matching non-resource and resource databases.
- **Finding #3:** Reinforcing the year one study findings, the LGP non-resource activities evaluated in this year's study were more successful at influencing municipalities' decisions to install EE equipment and engage in energy saving behaviors. For EE upgrades, the average influence scores of LGP non-resource activities versus other factors ranged from 5.3 to 8.3 out of 10, with an overall average of 6.3 among respondents. Regarding energy savings behaviors, the average influence scores of LGP non-resource activities versus other factors ranged from 5.0 to 7.2 out of 10, with an overall average of 6.2 among respondents.
- **Finding #4:** Based on the results of the engineering and attribution analysis, the evaluation team found that the success of LGPs in driving customers to install EE equipment was mixed. For the five LGPs studied in this evaluation, we estimate the net electric savings attributable to LGP non-resource activities to be 95 MWh (summarized in the table below and further detailed in Section 8.2). Based on survey participants' responses of which EE upgrades were rebated, approximately 55% of those savings are accounted for in the CPUC and IOU resource program databases. In the case of natural gas, of the attributable first-year net therm savings from EE equipment installations (1,572 therms), approximately 60% resulted from installing EE equipment outside of a PA resource program. As discussed in finding 1, these savings are representative of the quality and quantity of data collected by the LGPs and provided to the evaluation team.

Table 33 Attributable Electric and Natural Gas First-Year Savings by LGP

Non-Resource Activity	First-Year Net Electric Savings (kWh)	First-Year Net Gas Savings (Therms)	First-Year Net Solar Savings (kWh)
RCEW	14,835	380	101,760
SBEW	17,196	623	26,400
ECP	17,808	-	25,200
VCP	43,782	568	-
WRP	2,093	-	-
Total	95,715	1,572	153,360

LGP Specific Findings and Recommendations

PG&E's Redwood Coast Energy Watch (RCEW)

- **Finding #5:** RCEW's single comprehensive non-resource tracking dataset was a significant improvement compared to the disparate databases provided by the LGPs studied in the year one evaluation, and by other LGPs for this year's evaluation. The single dataset improved the evaluation team's ability to conduct the channeling analysis for RCEW's non-resource activities. The majority of non-resource tracking data fields were sufficiently populated and of good quality for our channeling analysis. This is likely why the channeling analysis was able to identify a significantly higher percentage

(74%) of municipal customers who went on to participate in a resource program after engaging in a RCEW non-resource activity compared with the percentages identified for the other LGPs in this study. A comparison of non-resource activities tracked in RCEW's database to the non-resource activities listed in the various marketing, education and outreach (ME&O) materials provided to the team for review indicates that RCEW is very comprehensive in the number of total possible non-resource activities being tracked. The quality of RCEW's non-resource activity tracking data puts it in a much better position to receive full credit for these tracked activities.

- **Finding #6:** Among LGPs included in this study, RCEW's non-resource activities had the highest average influence score versus that of other factors for both municipal EE upgrades (8.3 out of 10) and behavioral changes (7.2 out of 10).

PG&E and SCG's Santa Barbara Energy Watch (SBEW)

- **Finding #7:** SBEW provided significantly more municipal records (171) of unique contact information in their non-resource databases than the other LGPs evaluated, accounting for 55% of the total municipal records in this year's study. The evaluation team also found a number of non-resource activities targeting municipalities that were listed in SBEW's narrative description of its non-resource activities but did not have associated tracking databases. Despite SBEW providing the most non-resource municipal records, the inconsistency of data collection across its non-resource activities limited the extent to which the evaluation team could assess the benefits of SBEW's non-resource activities.
 - **Recommendation:** SBEW should expand its collection of customer data to include as many of its non-resource activities as possible. This will enable future evaluations to better examine and quantify the impact of these activities, thereby capturing the value of their non-resource activities more comprehensively.
 - **Recommendation:** Considering that the Energy Division seems to be increasingly interested in the value of PA non-resource activities, other LGPs and programs offering non-resource activities, including SBEW, should follow RCEW's standardized approach to tracking these types of activities using a single comprehensive and high-quality database as discussed previously in Finding #5.
- **Finding #8:** Three of SBEW's five non-resource-tracking databases were lacking phone numbers and email addresses, which can be used to match non-resource data to resource databases. This likely limited the number of municipal customers identified in the channeling analysis as having gone on to participate in a resource program after engaging in a SBEW non-resource activity (14%).
 - **Recommendation:** SBEW should establish data collection protocols that ensure consistent collection of non-resource activity participant email addresses and phone numbers.

SDG&E's Emerging Cities Partnership (ECP)

- **Finding #9:** Prior to the data request response, SDG&E staff indicated that the ECP's contributions to EE savings in San Diego County are primarily through reach code ordinances and climate action planning and cautioned that ECP's non-resource activities would likely have limited corresponding resource activities represented in the resource databases. Additionally, many of their non-resource activities outside of Orange County are conducted in partnership with their SANDAG LGP and were captured in those tracking databases. SDG&E policy and program staff recommend that savings be calculated with methods similar to those that Codes and Standards uses in order to measure the

impact of these activities. However, given the evaluation team's limited budget, timeline, and focused scope, it was not feasible to develop a new methodology for quantifying the impacts of reach code ordinances and climate action planning support. The evaluation team did receive a limited set of ECP non-resource databases useable for the channeling analysis and participant survey from SDG&E's data request response, including jurisdictions that received ordinance/climate action planning support. Although the channeling analysis did not identify any municipal customers as having gone on to participate in a resource program after engaging in a ECP non-resource activity (0%), we did find that 17% of ECP non-resource participants participated in a resource program the same year.

- **Recommendation:** ECP should expand its collection of customer data to include as many of its non-resource activities as possible. This will enable future evaluations to better examine and quantify the impact of these activities, thereby capturing the value of their non-resource activities more comprehensively.
- **Recommendation:** Considering that the Energy Division seems to be increasingly interested in the value of PA non-resource activities, other LGPs and programs offering non-resource activities, including ECP, should follow RCEW's standardized approach to tracking these types of activities using a single comprehensive and high-quality database as discussed previously in Finding #5.
- **Recommendation:** During the year two LGP study implementation staff and local municipalities raised the importance of LGP's supporting local reach code ordinances and climate action planning in in-depth interviews and participant surveys. Staff across LGPs and IOU territories raised concern that there may become a gap in funding for CAP support going forward if LGPs reduce funding for these types of activities. Similar sentiments were also mentioned by LGPs interviewed in year 1 which leads us to believe this is a widespread concern across local governments. The CPUC should consider a study to develop a methodology for quantifying the impacts of reach code ordinance/climate action planning support using methods similar to those used for the Codes and Standards program, especially if new third-party, public-sector implementers choose to continue to offer this non-resource activity.

SCE's Ventura County Energy Leader / SCG's Ventura County Partnership (VCP)

- **Finding #10:** The evaluation team found the non-resource data provided by VCP to be sufficient in completeness and quality. It contained enough fields mergeable with CPUC and IOU resource databases (e.g., contact name, phone number, email, etc.) to conduct the channeling analysis. In total, however, VCP provided only two non-resource related tracking databases. One originated from SCE and one from SCG (in PDF file format), which consisted of lists of the partnership's primary local government contacts. In SCE's VCP response to Question 3 of our data request, which asked for all non-resource tracking databases, they stated that "SCE does not track customer level information from LGP non-resource activities." The implementing partner did provide a list of 59 VCP events between 2017–2019, which detailed the type of event (e.g., outreach, training, or workshop), and the city where the event took place, but did not list customer tracking data. This limited the team's ability to conduct this study's channeling and surveying tasks. Consequently, a limited number of municipal customers were identified in the channeling analysis as having gone on to participate in a resource program after engaging in a VCP non-resource activity (10%).
- **Recommendation:** We recommend expanding customer tracking to include non-resource activities and using a single database to record both customer contact information and details on the types of non-resource activities in which each contact participates.

SCE's Western Riverside Energy Leader Partnership / SCG's Western Riverside Energy Partnership (WRP)

- **Finding #11:** Similar to VCP, WRP provided only three non-resource related tracking databases, two of which were generic contact lists. This limited the team's ability to conduct this study's channeling and surveying tasks.
 - **Recommendation:** We recommend expanding customer tracking to include non-resource activities and using a single database to record both customer contact information and details on the types of non-resource activities in which each contact participates.
- **Finding #12:** Many of the email addresses and phone numbers provided in WRP's non-resource-tracking databases were not complete. This made it more difficult to perform the channeling analysis and participant survey. Despite these issues, the channeling analysis did find that 31% of municipal customers listed in their non-resource databases went on to participate in a resource program after engaging in a WRP non-resource activity. This was the second highest percentage among the LGPs assessed in this evaluation and leads us to believe that with improved data collection protocols, an even higher percentage of customers may have been found.

Recommendation: SCE and SCG should establish data collection protocols that ensure consistent collection of non-resource activity participant email addresses and phone numbers. As noted previously, the evaluation team didn't expect for the year 1 data collection protocol recommendations to have been implemented and reflected in our year 2 study due to the timing of the studies.

Appendix A. LGP Selection Characteristic Definitions

Community Characteristics

Community characteristics allow us to understand various attributes of the constituents served by an LGP and allow for a comparison of the LGPs selected for evaluation to other LGPs not evaluated in year two. Community characteristics the team focused on include:

- **County.** This is the county where the programs are operating. In general, PG&E programs are organized by county, while SCE programs are generally defined as a collection of cities.
- **Covered Population.** This is the population covered by selected LGPs net of any other load serving entity, such as the Los Angeles Department of Water and Power. This indicator may be useful in assessing the potential span of influence of the programs and how a selection may be designed to include both small and large coverage areas.
- **Number of Jurisdiction.** The number of cities or county governments included in a program's operating territory may be considered as an indicator of what opportunities LGPs might have available for municipal retrofits at the local level. Most jurisdictions have a set of similar facilities, such as city halls, libraries, police and fire stations, and programs with more cities will typically have a larger group of facilities to work with.
- **CEC Climate Zone.** Climate zone helps define what might be the most appropriate and beneficial measures in weather-sensitive applications. For example, programs operating in hotter areas should have higher HVAC savings than programs operating in more temperate climates.
- **Total 2017 Per Capita Usage Net of Load Serving Entities.** The team analyzed data from the CPUC at the county level to assess per capita usage, excluding the impact of non-IOU load serving entities that might also be operating within the same county as an LGP.
- **% of 2017 GWh Non-Residential Usage.** The team examined data from the CPUC to assess what percentage of county consumption is attributable to non-residential loads. These values may be used in conjunction with other metrics to assess if and how LGPs are engaged in outreach to commercial customers, including public facilities.

Economic Burden Characteristics

Table 3 also provides the following economic burden metrics for the selected LGPs for study in year two. Three out of four of these metrics originate from the CalEnviroScreen. CalEnviroScreen is used by the California Environmental Protection Agency (CalEPA) to define disadvantaged communities. "CalEnviroScreen is a screening tool that evaluates the burden of pollution from multiple sources in communities while accounting for potential vulnerability to the adverse effects of pollution. CalEnviroScreen ranks census tracts in California based on potential exposures to pollutants, adverse environmental conditions, socioeconomic factors, and prevalence of certain health conditions."¹⁹ These metrics are useful in defining LGP interactions with disadvantaged and low-income communities and include the following:

¹⁹ California Office of Environmental Health Hazard Assessment's CalEnviroScreen FAQ. <https://oehha.ca.gov/calenviroscreen/calenviroscreen-faqs>

- **Average of CalEnviroScreen Version 3.0 Score.** This value indicates the average of the overall CalEnviroScreen 3.0 Score for census tracts within each program operating territory. Higher CalEnviroScreen values indicate increasing environmental and economic burden and may be used to assess program efforts to address disadvantaged and low-income focused activities.²⁰
- **CalEnviroScreen 3.0 Average of Poverty Percentile.** This value indicates the average CalEnviroScreen 3.0 poverty score for census tracts within each program's operating territory. Higher CalEnviroScreen values indicate increasing economic burden and may be used to assess program efforts to address disadvantaged and low-income focused activities.
- **CalEnviroScreen 3.0 Average of Housing Burden Percentile.** This value indicates the average CalEnviroScreen 3.0 poverty score for census tracts within each program operating territory. Higher CalEnviroScreen values indicate increasing housing burden and, where applicable, may be used to assess program efforts to address housing disparities within low-income populations, including multifamily programs.
- **California Alternative Rates for Energy (CARE) Eligibility – % Households.** This value is derived from the Public Utilities Code Section 913 Annual Report and states the percent of households participating in CARE at the county level.²¹ This metric is generally consistent with CalEnviroScreen values and is also useful in defining LGP activities regarding low-income programs, such as Energy Savings Assistance direct installation program participation, which is based on CARE program eligibility.

Economic and Program Delivery Capacity

Economic and program delivery capacity metrics for the selection are also presented. They are useful in defining access to funding for constituents within an LGP operations area and include the following:

- **Median Household Income (Dollars).** This is data from the 2017 American Community Survey (ACS) that provides an estimate of median household income and may indicate how successful cities and counties are at driving sustainability where income is a barrier to action.
- **Estimated Per Capita Public Purpose Programs (PPP) Dollars Paid.** This is an estimate of PPP funds derived from a county, based on CPUC estimates of countywide energy consumption, and PPP revenue as defined in the annual California Electric and Gas Utility Cost Report to legislators on the source and use of PPP funds.²² This metric may help indicate how successful LGPs are at helping constituents access PPPs for project use (for example, by comparing project counts or savings values at the program/portfolio level against constituent funds paid).
- **Total Per Capita Local Program Delivery Funding.** This is a summary of per capita funding available to deliver EE projects implemented by PAs focused on local programs based on 2016 and 2017 approved funding. We define local programs as:
 - LGPs

²⁰ California Office of Environmental Health Hazard Assessment's CalEnviroScreen 3.0 Map.

<https://oehha.ca.gov/calenviroscreen/report/calenviroscreen-30>

²¹ As discussed in Pacific Gas and Electric, San Diego Gas & Electric, Southern California Gas, and Southern California Edison's 2017 Annual Reports for Low Income Programs.

²² Public Utilities Code Section 913 Annual Report to the Governor and Legislature, April 2018

- RENS (prorated where RENS overlap with LGP coverage areas)
- CCAs (prorated where CCAs overlap with LGP coverage areas)

Budget History

Initially, the evaluation team proposed the following five LGPs for consideration, including a summary of recent budget history, to Energy Division staff:

- SCE's Ventura County Energy Leader/SCG's Ventura County EE Partnership
 - \$1.7 million budget requested in 2019 from SCE
 - \$170k budget requested in 2019 from SCG
 - Fifth largest requested budget for both SCE and SCG in 2019
- SCE's Desert Cities Energy Leader/SCG's Desert Cities Energy Partnership
 - \$150k budget request in 2019 from SCE
 - \$18k budget request in 2019 from SCG
 - One of three LGPs serving Riverside (i.e. Western Riverside, County of Riverside), serving cities in the east
- PG&E's RCEW
 - \$1.2m budget request in 2019
 - Has a CCA that recently elected to administer, who also implements the Energy Watch program
- PG&E's SBEW
 - \$600k budget requested in 2019
 - Santa Barbara County is also partially served by SCE and SCG LGP programs
- SDG&E's ECP
 - \$280k budget requested in 2019
 - Acts as an "on-ramp" for non-direct partner jurisdictions, serving jurisdictions not covered by other partnerships

In the event that IOU staff raised concerns about evaluating one of the proposed LGPs, we prepared three alternative selections early on for each IOU:

- SCE's San Joaquin Valley Energy Leader/SCG's SJV Energy Partnership
 - \$390k budget requested in 2019 from SCE
 - \$120k budget requested in 2019 from SCG

- Serves a large number of disadvantaged communities
- PG&E's Northern San Joaquin Valley Energy Watch Partnership
 - \$990k budget requested in 2019
 - High number of disadvantaged communities served
 - Serves a large territory including the County of Merced, Stanislaus, and San Joaquin
- SDG&E's County of San Diego Partnership
 - \$1.2 million budget requested in 2019

Appendix B. In-Depth Interview Guide

California Public Utilities Commission Energy Efficiency

Program Oversight and Evaluation of the Group B Sectors

Deliverable 22A – Local Government Partnership In-Depth Interview Guide

Study Overview

On behalf of the California Public Utilities Commission (CPUC), the Tierra and Opinion Dynamics evaluation team is assessing the energy savings benefits derived from non-resource activities offered by the following partnership programs:

- PG&E's RCEW
- PG&E and SCG's Santa Barbara Energy Watch Partnership (This does not include SCE's South Santa Barbara County Energy Leader Partnership)
- SCE and SCG's VCP
- SCE and SCG's Western Riverside Partnership
- SDG&E's ECP

Our focus is on program years 2017-2018, however we will also be asking questions to understand how things have changed from past program cycles to the present, and how you think they might be changing in the future.

Due to the significant number of LGPs, the CPUC is interested in examining the activities of a small selection of LGPs in each year of this 3-year study. While each IOU's LGP program is uniquely structured, and there exist operational differences among LGPs in the same IOU service territory, past studies have defined LGP activity areas as consisting of municipal building retrofits, Strategic Plan support, and IOU core programs coordination. Activities that are typically defined as 'non-resource' include, but are not limited to, marketing and outreach, educational workshops, technical assistance, trainings, energy audits, benchmarking, reach codes, and/or financing options. The evaluation team will use this study to build an understanding of whether those LGP non-resource activities with the most participation are channeling their customers into ratepayer-funded resource programs offered by PAs and/or encouraging them to take energy-saving actions outside of programs (e.g., individual actions or behavior changes without rebates).

Research questions the evaluation team would like to address during in-depth interviews include the following:

- Which LGP non-resource activities engaged the most customers during 2017 and 2018 program years?
- What non-resource activities have been the most successful in channeling customers into PA EE resource programs and to which programs have customers been channeled, particularly during 2017 and 2018?

- How have LGPs engaged with local government agencies/departments, what was that experience like in terms of doing energy efficiency projects at public facilities, what resulted, and how it might be improved to help LGs become more effective? We may also consider activities that have been the focus of certain LGPs such as effectiveness of code enhancement efforts or accessing hard-to-reach market segments.
- What types of EE actions are being taken outside of the PA EE resource programs that are attributable to participation in an LGP non-resource activity?
- Since the end of 2018, what additional non-resource activities has the LGP engaged in? Have there been changes to the resource and non-resource offerings?

Fielding Strategy

The evaluation team plans to conduct in-depth interviews with IOU program managers and implementing partners'²³ program management. We do not expect any individual interviewee to have responses to all the questions in this interview guide. The questions below are not designed to be read verbatim. Instead, interviewers will follow the conversational flow of the interview and cover topics as discussed. The evaluation team will conduct 9 interviews including:

1. Interviews with the IOU management overseeing the selected LGP programs (single or team), consisting of one per IOU for a total of four total interviews. Key participant(s) include the senior IOU manager over local government programs (e.g. Principals, Supervisors, etc.) operating during the 2017-2018 program cycle and IOU management staff overseeing the current program cycle if different from 2017-2018. These will be scheduled for a duration of 1.5 hours but may vary depending on the program (e.g. Number of Local Government Partners in the program, number of Strategic Plan activities undertaken, etc.).
2. Interviews with the Implementing Partners' management (single or team), consisting of one per program, for five interviews total. Key participant(s) include the senior Implementation Partner manager of the program during the 2017-2018 cycle, and the senior Implementation Partner manager overseeing the current program cycle if different from 2017-2018. These will be scheduled for a duration of 1.5 hours but may vary depending on the program.

²³ Defined as local governments or third-party organizations that hold the contract with the IOU for LGP administration; this can be a single city/county, other type of association/council of governments/JPA, or a private company.

In-Depth Interview Guide

Interviewee: _____

Title and Organization: _____

Date and Time of Interview: _____

Interviewer: _____

Introduction

Ask permission to record and transcribe this conversation.

Thank you again for taking the time to speak with us today. We recognize that your organization engages in multiple activities and that you may have information about some of the topics below. We would appreciate it if you could respond with what you know and direct us to the most appropriate staff member of your organization to provide us answers to the questions for which you do not have information. For today's interview, we'd like to focus on the following topics:

- Roles and Responsibilities. Your role in the organization and your responsibilities during the 2017-2018 program cycle.
- Program Design and Implementation Processes . This section explores how the 2017- 2018 non-resource activities of the program were designed and implemented in a way that channeled participation in resource programs. This section includes four areas of interest:
 - IOU/LGP Coordination on Program Design and Innovation
 - Coordination Across Delivery Platforms
 - Local Capacity Building²⁴
 - Coordination on Program Operation
- Data Collection Protocols. This section explores existing non-resource activity tracking data collection protocols and practices, as well as opportunities and barriers to improve future data collection.
- Non-Resource Activity Savings. This section explores specific activities that have channeled participation in IOU resource programs. This section includes three areas of interest:
 - Municipal retrofits and behavior programs
 - Strategic Plan goals
 - Coordination with core IOU programs (where applicable)

²⁴ Where capacity building is an investment that supports the public sector's ability to implement energy efficiency projects or deliver energy savings without support in the future.

Roles and Responsibilities (Questions for IOU Program Managers and Implementing Partner Staff)

Our first set of questions are regarding staff roles and responsibilities.

1. What is your current role and title within <IOU/Program> and how long have you been in this position?
2. How long have you worked at the <IOU/Program>?
3. How your role changed since you first started there?

Program Design and Implementation Processes (Questions for IOU Program Managers and Implementing Partner Staff)

4. Can you please describe the design and implementation of the program you manage as it operated in 2017 and 2018, particularly the non-resource elements of the program listed below? What has changed since 2018 that is in operation now and what is anticipated to change in 2021?
 - Municipal retrofits
 - Strategic Plan activities, and
 - Core program coordination

[PROBE FOR DETAILS REGARDING PROGRAM PARTICIPATION PROCESS, CUSTOMER ELIGIBILITY REQUIREMENTS, IMPLEMENTATION PARTNERS, INCENTIVES, PERFORMANCE/DATA TRACKING, ETC.]

Coordination on Program Design and Innovation

5. What are your overall perspectives on the ways that IOUs and Implementing Partners coordinated with member local governments on program design and innovation?

[PROBE FOR DETAILS ABOUT LEVEL OF COORDINATION AND INVOLVEMENT WITH MEMBER LOCAL GOVERNMENT]

6. During the 2017 - 2018 program cycle, what are the most effective ways that the program channeled participation to resource programs? For example, what had worked well in previous program cycles that was used in 2017-2018?
7. During the 2017 - 2018 program cycle, what innovations were implemented that helped channel projects to resource programs in a way that is unique and not present in other IOU or third-party programs? Who was the primary driver of these innovations, the IOU or Implementing Partner? Since the 2018 program year, what innovations were implemented that helped channel projects to resource programs in a way that is unique? Who was the primary driver of these innovations? What gaps remain in the program's design for delivering non-resource activities and how are the IOU or Implementation Partner working to address this?

[PROBE FOR DETAILS DEFINING RELATIVE ROLES OF IOU AND IMPLEMENTATION PARTNER]

8. What was the nature of the collaboration between the IOU and Implementing Partner in determining the overall budget for the 2017 - 2018 program cycle? What about after 2018 - what was the nature of the collaboration between the IOU and Implementing Partner in determining the overall budget?
9. [FOR IPs ONLY - PROBE FOR DETAILS RELATED TO FINDING 7] Did you compare the budget for <IOU/Program> to other LGP budgets? If so, how did this factor into the budget discussions for <IOU/Program>? Do you think per capita funding is a reasonable metric to compare funding across LGPs?
10. [PROBE FOR DETAILS RELATED TO FINDING 5] Do you think the member local governments understand how much amount of technical and economic EE potential there are for the public facilities in their jurisdiction? Let's consider this as a range like x% understand very well, y% have some idea and z% do not have a good idea. Was this considered in defining the budget for <IOU/Program>?

Coordination on Program Operation

11. What is the IOU and Implementing Partners level of involvement with member local governments? For Implementing Partners can you describe the level of involvement with member local governments, specifically what was the focus of this involvement and who did you engage with? From your perspective, are there ways to improve coordination between the IOU and Implementing Partners to support local governments?
12. [PROBE FOR DETAILS RELATED TO FINDING 5] Was there a defined process that member local governments used to identify projects?
 - [IF YES] How was this tracked and reported to the Implementing Partner?
13. [PROBE FOR DETAILS RELATED TO FINDING 5] Are you aware if member local governments engaged in a review of the capital plan that their local government produce annually to identify projects that are candidates for PA resource programs?
 - [IF NO] Do you think this would help increase the number of projects ultimately submitted to PA resource programs?
14. From your perspective, are there ways to improve coordination between the IOU and Implementing Partners to support local governments?
15. During the 2017 - 2018 program cycle, what are traditional ways that the program channeled participation to resource programs? For example, what had worked well in previous program cycles that was used in 2017-2018?
16. [PROBE FOR DETAILS RELATED TO FINDING 6] From research we completed in the first year of our evaluation, we are aware that LGPs provide a coordinating role to make sure that program implementers are presented across multiple local government functions and internal operations. Do

you agree with this observation? Do you anticipate that 3rd party implementers will take over non-resource activities that the <IOU/Program> completed in 2017-2018?

Coordination Across Delivery Platforms

We'd like to discuss the type and level of cooperation and coordination between the program and non-resource activities that might be undertaken by RENs and CCAs also present in your operating territory.

17. Does <Applicable REN and/or Applicable CCA> perform non-resource activities in your operating area? If yes:

- a. Do these <Applicable REN and/or Applicable CCA> activities overlap with any program activities? Are there any programmatic synergies between <Applicable REN and/or Applicable CCA> that are being leveraged?
- b. Considering that <Applicable REN and/or Applicable CCA> are also present in the program operating territory, what gaps remain in the program design for delivering non-resource activities?

18. Considering that the LGP and <Applicable REN and/or Applicable CCA> share many of the same target audiences and stakeholders (i.e. Local Government partners), have <Applicable REN and/or Applicable CCA> programs and activities benefited directly or indirectly from LGP capacity building activities? Are you aware of any other ways the LGP program has influenced the development of <Applicable REN and/or Applicable CCA> activities?

Local Capacity Building

Capacity building involves 1) increasing the number of Member Local Governments participating in the program and other IOU core programs, and 2) increasing the annual rate at which they complete energy efficiency projects (both within and outside of resource programs).

19. How has the number of local government partners submitting projects changed over time? Is it your impression that the number of participating partners has increased, decreased, or stayed the same during 2017 and 2018 compared to previous years? What are the primary factors influencing this change? Which partners are consistently participating, and which partners are less consistent or do not actively participate?

20. [PROBE FOR DETAILS RELATED TO FINDING 6] Thinking back on our previous question about the role LGPs play in coordinating across multiple local governments, how do you think 3rd party implementers will coordinate across multiple LG partners to build capacity?

21. Are you aware of member local governments completing energy efficiency projects outside of PA programs? If so, what types of projects are these (e.g. lighting, HVAC, etc.) and why do you suspect these projects have occurred outside of PA programs? Have any LGP non-resource activities influenced and/or enabled member local governments to complete energy efficiency projects outside PA programs? If so which activities have been the most effective?

22. [PROBE FOR DETAILS RELATED TO FINDING 4] Are you tracking how other LGP funded non-resource engagements might be driving projects that are funded outside of PA rebates, such as OBF or CAEATFA's Qualified Energy Conservation Bonds?
23. Thinking back on our previous question about the role LGPs pay in coordinating across multiple local governments, how do you think 3rd party implementers will coordinate across multiple LG partners to build capacity?

Data Collection Protocols

The objective of the following questions is to better understand the data collection protocols and procedures in place in 2017 and 2018 as well as identify existing barriers and opportunities to improve the quality of non-resource tracking databases.

In the narrative responses to this year's data request, the majority of IOUs indicated that non-resource tracking data collection protocols and practices are defined in Scopes of Work (SDG&E and SCG), as well as Contract Work Authorizations and Policies & Procedure documents (PG&E). Moreover, SCE indicated that they do not track customer level information from LGP non-resource activities. However, per our review of the materials submitted in response to the data request, the evaluation team could not clearly identify policies and procedures or requirements for collecting non-resource activity tracking data.

24. [PROBE FOR DETAILS RELATED TO FINDING 1] Please describe the non-resource tracking data collection protocols and practices in place during 2017 and 2018? Was tracking data standardized and consistent across non-resource events? Was this information then entered into a single tracking database? If not, how was it stored and compiled?
25. How do these protocols and practices differ from resource activity tracking data? For what types of non-resource events do you use these tracking data collection protocols and practices? On about what % of non-resource events funded by the program do you think this protocol was used to collect participant data?
26. Have there been any changes to tracking data collection protocols and practices since 2018 that improved the quality and/or consistency of non-resource tracking database?
27. Can you please point out the page numbers and location of the text you were referring to in your data request response which describes your non-resource tracking data collection protocols and practices? (Question 8 of the data request)
28. [PROBE FOR DETAILS RELATED TO FINDING 2] Did you follow-up with LG staff who participated in non-resource events to assess if they were directly engaged in developing a project that was submitted to a PA resource program?
- [IF YES] Was this tracked? In other words, did you record where a non-resource event participant was also the name on a project submitted to a PA resource program?

29. [PROBE FOR DETAILS RELATED TO FINDING 2] We are aware that the staff attending the LGP non-resource event may work to develop a project but may not be the same staff that appear in program tracking databases (e.g. project applications). Was there any follow-up with LG staff who participated in non-resource events to ask them if they had assisted in developing a project where they do not appear as the contact in the PA resource program tracking data?

- [IF YES] Was this tracked? In other words, did you match the name of the non-resource event participant to the name of the person on a PA resource program tracking database and how the project was influenced?

In the Year 1 evaluation we found the quality of LGP non-resource tracking data to be inconsistent and lacking a standardized set of fields useable to match non-resource participants with the CPUC tracking data. The information that would most improve the evaluability of non-resource activities includes tracking customer name, email address, service address, dates of participation in the non-resource activity, and all associated customer IDs used by the PAs. Improving the quality of these databases is important for future evaluations because it will boost the ability of evaluators to target participant surveys to those individuals who are familiar with their organization's decision to participate or not participate in an EE program and the specifications of any energy saving equipment installed.

30. The evaluation team has identified the following fields as being mergeable with the CPUC database:

- Contact Name
- Contact Phone Number
- Contact Email
- Site Address
- Service Account ID
- Service Account Name
- PA
- Program Name
- Program Implementer
- Statewide Program
- Implementation Contractor
- Program Manager
- Which, if any, of these fields are you currently using to track non-resource activities?
- Which of these could feasibly be tracked in future years? Does it vary by type of non-resource activity?

- For those that are unfeasible or would be difficult to track, why is this the case? What are the primary barriers to collecting this data?

31. What barriers and opportunities exist to incorporating select non-resource tracking data into future Scopes of Work and Contract Work Authorizations? Specifically, customer name, email address, service address, dates of participation in the non-resource activity, and all associated customer IDs used by the PAs.
32. Are there any tools or processes that can be used to improve this tracking going forward? Do you have any other thoughts on how to improve the quality and constancy of tracking databases across LGP non-resource activities?

Non-Resource Activity Savings (Questions for Implementing Partner Staff Only)

We'd like to ask some questions that will allow us to better quantify the savings attributable to the programs' non-resource activities.

Municipal Retrofits

33. Did your program engage with local governments to identify municipal retrofits in the 2017 and 2018 program cycle? What, if any, municipal retrofit projects were completed during these program years and how do they compare to previous years?
34. We are aware that projects involving local governments can take a long time to complete, including the time needed for design, funding acquisition, and construction. As a result, savings recorded by the IOUs and reported to the CPUC sometimes might not show up until some length of time after the program non-resource activity has occurred. With that in mind:
 - On average, how long does it take (e.g. years, months, etc.) to complete a municipal retrofit project (i.e. complete post inspection and submit an invoice to IOU for incentives), from the time local government representatives first engage with the program to discuss which facilities to retrofit?
 - Do you think the partnership has reduced the timeline for completing municipal retrofit projects?
35. What marketing, education and outreach activities does your program staff engage in to support development of municipal retrofits? Which of these activities have been most effective in engaging customers, and channeling them towards participating in resource programs?

Strategic Plan Activities

36. Which Strategic Plan activities are successfully leading municipal customers to participate in IOU resource programs? Have you tracked energy savings achieved by these participants?
37. For Strategic Plan activities that are identified as Re-Launch of Past Projects, what do you think is the trajectory of these activities leading to projects being reported through IOU resource programs. Over

time did the number of projects resulting from Strategic Plan activities increase / decrease / stay the same? Have you formerly tracked this?

Core Program Coordination

38. Aside from municipal retrofit and Strategic Plan activities, in what M&O activities did the program engage the broader community to help channel projects to resource programs? Can you briefly describe these activities and how they were carried out in 2017/2018?

[Discuss any M&O partners such as local business groups, contractors, other organizations, CPUC statewide marketing, etc.]

39. Based on your experience/involvement in marketing and outreach activities, which of these activities have been most effective in engaging customers, if not channeling them toward taking steps toward energy efficiency? Can you rank these activities by effectiveness? Do these results vary by customer and if so how come?

Closing

40. Do you have any suggestions or final comments on what the evaluation of the non-resource activities of your organization should cover this year or in future years?

These were all the questions we have for now. Thanks again for taking the time to speak with us. We are currently conducting interviews with other LGP staff to learn about the various non-resource activities in which these LGPs are engaged. If we have follow-up questions based on the additional information we learn, is it okay for us to follow up with you by email?

Thank you.

Appendix C. Survey Instrument

Overview

On behalf of the CPUC, the Opinion Dynamics and Tierra Resource Consultants evaluation team is assessing the energy savings benefits derived from non-resource activities offered by select Investor-Owned Utility (IOU) Local Government Partnership Programs, with a focus on program years 2017 and 2018. The number of LGPs implemented over the past decade, as well as the diversity of sizes, budgets, constituents, experiences, and government priorities, makes evaluation of these programs difficult. Thus, the evaluation team is performing evaluations for a selection of LGPs in each evaluation year, recognizing the template nature of the Energy Watch and Energy Leader designs. The evaluation team's selected set of LGPs for the first year was conducted in consultation with Energy Division staff.

This survey is designed to gather data from IOU customers that participated in an LGP non-resource activity. Since inception, these LGPs have offered a variety of non-resource activities to their residential and non-residential customers including marketing and outreach, technical assistance, trainings, energy audits, benchmarking, and/or referrals to other programs. However, LGP programs across the state are currently undergoing significant changes to their program design as detailed in the recent IOU business plans and ABALs, and confirmed by the evaluation team's discussions with IOUs, LGP lead Implementing Partners and Energy Division staff. Accordingly, the evaluation team is not assessing residential and commercial assessments and direct install related non-resource activities because they are generally being phased out of the LGP portfolio going forward, with a renewed focus being placed on supporting the public sector. As such, the evaluation team is focusing on assessing the LGP's non-resource activities targeting the public sector, which will continue to be conducted and will be the primary focus of LGPs in future program years. The evaluation team is using this survey to build a foundational understanding of whether the LGP's public sector non-resource activities channel their customers into ratepayer-funded EE resource programs offered by Program Administrators (PAs) and/or encourage them to take energy-saving actions outside of programs (e.g., equipment upgrades or behavior changes without rebates).

Research questions the evaluation team answered through this study include the following:

- What non-resource activities do LGP public sector customers recall?
- What PA EE resource programs did customers participate in after engaging in an LGP non-resource activity, particularly during the 2017-2018-time frame?
- What EE behavioral changes and actions have customers made outside of EE resource programs since they were engaged in an LGP non-resource activity?
- Do customers plan to participate in PA EE resource programs and take other EE actions in the future after interacting with an LGP through its non-resource activities?
- How did customers become aware of EE resource programs and other EE behavior changes in which they participated?
- Did the non-resource activities in which customers engaged influence their decisions to participate in EE resource programs or other EE actions?
- Are there other factors that influenced customers' decisions to participate in EE resource programs and/or take actions toward EE outside of resource programs?

- What challenges, if any, did customers experience in participating in PA EE resource programs?
- Are customers satisfied with the non-resource activities in which they participated? How can LGPs improve their non-resource activities?

Fielding Strategy

The evaluation team administered surveys with the selected LGPs' public sector non-resource program participants as well as public sector participants in LGP programs that completed projects. It targeted a 10% response rate of all email addresses. The team administered computer-assisted web interviews to collect data. Based on the type of contact information available, we used an email push to web survey strategy.

The evaluation team conducted this web survey to identify the EE equipment upgrades and behavioral changes customers carried out on public facilities after engaging with LGP non-resource activities. Surveys were sent to municipal customers identified in the tracking datasets provided by the IOUs in response to our data request. These customers included:

- LGP non-resource activity participants located in the CPUC program database. These participants located in the CPUC program tracking participated in an EE resource program after engaging in an LGP non-resource activity.
- LGP non-resource activity participants not located in the CPUC database.

All survey participants were asked about whether they recalled participating in an LGP non-resource activity and if they did not, their survey was terminated. The survey asked all sets of customers about the EE actions they have taken through resource programs, as well as outside of EE resource programs, since their interaction with an LGP non-resource activity.

Sample Composition and Sampling Approach

The sample composition and approach for the survey was determined by the most common non-resource activities in which customers engaged and for which the selected LGPs were able to provide customer contact information. Interviews with program staff and an accompanying assessment of the non-resource activity data revealed that customer contact primarily occurred via the following channels:

- Recurring Implementing Partner meetings with local government and utility staff
- Regional collaboration meetings between multiple local government staff and other stakeholders
- Mailing, emailing, and social media campaigns
- Community events
- Workshops and webinars on a variety of energy related subjects
- Municipal energy audits and benchmarking services
- Energy project technical assistance services

Survey Structure

The following table outlines the structure of the survey, including the key sections, respondents that will receive them, and the key desired outcome from those questions. The team designed the survey to balance data needs and respondent burden.

Table 34. LGP Participant Survey Structure

Survey Section	Target Audience	Primary Goal
Participation Verification	All respondents	Verify that people recall engaging with specific non-resource activities
Energy Saving Actions	Respondent groups detailed below	Determine what EE resource programs respondents participated in and/or EE actions were taken after exposure to non-resource activities
Redwood Coast Energy Watch Partnership	Respondents who participated in Redwood Coast Energy Watch Partnership's non-resource activities.	Assess EE resource program participation/EE actions taken by public entity after exposure to Redwood Coast Energy Watch Partnership non-resource activities.
Santa Barbara Energy Watch Partnership	Respondents who participated in Santa Barbara Energy Watch Partnership's non-resource activities	Assess EE resource program participation/EE actions taken by public entity after exposure to Santa Barbara Energy Watch Partnership non-resource activities.
Emerging Cities Partnership	Respondents who participated in Emerging Cities Partnership's non-resource activities	Assess EE resource program participation/EE actions taken by public entity after exposure to Emerging Cities Partnership non-resource activities.
Ventura County Partnership	Respondents who participated in Ventura County Partnership's non-resource activities	Assess EE resource program participation/EE actions taken by public entity after exposure to Ventura County Partnership non-resource activities.
Western Riverside Partnership	Respondents who participated in Western Riverside Partnership's non-resource activities	Assess EE resource program participation/EE actions taken by public entity after exposure to Western Riverside Partnership non-resource activities.
Attribution of Non-Resource Activities on Participation in EE Resource Programs	Respondents who participated in EE resource programs	Assess the degree to which non-resource activity engagement influenced the decision to participate in an EE resource program
Attribution of Non-Resource Activities on EE Actions taken outside of EE Resource Programs	All respondents	Assess the degree to which non-resource activity engagement influenced the decision to carry out EE actions/behavior changes outside of an EE resource program
Awareness of EE Resource Programs	All respondents	Assess awareness of EE resource programs

Survey Section	Target Audience	Primary Goal
Drivers and Barriers to Participation in EE Resource Programs	All respondents	Assess what motivates and poses barriers to customers to participate in EE resource programs
Non-Resource Activity Satisfaction and Improvement	All respondents	Inquire about customer satisfaction with the non-resource activity in which they engaged and whether they have suggestions for improvement
Demographics/Firmographics	All respondents	Gather demographic/firmographic information about non-resource activity customers

Survey Variables

Survey Flags in Sample (FL = flag)

The survey flags in the year 2 survey were kept consistent with the year one study flags in order to reduce programing development time and costs. Survey flags are not seen by survey participants. The following flags were assigned new LGPs for the year 2 survey:

- EBEW_FL Denotes “Redwood Coast Energy Watch Partnership” program participant.
- FEW_FL Denotes “Santa Barbara Energy Watch Partnership” program participant.
- SAND_FL Denotes “Emerging Cities Partnership” program participant.
- WSide_FL Denotes “Western Riverside Energy Leader Partnership” program participant.
- SGab_FL Denotes “Ventura County Energy Leader Partnership” program participant.

Survey Flags Determined by Customer Responses

Table 35. Survey Flags Index

Flag	Denotes the following
Community event FL	Community event, workshop, or presentation where someone discussed energy efficiency
Canvassing FL	Door to door canvassing notice or discussion about energy efficiency
Mail FL	Mail message such as a letter, postcards or flyers about energy efficiency
Email FL	Email about energy efficiency
Social media FL	Social media about energy efficiency
WOM FL	Word of mouth from co-workers
Other FL	Other, non-resource activity
Meetings FL	Participation in recurring program meetings where someone discussed energy efficiency programs, equipment or actions
Audit FL	Municipal facility audit or benchmarking services

Flag	Denotes the following
Strategies FL	Support developing Energy/Climate Action Plans, greenhouse gas inventories, or other municipal energy strategies
Certification FL	Training or certification on energy related topics (e.g. building operator certification)
TA FL	Municipal project technical assistance and program communication

Read-Ins

ADDRESS Customer address that corresponds with participation (when available)

Participant Survey Instrument

Landing Page

Please enter your Survey Access Code to begin the survey. This is the 6-digit PIN provided with the survey link on the letter you received.

Survey Access Code:

Generate Variable: TEXT SHOWN_organization

- 1: [IF FLAG = EBEW_FL] Redwood Coast Energy Watch Partnership
- 2: [IF FLAG = FEW_FL] Santa Barbara Energy Watch Partnership
- 4: [IF FLAG = SAND_FL] Emerging Cities Partnership
- 5: [IF FLAG = WSide_FL] Western Riverside Energy Leader Partnership
- 6: [IF FLAG = SGab_FL] Ventura County Energy Leader Partnership

Introduction

On behalf of the California Public Utilities Commission (CPUC), thank you for participating in this survey. Tierra Resource Consultants is conducting this survey on behalf of the CPUC to gather information about your experience on behalf of a municipality, with energy saving related activities associated with the [PIPE:TEXT_SHOWN_organization] program. We're specifically interested in understanding how the program influenced energy efficiency retrofits in municipal facilities owned and/or operated by city or county governments. This would include, for example, projects at municipal buildings such as city halls, or upgrades to operational processes such as those found in municipal water operations. Rest assured that your responses will remain confidential.

If you have only a short amount of time right now, you may complete part of the survey and come back to it where you left off when you have more time.

Please click CONTINUE below to start the survey.

Screener and Participation Verification

- S1. During 2017 or 2018, did you participate in any of the following [PIPE:TEXT_SHOWN_organization] activities on behalf of your municipality, in which you learned about programs or ways to save energy and/or money through energy saving equipment or actions? Check all that apply.
1. Community event, workshop, or presentation where someone discussed energy efficiency programs, equipment or actions
 - 2.
 3. Mail message such as a letter, postcard or flyer about energy efficiency programs, equipment or actions
 4. Email about energy efficiency programs, equipment or actions
 5. Social media about energy efficiency programs, equipment or actions
 6. Word of mouth from co-workers about energy efficiency programs, equipment or actions
 9. Participation in recurring meetings where someone discussed energy efficiency programs, equipment or actions
 10. Municipal facility audit or benchmarking services
 11. Support developing Energy/Climate Action Plans, greenhouse gas inventories, or other municipal energy strategies
 12. Training or certification on energy related topics (e.g. building operator certification)
 13. Municipal project technical assistance and program communication
 14. Other, specify [OPEN ANSWER]
 15. Don't recall

[IF S1 =15, THANK AND TERMINATE, ELSE CONTINUE AND GENERATE FLAGS AS FOLLOWS.]

1. Community event FL
- 2.
3. Mail FL
4. Email FL
5. Social media FL
6. WOM FL
9. Meetings FL
10. Audit FL
11. Strategies FL
12. Certification FL
13. TA FL
14. Other FL

Generate Variable: TEXT SHOWN_method

- 1: [IF FLAG = 1] community events
- 2:
- 3: [IF FLAG = 3] mailing materials

4: [IF FLAG = 4] email messaging

5: [IF FLAG = 5] social media messaging

6: [IF FLAG = 6] word of mouth communication

7: [IF FLAG = 7] rebate or discount coupon

8: [IF FLAG = 8] program you previously participated in

9: [IF FLAG = 9] recurring local government partnership meetings

10: [IF FLAG = 10] audit or benchmarking services you received

11: [IF FLAG = 11] Energy/Climate Action Plans and municipal strategy support

12: [IF FLAG = 12] training and certification

13: [IF FLAG = 13] project technical assistance and program communication

14: [IF FLAG = 14] [INSERT RESPONSE FROM S1=14]

S2. You indicated that you participated in activities associated with the [PIPE:TEXT_SHOWN_organization] in which you learned about energy saving equipment or actions. In which year did you first participate in any of these activities?

1. Before 2017

2. 2017

3. 2018

4. 2019

[ASK IF <ADDRESS> = NULL]

AD1. Can you please provide the full street address with city and state for these municipal facilities which have undergone energy saving upgrades? [PROVIDE 5 INDIVIDUAL OPEN-END SPACES FOR RESPONSES WITH ONLY 1 BOX NEEDING TO BE FORCED (PARTICIPANTS SHOULD BE ABLE TO PROCEED WITHOUT NEEDING TO FILL IN ALL SPACES).; CHECKBOX FOR PREFER NOT TO ANSWER]

9. Prefer not to answer

AD2. Please provide the name of your municipality. [OPEN END; CHECKBOX FOR PREFER NOT TO ANSWER]

9. Prefer not to answer

[LET OPEN END TO AD1] = <ADDRESS>

Energy Savings Actions

[DISPLAY SENTENCE BELOW ON SAME PAGE AS EE0]

Next, we would like to learn about any actions that the municipal facilities you're engaged with may have taken toward saving energy, either on their own or by participating in energy saving programs.

EE0. Since your interaction with the [PIPE:TEXT_SHOWN_organization] program on behalf of your municipality, through the [PIPE:TEXT_SHOWN_method], has your municipality completed any equipment upgrades to a facility to help save energy?

1. Yes
2. No [SKIP TO B1, BEHAVIORAL SECTION]
8. Not sure [SKIP TO B1, BEHAVIORAL SECTION]

[ASK IF EE0=1; ELSE SKIP TO BEHAVIORAL SECTION]

EE1. What types of energy saving equipment did your municipality upgrade or install to reduce their facilities' energy usage since 2017? [MULTIPLE RESPONSE, ROTATE RESPONSE OPTIONS 1 THROUGH 11]

1. Lighting equipment or lighting controls
2. Heating, cooling and ventilation equipment or controls, including thermostats and duct work
3. Energy saving consumer electronics or office equipment
4. Water heating equipment or controls
5. Refrigeration equipment and controls
- 6.
7. Installed solar panels
00. Something else, please specify [OPEN END]
98. Not sure [SKIP TO B1, BEHAVIORAL SECTION]
99. None [SKIP TO B1, BEHAVIORAL SECTION]

EE1_SHOWN

1. Lighting equipment
2. Heating, cooling and ventilation equipment or controls, including thermostats and duct work
3. Energy saving consumer electronics or office equipment
4. Water heating equipment or controls
5. Refrigeration equipment and controls
7. Installed solar panels
00. Other

[NOTE TO PROGRAMMER: IF RESPONDENT SELECTS MORE THAN 3 EQUIPMENT TYPES IN EE1, LEAST FILL UP TO 3 EQUIPMENT TYPES TO ASK ABOUT IN THE SUCCEEDING QUESTIONS ("LIGHTING" THROUGH "OTHER" SECTIONS BELOW - WE WANT TO LIMIT THE NUMBER OF EQUIPMENT TYPES TO ASK THEM ABOUT BELOW TO A MAXIMUM OF 3)]

EE2. With regard to these upgrades completed by your municipality since 2017, how would you describe the type of facilities upgraded? (Please select all options that are applicable to your municipality). These municipal facilities upgrades included...

1. Municipal buildings such as city halls, fire stations, annex buildings, etc.
2. Water systems such as a treatment plant of potable water pumping plant, etc.

3. Streetlights operated by the city or county.

EE3. During 2017 or 2018, did you personally influence any of these energy saving project(s) (i.e. identifying facilities to update, developing technical components, approval and budgeting process support or administration, project buildout, etc.)?

1. Yes
2. No
8. Not sure

[ASK IF EE3=1 ELSE SKIP TO L1]

EE4. On a scale of 0 to 10, where 0 is “Not at All Influential” and 10 is “Extremely Influential” what aspect of the project(s) did you influence? We’re interested to know, in general what role you play in influencing the installation of energy efficiency projects, later we’ll ask about specific measures or the influence of the [PIPE:TEXT_SHOWN_organization] Program.

Energy-Efficiency Project Related Activity	Not at All Influential 0	1	2	3	4	5	6	7	8	9	Extremely Influential 10	Not Sure
1. Identifying the project	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Developing and specifying the technical components of the project	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Moving the project through the approval and budgeting process	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. Engaged in the buildout of the project (e.g. SERVED AS project management or contract management)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. Other Activity	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

[ASK IF EE4_5=1 through 10 ELSE SKIP TO L1]

EE5. You indicated that you had taken energy-efficiency project related activity to save energy that were not described on the previous list. Please tell us briefly what actions those were. [OPEN END].

[ASK IF EE1_Shown = 1]

Lighting Section

[DISPLAY SENTENCE BELOW ON SAME PAGE AS L1]

Next, we would like to learn more about the energy saving upgrades you have completed at your municipality's properties.

L1. Which of the following type(s) of lighting equipment have you installed or upgraded at your municipality's properties? Please select all that apply. [MULTIPLE RESPONSE] [RANDOMIZE RESPONSE OPTIONS 2-5]

1. Lighting controls (such as occupancy sensors, timers, photocells, bi-level controls) [ANCHOR]
2. Interior CFL bulbs or fixtures (e.g. higher efficiency CFL bulbs replacing less efficient bulbs or ceiling 'can' type fixtures with CFL bulbs replacing less efficient fixtures)
3. Interior LED bulbs, lamps, or fixtures (e.g. 1x4, 2x2, and 2x4 luminaires with LEDs for ambient lighting of interior commercial spaces, such as offices)
4. Interior Linear fluorescent lamps or fixtures (e.g. 1x4, 2x2, and 2x4 luminaires with high efficiency fluorescent lamps for ambient lighting of interior commercial spaces, such as offices)
5. Exterior LEDs (e.g. wall, canopy, pole mounted lights, or exterior signs)

00. Something else, please specify [OPEN END]

98. Not sure [Skip to H1]

[ASK IF L1=2 Through 5 or 00]

L2. During the years 2017 through 2018, how much total INTERIOR and EXTERIOR lit space was upgraded (sq. ft.) at your municipality?

IMPORTANT – It's important that we get an idea of how much INTERNAL and EXTERNAL area (sq. ft.) was impacted by Lighting EE projects. We recognize that this might be difficult to estimate but giving us an idea of the amount of area that was impacted by lighting upgrades will help us estimate the savings achieved by the program. Your best estimate of sq. ft. impacted by lighting upgrade projects is fine.

Leave both columns blank in the table below if you didn't install particular type of equipment. [NUMERIC OPEN END, CHECKBOX FOR NOT SURE, ONLY REQUIRE 1 OPTION TO BE ANSWERED]

Lighting Type	Total Lighted Space Installed (sq. ft)	Installed equipment but not sure of sq. ft. impacted
1. [SHOW IF L1=2] Standard CFLs		<input type="checkbox"/>
2. —		
3. [SHOW IF L1=3] Standard LEDs		<input type="checkbox"/>
4. —		
5. —		
6. —		
7. [SHOW IF L1=3] LED Flood Lights		<input type="checkbox"/>
8. [SHOW IF L1=3] LED Canned Light Fixtures		<input type="checkbox"/>
9. —		
10. [SHOW IF L1= 5] EXTERIOR LED Wall Pack		<input type="checkbox"/>
11. [SHOW IF L1= 5] EXTERIOR LED Canopy		<input type="checkbox"/>
12. [SHOW IF L1= 5] EXTERIOR LED Pole Mounted (i.e. parking lot lighting)		<input type="checkbox"/>

Lighting Type	Total Lighted Space Installed (sq. ft)	Installed equipment but not sure of sq. ft. impacted
13.—		
14. [SHOW IF L1=3] LED Exit Signs		<input type="checkbox"/>
15. [SHOW IF L1= 5] EXTERIOR LED Signs, such as “Open” signs		<input type="checkbox"/>
16. [SHOW IF L1=3] High Bay LED Fixtures replacing non-LED fixtures		<input type="checkbox"/>
17. [SHOW IF L1=4] High Bay Fluorescent Fixtures with T5 lamps replacing less efficient fixtures		<input type="checkbox"/>
18. [SHOW IF L1=4] High Bay Fluorescent Fixtures with T8 lamps replacing less efficient fixtures		<input type="checkbox"/>
19. [SHOW IF L1=3] Linear or tube LED lamps or fixtures replacing linear fluorescent lamps or fixtures		<input type="checkbox"/>
20. [SHOW IF L1=4] Linear Fluorescent T8 lamps or fixtures replacing less efficient fluorescent lamps or fixtures		<input type="checkbox"/>
21. [SHOW IF L1=4] Linear Fluorescent T5 lamps or fixtures replacing less efficient fluorescent lamps or fixtures		<input type="checkbox"/>
22. [SHOW IF L1=4] Removed linear fluorescent lamps (i.e. delamping)		<input type="checkbox"/>
23. [SHOW IF L1=00] [INSERT RESPONSE FROM L1_00] (If more than one type, please provide total lighted space installed for each type of lighting equipment installed) [OPEN END]		<input type="checkbox"/>

[ASK IF ANY L1 = 1 THROUGH 5 OR 00]

L7. Did the municipal facilities you’re engaged with receive any rebates or incentives for installing any of your energy saving lighting equipment?

1. Yes
2. No
8. Not sure

[ASK IF L7=1]

L7a. For which energy saving lighting equipment did your municipality receive rebates or incentives? Please select all that apply. [MULTIPLE RESPONSE]

1. [SHOW IF L2-1= <>NULL] Standard CFLs
- 2.
3. [SHOW IF L2-3= <>NULL] Standard LEDs
- 4.—
- 5.—
- 6.—

7. [SHOW IF L2-7= <>NULL] LED Flood Lights
8. [SHOW IF L2-8= <>NULL] LED Canned Light Fixtures
- ~~9.—~~
10. [SHOW IF L2-10= <>NULL] EXTERIOR LED Wall Pack
11. [SHOW IF L2-11= <>NULL] EXTERIOR LED Canopy
12. [SHOW IF L2-12= <>NULL] EXTERIOR LED Pole Mounted
- ~~13.—~~
14. [SHOW IF L2-14= <>NULL] LED Exit Signs
15. [SHOW IF L2-15= <>NULL] EXTERIOR LED Signs, such as “Open” signs
16. [SHOW IF L2-16= <>NULL] High Bay LED Fixtures
17. [SHOW IF L2-17=<>NULL] High Bay Fluorescent Fixtures with T5 lamps
18. [SHOW IF L2-18=<>NULL] High Bay Fluorescent Fixtures with T8 lamps
19. [SHOW IF L2-19= <>NULL] Linear or tube LED lamps or fixtures
20. [SHOW IF L2-20= <>NULL] Linear Fluorescent T8 lamps or fixtures
21. [SHOW IF L2-21= <>NULL] Linear Fluorescent T5 lamps or fixtures
22. [SHOW IF L2-22= <>NULL] Lighting controls
00. [SHOW IF L2-23=00] [INSERT RESPONSE FROM L1]
24. Other [OPEN ENDED RESPONSE]
23. I received no rebates for the above listed equipment

[ASK IF L7 = 1]

L7b. Please identify the organization(s) from which your municipality received rebates or incentives? Please select all that apply. [MULTIPLE RESPONSE]

1. [Show if EBEW_FL or FEW_FL] Pacific Gas & Electric Company (PG&E)
- 2.
- 3.
4. [Show if WSide_FL or SGab_FL] Southern California Edison (SCE)
5. [Show if WSide_FL or SGab_FL or FEW_FL] Southern California Gas (SCG)
6. [Show if WSide_FL or SGab_FL] Southern California Regional Energy Network (SoCalREN)

7. [Show if SAND_FL] San Diego Gas and Electric (SDG&E)
8. Other municipal utility, please specify [OPEN END]
9. Propane delivery company, please specify [OPEN END]
00. Another organization, please specify [OPEN END]
12. Not sure

[ASK IF L7=2]

L7c. Please identify the main reason why your municipality did not receive rebates.

1. Equipment did not qualify
2. Was in a hurry to purchase new equipment
3. Too much of a hassle to apply for the rebate
4. Did not know if one existed
0. Something else, please specify [OPEN END]

[ASK IF L7=1]

L8. Using a scale from 0 to 10, where 0 is “Not at all likely” and 10 is “Extremely likely”, If your municipality hadn’t received a rebate, what is the likelihood that your municipality would have installed EXACTLY the same ENERGY SAVING equipment without the rebates they received?

Not at All Likely 0	1	2	3	4	5	6	7	8	9	Extremely Likely 10	Not applicable	Not sure
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

[ASK SECTION IF EE1_SHOWN= 2]

Heating, Cooling And Ventilation (HVAC) Section

H1. Which of the following heating, cooling, and/or ventilation systems has your municipality upgraded or installed at your municipality’s properties? Please select all that apply. [MULTIPLE RESPONSE]
[RANDOMIZE RESPONSE OPTIONS 1 THROUGH 7]

1. New energy saving heating and cooling equipment
2. Heating and/or cooling system tune-ups
3. Made changes to chillers or chilled water system(s)
4. Made changes to boilers or steam water system(s)
5. Made changes to air distribution equipment and ventilation controls
6. Made changes to HVAC operating schedules
7. Variable speed fan or blower motors

00. Something else, please specify [OPEN END] [ANCHOR]

98. Not sure [SKIP TO HE1] [ANCHOR]

[ASK IF H1=1 or H1=0]

H2. What type of energy saving heating and/or cooling equipment did your municipality install or upgrade?
[MULTIPLE RESPONSE]

1. 2 to 5-ton Split System Air Conditioner
2. 2 to 5-ton Split System Heat Pump
3. Mini-Split (Ductless) Heat Pump
4. Ground Source Heat Pump
5. Boiler
6. Furnace
7. Infrared Heater
8. Gas-Fired Condensing Unit Heater
9. Packaged Heating and/or Air Conditioner (e.g. 5+ ton rooftop unit)
10. Packaged Heat Pump (e.g. 5+ ton rooftop unit)
11. Chiller
12. Cooling Tower
13. Variable Air Volume (VAV) box
00. [INSERT ANSWER FROM H1=00] [hide 00 if H1 != 0]
98. Not sure

[ASK IF H2 = 1 TO 00]

H2a. How much conditioned space (sq. ft.) was impacted by each type of heating and/or cooling equipment installed or upgraded during the year 2017 and 2018? Select all that apply.

IMPORTANT – It's important that we get an idea of how much conditioned space was impacted by HVAC EE projects. We recognize that this might be difficult to estimate but giving us an idea of the amount of conditioned space impacted by energy efficiency upgrades will help us estimate the savings achieved by the program. Your best estimate of sq. ft. of conditioned space impacted by HVAC EE projects is fine.

Leave both columns blank in the table below if you didn't install particular type of equipment. [MULTIPLE RESPONSE] [NUMERIC OPEN END, CHECKBOX FOR NOT SURE FOR EACH ROW]

Heating and/or Cooling Equipment	Total Conditioned Space Impacted (sq. ft.)	Installed equipment but not sure of sq. ft. impacted
1. [SHOW IF H2 =1] 2 to 5-ton Split System Air Conditioners		<input type="checkbox"/>
2. [SHOW IF H2 = 2] 2 to 5-ton Split System Heat Pumps		<input type="checkbox"/>
3. [SHOW IF H2 = 3] Mini-Split (Ductless) Heat Pumps		<input type="checkbox"/>
4. [SHOW IF H2 = 4] Ground Source Heat Pumps		<input type="checkbox"/>
5. [SHOW IF H2 = 5] Boilers		<input type="checkbox"/>
6. [SHOW IF H2 = 6] Furnaces		<input type="checkbox"/>
7. [SHOW IF H2 = 7] Infrared Heaters		<input type="checkbox"/>
8. [SHOW IF H2 = 8] Gas-Fired Condensing Unit Heater		<input type="checkbox"/>
9. [SHOW IF H2 = 9] Packaged Heating and/or Air Conditioner (e.g. 5+ ton rooftop unit)		<input type="checkbox"/>
10. [SHOW IF H2 = 10] Packaged Heat Pumps (e.g. 5+ ton rooftop unit)		<input type="checkbox"/>
11. [SHOW IF H2 = 11] Chillers		<input type="checkbox"/>
12. [SHOW IF H2 = 12] Cooling Towers		<input type="checkbox"/>
13. [SHOW IF H2 = 13] Variable Air Volume (VAV) boxes		<input type="checkbox"/>
14. [SHOW IF H1 =00] [INSERT RESPONSE TO H1_00]		<input type="checkbox"/>

H16. Did your municipality receive any rebates or incentives for installing or upgrading any of your heating, cooling, and/or ventilation equipment?

1. Yes

2. No

98. Not Sure

[ASK IF H16=1]

H16a. For which energy saving heating, cooling, and/or ventilation equipment did your municipality receive rebates or incentives? Please select all that apply. [MULTIPLE RESPONSE]

1. [SHOW IF H2=1] 2 to 5-ton Split System Air Conditioner

2. [SHOW IF H2=2] 2 to 5-ton Split System Heat Pump

3. [SHOW IF H2=3] Mini-Split (Ductless) Heat Pump

4. [SHOW IF H2=4] Ground Source Heat Pump

5. [SHOW IF H2=5] Boiler

6. [SHOW IF H2=6] Furnace
7. [SHOW IF H2=7] Infrared Heater
8. [SHOW IF H2=8] Gas-Fired Condensing Unit Heater
9. [SHOW IF H2=9] Packaged Heating and/or Air Conditioner
10. [SHOW IF H2=10] Packaged Heat Pump
11. [SHOW IF H2=11] Chiller
12. [SHOW IF H2=12] Cooling Tower
13. [SHOW IF H2=13] Variable Air Volume (VAV) box
00. [INSERT RESPONSE FROM H1=00]
15. Other [OPEN ENDED RESPONSE]
14. I received no rebates for the above listed equipment

[ASK IF ANY H16 = 1]

H16b. Please identify the organization(s) from which your municipality received rebates or incentives?
Please select all that apply. [MULTIPLE RESPONSE]

1. [Show if EBEW_FL or FEW_FL] Pacific Gas & Electric Company (PG&E)
- 2.
- 3.
4. [Show if WSide_FL or SGab_FL] Southern California Edison (SCE)
5. [Show if WSide_FL or SGab_FL or FEW_FL] Southern California Gas (SCG)
6. [Show if WSide_FL or SGab_FL] Southern California Regional Energy Network (SoCalREN)
7. [Show if SAND_FL] San Diego Gas and Electric (SDG&E)
8. Other municipal utility, please specify [OPEN END]
9. Propane delivery company, please specify [OPEN END]
00. Another organization, please specify [OPEN END]
12. Not sure

[ASK IF H16=2]

H16c. Please identify the main reason why your municipality did not receive rebates or incentives?

1. Equipment did not qualify

2. Was in a hurry to purchase new equipment
3. Too much of a hassle to apply for the rebate
4. Did not know if one existed
0. Something else, please specify [OPEN END]

[ASK IF H16=1]

H17. Using a scale from 0 to 10, where 0 is “Not at all likely” and 10 is “Extremely likely”, If your municipality hadn’t received a rebate, what is the likelihood that your municipality would have installed EXACTLY the same ENERGY SAVING equipment without the rebates they received?

Not at All Likely 0	1	2	3	4	5	6	7	8	9	Extremely Likely 10	Not applicable	Not sure
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

[ASK IF EE1_SHOWN = 3]

Consumer Electronics Section

HE1. Which of the following consumer electronic equipment has your municipality installed to reduce your property’s energy use? Remember, we are interested in the consumer electronics you purchased to replace old equipment since you interacted with [PIPE:TEXT_SHOWN_organization] program. [MULTIPLE RESPONSE, UP TO THREE]

1. Advanced power strips
2. Computer power management software
3. Energy saving desktop or laptop computers
4. ENERGY STAR rated printer(s)
5. ENERGY STAR rated copier(s)
6. ENERGY STAR rated computer monitor(s)
00. Something else, please specify [OPEN END]
98. Not sure [SKIP TO WH1]

HE1a. How many of each type of consumer electronic equipment did your municipality install? [NUMERIC OPEN END, 0-99, CHECKBOX FOR NOT SURE FOR EACH ROW]

Consumer Electronic Equipment	Quantity	Not sure
1. [SHOW IF HE1=1] Advanced power strips		<input type="checkbox"/>
2. [SHOW IF HE1=1] Computer power management software		<input type="checkbox"/>
3. [SHOW IF HE1=1] Energy saving desktop or laptop computers		<input type="checkbox"/>

Consumer Electronic Equipment	Quantity	Not sure
4. [SHOW IF HE1=1] ENERGY STAR rated printer(s)		<input type="checkbox"/>
5. [SHOW IF HE1=1] ENERGY STAR rated copier(s)		<input type="checkbox"/>
6. [SHOW IF HE1=1] ENERGY STAR rated computer monitor(s)		<input type="checkbox"/>
7. [SHOW IF HE1=1] [INSERT RESPONSE TO HE1=00]		<input type="checkbox"/>

[ASK IF ANY HE1 = 1 THROUGH 00]

HE2. Did your municipality receive any rebates or incentives for the consumer electronics you installed?

1. Yes
2. No
98. Not sure

[ASK IF HE2=1]

HE2a. For which consumer electronic equipment did your municipality receive rebates or incentives? Please select all that apply. [MULTIPLE RESPONSE]

1. [SHOW IF HE1=1] Advanced power strips
2. [SHOW IF HE1=2] Computer power management software
3. [SHOW IF HE1=3] Purchased energy saving desktop or laptop computers
4. [SHOW IF HE1=4] ENERGY STAR rated printer(s)
5. [SHOW IF HE1=5] ENERGY STAR rated copier(s)
6. [SHOW IF HE1=6] ENERGY STAR rated computer monitor(s)
00. [SHOW IF HE1=00] [INSERT RESPONSE TO HE1_00]
8. Other [OPEN ENDED RESPONSE]
7. I received no rebates for the above listed equipment

[ASK IF HE2a=1 THROUGH 00]

HE2b. Please identify the organization(s) from which your municipality received rebates or incentives? Please select all

that apply. [MULTIPLE RESPONSE]

1. [Show if EBEW_FL or FEW_FL] Pacific Gas & Electric Company (PG&E)
- 2.
- 3.

4. [Show if WSide_FL or SGab_FL] Southern California Edison (SCE)
5. [Show if WSide_FL or SGab_FL or FEW_FL] Southern California Gas (SCG)
6. [Show if WSide_FL or SGab_FL] Southern California Regional Energy Network (SoCalREN)
7. [Show if SAND_FL] San Diego Gas and Electric (SDG&E)
8. Other municipal utility, please specify [OPEN END]
9. Propane delivery company, please specify [OPEN END]
00. Another organization, please specify [OPEN END]
12. Not sure

[ASK IF HE2=2]

HE2c. Please identify the main reason why your municipality did not receive rebates or incentives?

1. Equipment did not qualify
2. Was in a hurry to purchase new equipment
3. Too much of a hassle to apply for the rebate
4. Did not know if one existed
0. Something else, please specify [OPEN END]

[ASK IF HE2=1]

HE3. Using a scale from 0 to 10, where 0 is “Not at all likely” and 10 is “Extremely likely”, If your municipality hadn’t received a rebate, what is the likelihood that your municipality would have installed EXACTLY the same ENERGY SAVING equipment without the rebates they received?

Not at All Likely 0	1	2	3	4	5	6	7	8	9	Extremely Likely 10	Not applicable	Not sure
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

[ASK IF EE1_SHOWN = 4]

Water Heating Section

WH1. Which of the following energy related upgrades has your municipality made to reduce their facilities’ hot water energy use? Please select all that. [MULTIPLE RESPONSE] [RANDOMIZE 1 THROUGH 8]

1. Installed pre-rinse spray valve(s)
2. Installed new ENERGY STAR rated water heater(s)
3. Installed demand control recirculation pump(s)

4. Performed boiler tune-up(s)
5. Set water heater temperature to 120F degrees
6. Insulated hot water pipes with pipe insulation
7. Installed insulating blanket around water heater tank(s)
8. Installed new high efficiency boiler
00. Something else, specify [OPEN END] [ANCHOR]

98. Not sure [SKIP TO R1] [ANCHOR]

[ASK IF WH1 = 2 OR 8 OR 00]

WH1a. For each hot water upgrade your municipality made to their facilities, please specify the capacity (Btu/hr) of each equipment type installed. [NUMERIC OPEN END 0-99, CHECKBOX FOR NOT SURE FOR EACH ROW]

Equipment Type	Total Capacity (Btu/hr)	Installed equipment but not sure of capacity
1. [SHOW IF WH1=2] ENERGY STAR rated water heater(s)		<input type="checkbox"/>
2. [SHOW IF WH1=8] Installed new high efficiency boiler		<input type="checkbox"/>
3. [SHOW IF WH1=00] [INSERT RESPONSE TO WH1=00]		<input type="checkbox"/>

[ASK IF WH1=6]

WH2. Approximately how many linear feet of pipe insulation did you install? [NUMERIC OPEN END, CHECKBOX FOR NOT SURE]

98. Not Sure [CHECKBOX]

[ASK IF WH1=2]

WH3. What type of energy saving water heater was installed? [MULTIPLE RESPONSE]

1. Storage tank water heater
2. Tankless water heater (also referred to as instantaneous or on-demand)
3. Heat pump water heater
4. Solar water heating
00. Something else, please specify [OPEN END]

[ASK IF ANY WH1 = 1 THROUGH 00]

WH4. Did your municipality receive rebates or incentives for any of the hot water equipment you installed or upgraded?

- 0. Yes
- 1. No
- 8. Not sure

[ASK IF WH4=1]

WH4a. For which hot water equipment or equipment modifications did your municipality receive rebates or incentives? Please select all that apply. [MULTIPLE RESPONSE]

- 1. [SHOW IF WH1=1] Installed pre-rinse spray valve(s)
- 2. [SHOW IF WH1=2] Installed new ENERGY STAR rated water heater(s)
- 3. [SHOW IF WH1=3] Installed demand control recirculation pump(s)
- 4. [SHOW IF WH1=4] Performed boiler tune-up(s)
- 5. [SHOW IF WH1=5] Set water heater temperature to 120F degrees
- 6. [SHOW IF WH1=6] Insulated hot water pipes with pipe insulation
- 7. [SHOW IF WH1=7] Installed insulating blanket around water heater tank(s)
- 8. [SHOW IF WH1=8] Installed new high efficiency boiler
- 00. [SHOW IF WH1=00] [INSERT RESPONSE TO WH1_00]
- 10. Other [OPEN ENDED RESPONSE]
- 9. I received no rebates for the above listed equipment

[ASK IF WH4=1]

WH4b. Please identify the organization(s) from which your municipality received rebates or incentives? Please select all that apply. [MULTIPLE RESPONSE]

- 1. [Show if EBEW_FL or FEW_FL] Pacific Gas & Electric Company (PG&E)
- 2.
- 3.
- 4. [Show if WSide_FL or SGab_FL] Southern California Edison (SCE)
- 5. [Show if WSide_FL or SGab_FL or FEW_FL] Southern California Gas (SCG)
- 6. [Show if WSide_FL or SGab_FL] Southern California Regional Energy Network (SoCalREN)
- 7. [Show if SAND_FL] San Diego Gas and Electric (SDG&E)

8. Other municipal utility, please specify [OPEN END]
9. Propane delivery company, please specify [OPEN END]
00. Another organization, please specify [OPEN END]
12. Not sure

[ASK IF WH4=2]

WH4c. Please identify the main reason why your municipality did not receive rebates or incentives?

1. Equipment did not qualify
2. Was in a hurry to purchase new equipment
3. Too much of a hassle to apply for the rebate
4. Did not know if one existed
0. Something else, please specify [OPEN END]

[ASK IF WH4=1]

WH5. Using a scale from 0 to 10, where 0 is “Not at all likely” and 10 is “Extremely likely”, If your municipality hadn’t received a rebate, what is the likelihood that your municipality would have installed EXACTLY the same ENERGY SAVING equipment without the rebates they received?

Not at All Likely 0	1	2	3	4	5	6	7	8	9	Extremely Likely 10	Not applicable	Not sure
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

[ASK IF EE1_SHOWN =5]

Refrigeration Section

R1. Which of the following refrigeration equipment has your municipality installed to save on their facilities’ energy usage? Please select all that apply. [MULTIPLE RESPONSE]

1. Controls for coolers and/or freezers
2. Refrigerated beverage or snack machine controls
3. ENERGY STAR refrigerated vending machine
4. ECM for walk-in and reach-in coolers and/or freezers
5. Strip curtain for walk-in coolers and/or freezers
6. Refrigeration economizers
7. Night covers for open refrigeration cases

00. Something else, please specify [OPEN END]

98. Not sure [SKIP TO CA1]

[ASK IF R1=1]

R3. What type(s) of refrigeration controls did your municipality install? Please select all that apply.

[MULTIPLE RESPONSE]

1. Automatic door closers
2. Door heater controls
3. Electrically Commutated Motor (ECM) controls

00. Something else, please specify [OPEN END]

98. Not sure

[ASK IF ANY R3 = 1 THROUGH 00]

R3a. How many of each type of refrigeration controls were installed? [NUMERIC OPEN END, CHECKBOX FOR NOT SURE]

Refrigeration Control	Quantity	Not Sure
1. [SHOW IF R3=1] Automatic door closers		<input type="checkbox"/>
2. [SHOW IF R3=2] Door heater controls		<input type="checkbox"/>
3. [SHOW IF R3=3] Electrically Commutated Motor (ECM) controls		<input type="checkbox"/>
4. [SHOW IF R3=00] [INSERT RESPONSE FROM R3_00]		<input type="checkbox"/>

[ASK IF R1=1]

R3b. For which equipment types were refrigeration controls installed?

a. [SHOW IF R3=1] Automatic door closers

1. Cooler
2. Freezer
8. Not sure

b. [SHOW IF R3=2] Door heater controls

1. Cooler
2. Freezer
8. Not sure

c. [SHOW IF R3=3] Electrically Commutated Motor (ECM) controls

1. Cooler

2. Freezer

8. Not sure

d. [SHOW IF R3=00] [INSERT RESPONSE FROM R3_00]

1. Cooler

2. Freezer

8. Not sure

[ASK IF R1 = 2 THROUGH 00]

R4. Please identify the number of refrigeration equipment installed at your municipality's facilities. Your best estimate is fine. [NUMERIC OPEN END, CHECKBOX FOR NOT SURE FOR EACH ROW]

Refrigeration Control	Quantity	Not Sure
1. [SHOW IF R1=2] Refrigerated beverage or snack machine controls		<input type="checkbox"/>
2. [SHOW IF R1=3] ENERGY STAR refrigerated vending machine		<input type="checkbox"/>
3. [SHOW IF R1=4] ECM for walk-in and reach-in coolers and/or freezers		<input type="checkbox"/>
4. [SHOW IF R1=5] Strip curtain for walk-in coolers and/or freezers		<input type="checkbox"/>
5. [SHOW IF R1=6] Refrigeration economizers		<input type="checkbox"/>
6. [SHOW IF R1=7] Night covers for open refrigeration cases		<input type="checkbox"/>
7. [SHOW IF R1=00] [INSERT RESPONSE FROM R1_00]		<input type="checkbox"/>

[ASK IF R1=7]

R5. For how many linear feet of refrigerated cases did you install night covers? [NUMERIC OPEN END, CHECKBOX FOR NOT SURE]

[ASK IF ANY R1 = 1 THROUGH 00]

R6. Did your municipality receive a rebate from any of the refrigeration equipment you installed?

1. Yes

2. No

8. Not sure

[ASK IF R6=1]

R6a. For which refrigeration equipment did your municipality receive rebates or incentives? Please select all that apply. [MULTIPLE RESPONSE]

1. [SHOW IF R1=1] Controls for coolers and/or freezers

2. [SHOW IF R1=2] Refrigerated beverage or snack machine controls

3. [SHOW IF R1=3] ENERGY STAR refrigerated vending machine
4. [SHOW IF R1=4] ECM for walk-in and reach-in coolers and/or freezers
5. [SHOW IF R1=5] Strip curtain for walk-in coolers and/or freezers
6. [SHOW IF R1=6] Refrigeration economizers
7. [SHOW IF R1=7] Night covers for open refrigeration cases
00. [SHOW IF R1=00] [INSERT RESPONSE TO R1_00]
9. Other [OPEN ENDED RESPONSE]
8. I received no rebates for the above listed equipment

[ASK IF R6a = 1 THROUGH 00]

R6b. Please identify the organization(s) from which your municipality received rebates or incentives? Please select all that apply. [MULTIPLE RESPONSE]

1. [Show if EBEW_FL or FEW_FL] Pacific Gas & Electric Company (PG&E)
- 2.
- 3.
4. [Show if WSide_FL or SGab_FL] Southern California Edison (SCE)
5. [Show if WSide_FL or SGab_FL or FEW_FL] Southern California Gas (SCG)
6. [Show if WSide_FL or SGab_FL] Southern California Regional Energy Network (SoCalREN)
7. [Show if SAND_FL] San Diego Gas and Electric (SDG&E)
8. Other municipal utility, please specify [OPEN END]
9. Propane delivery company, please specify [OPEN END]
00. Another organization, please specify [OPEN END]
12. Not sure

[ASK IF R6=2]

R6c. Please identify the main reason why your municipality did not receive rebates or incentives?

1. Equipment did not qualify
2. Was in a hurry to purchase new equipment
3. Too much of a hassle to apply for the rebate
4. Did not know if one existed

0. Something else, please specify [OPEN END]

[ASK IF R6=1]

R7. Using a scale from 0 to 10, where 0 is “Not at all likely” and 10 is “Extremely likely”, If your municipality hadn’t received a rebate, what is the likelihood that your municipality would have installed EXACTLY the same ENERGY SAVING equipment without the rebates they received?

Not at All Likely 0	1	2	3	4	5	6	7	8	9	Extremely Likely 10	Not applicable	Not sure
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

[ASK IF EE1_SHOWN = 6]

Compressed Air Section

CA1. Which of the following equipment has your municipality installed or upgraded to reduce your property’s compressed air energy usage? Please select all that apply. [MULTIPLE RESPONSE]

1. Air compressor with a variable frequency drive
2. High efficiency air dryer
3. Low-pressure drop filters
4. No-loss condensate drains
5. High efficiency air nozzles
00. Something else, please specify [OPEN END]
98. Not sure [SKIP TO SOL1]

[ASK IF ANY CA1 = 1 THROUGH 00]

CA1a. How many of each type of compressed air equipment did your municipality install or upgrade?
[NUMERIC OPEN END 0-99, CHECKBOX FOR NOT SURE FOR EACH ROW]

Compressed Air Equipment	Quantity	Not Sure
1. [SHOW IF CA1=1] Air compressor with a variable frequency drive		<input type="checkbox"/>
2. [SHOW IF CA1=2] High efficiency air dryer		<input type="checkbox"/>
3. [SHOW IF CA1=3] Low-pressure drop filters		<input type="checkbox"/>
4. [SHOW IF CA1=4] No-loss condensate drains		<input type="checkbox"/>
5. [SHOW IF CA1=5] High efficiency air nozzles		<input type="checkbox"/>
6. [SHOW IF CA1=00] [INSERT RESPONSE TO CA1_00]		<input type="checkbox"/>

[ASK IF CA1 = 1 THROUGH 00]

CA2. How often does your property use compressed air? Your best estimate is fine.

1. Less than 8 hours per day; 5 days a week

2. 8 hours per day; 5 days a week
3. 16 hours per day; 5 days a week
4. 24 hours per day; 5 days a week
5. 24 hours per day; 7 days a week
00. Something else, specify [OPEN END]
98. Not sure

[ASK IF CA1 = 1 THROUGH 00]

CA3. Please identify the air compressor type at your property.

1. Reciprocating
2. Screw
00. Something else, specify [OPEN END]
98. Not sure

[ASK IF CA1 = 1 THROUGH 00]

CA4. Did your municipality receive rebates or incentives for upgrading your compressed air equipment?

1. Yes
2. No
98. Not sure

[ASK IF CA4 = 1]

CA4a. For which compressed air equipment upgrades or installations did your municipality receive rebates or incentives? Please select all that apply. [MULTIPLE RESPONSE]

1. [SHOW IF CA1=1] Air compressor with a variable frequency drive
2. [SHOW IF CA1=2] High efficiency air dryer
3. [SHOW IF CA1=3] Low-pressure drop filters
4. [SHOW IF CA1=4] No-loss condensate drains
5. [SHOW IF CA1=5] High efficiency air nozzles
00. [SHOW IF CA1=00] [INSERT RESPONSE TO CA1_00]
7. Other [OPEN ENDED RESPONSE]
6. I received no rebates for the above listed equipment

[ASK IF CA4a THROUGH 00=1]

CA4b. Please identify the organization(s) from which your municipality received rebates or incentives? Please select all that apply. [MULTIPLE RESPONSE]

1. [Show if EBEW_FL or FEW_FL] Pacific Gas & Electric Company (PG&E)
- 2.
- 3.
4. [Show if WSide_FL or SGab_FL] Southern California Edison (SCE)
5. [Show if WSide_FL or SGab_FL or FEW_FL] Southern California Gas (SCG)
6. [Show if WSide_FL or SGab_FL] Southern California Regional Energy Network (SoCalREN)
7. [Show if SAND_FL] San Diego Gas and Electric (SDG&E)
8. Other municipal utility, please specify [OPEN END]
9. Propane delivery company, please specify [OPEN END]
00. Another organization, please specify [OPEN END]
12. Not sure

[ASK IF CA4=2]

CA4c. Please identify the main reason why your municipality did not receive rebates or incentives?

1. Equipment did not qualify
2. Was in a hurry to purchase new equipment
3. Too much of a hassle to apply for the rebate
4. Did not know if one existed
0. Something else, please specify [OPEN END]

[ASK IF CA4=1]

CA5. Using a scale from 0 to 10, where 0 is “Not at all likely” and 10 is “Extremely likely”, If your municipality hadn’t received a rebate, what is the likelihood that your municipality would have installed EXACTLY the same ENERGY SAVING equipment without the rebates they received?

Not at All Likely 0	1	2	3	4	5	6	7	8	9	Extremely Likely 10	Not applicable	Not sure
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

[ASK IF EE1_SHOWN = 7]

Solar Section

SOL1. How much solar capacity did your municipality install? Please estimate how many kilowatts (kW) of capacity was installed. Your best estimate is fine. [NUMERIC OPEN END]

98. Not Sure [CHECKBOX]

[ASK IF SOL1 > 0]

SOL2. Did your municipality receive a rebate or incentive for solar panels you installed in your property?

1. Yes
2. No
8. Not sure

[ASK IF SOL2=1]

SOL2a. Please identify the organization(s) from which your municipality received rebates or incentives?
Please select all that apply. [MULTIPLE RESPONSE]

1. [Show if EBEW_FL or FEW_FL] Pacific Gas & Electric Company (PG&E)
- 2.
- 3.
4. [Show if WSide_FL or SGab_FL] Southern California Edison (SCE)
5. [Show if WSide_FL or SGab_FL or FEW_FL] Southern California Gas (SCG)
6. [Show if WSide_FL or SGab_FL] Southern California Regional Energy Network (SoCalREN)
7. [Show if SAND_FL] San Diego Gas and Electric (SDG&E)
8. Other municipal utility, please specify [OPEN END]
9. Propane delivery company, please specify [OPEN END]
00. Another organization, please specify [OPEN END]
12. Not sure

[ASK IF SOL2 =2]

SOL2b. Please identify the main reason why your municipality did not receive rebates.

1. Equipment did not qualify
2. Was in a hurry to purchase new equipment
3. Too much of a hassle to apply for the rebate
4. Did not know if one existed
00. Something else, please specify [OPEN END]

[ASK IF SOL2=1]

SOL3. Using a scale from 0 to 10, where 0 is “Not at all likely” and 10 is “Extremely likely”, If your municipality hadn’t received a rebate, what is the likelihood that your municipality would have installed EXACTLY the same ENERGY SAVING equipment without the rebates they received?

Not at All Likely 0	1	2	3	4	5	6	7	8	9	Extremely Likely 10	Not applicable	Not sure
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

[ASK IF EE1_SHOWN = 00]

Other Equipment Section

OT1. Previously in the survey, when asked what energy saving equipment was upgraded or installed to reduce your municipal facilities’ energy usage since 2017, you specified that [INSERT EE_1=0 RESPONSE] was upgraded or installed. How many units of this equipment type, or alternatively, how much sq. ft. of space is covered by the installed equipment type?

Equipment	Quantity	Total Space Installed (sq. ft)	Installed equipment but not sure of quantity or sq. ft. impacted	Not Applicable
[INSERT EE_1=0 RESPONSE]			<input type="checkbox"/>	<input type="checkbox"/>

[ASK IF EE1__SHOWN = 00]

OT3. Did your municipality receive a rebate or incentive for these other changes you made to reduce energy use?

1. Yes
2. No
8. Not sure

[ASK IF OT3=1]

OT3a. Please identify the organization(s) from which your municipality received rebates or incentives? Please select all that apply. [MULTIPLE RESPONSE]

1. [Show if EBEW_FL or FEW_FL] Pacific Gas & Electric Company (PG&E)
- 2.
- 3.
4. [Show if WSide_FL or SGab_FL] Southern California Edison (SCE)

5. [Show if WSide_FL or SGab_FL or FEW_FL] Southern California Gas (SCG)
6. [Show if WSide_FL or SGab_FL] Southern California Regional Energy Network (SoCalREN)
7. [Show if SAND_FL] San Diego Gas and Electric (SDG&E)
8. Other municipal utility, please specify [OPEN END]
9. Propane delivery company, please specify [OPEN END]
00. Another organization, please specify [OPEN END]
12. Not sure

[ASK IF OT3=2]

OT3c. Please identify the main reason why your municipality did not receive rebates or incentives?

1. Equipment did not qualify
2. Was in a hurry to purchase new equipment
3. Too much of a hassle to apply for the rebate
8. Did not know if one existed
0. Something else, please specify [OPEN END]

[ASK IF OT3=1]

OT4. Using a scale from 0 to 10, where 0 is “Not at all likely” and 10 is “Extremely likely”, If your municipality hadn’t received a rebate, what is the likelihood that your municipality would have installed EXACTLY the same ENERGY SAVING equipment without the rebates they received?

Not at All Likely 0	1	2	3	4	5	6	7	8	9	Extremely Likely 10	Not applicable	Not sure
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

[ASK IF ANY EE1 = 1 THROUGH 00]

Level of Influence of Non-Resource Activity on Installation of EE Equipment

The following questions are about the level of influence of the [PIPE:TEXT_SHOWN_organization] program on your decision to install or upgrade your equipment. First, we’re going to ask about specific types of interactions that the program offered and how influential these were in your decisions, then we’re going to ask about the overall level of influence the program had on your decisions.

IN1a. On a scale of 0 to 10, where 0 is “Not at All Influential” and 10 is “Extremely Influential”, how influential was the energy efficiency related [PIPE:TEXT_SHOWN_method] in your decision to install energy saving equipment?

Energy-Efficiency Related Activity	Not at All Influential 0	1	2	3	4	5	6	7	8	9	Extremely Influential 10	Not Sure
1. [ASK IF Community event FL=1] Community Event	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. [ASK IF Canvasing FL=1] Canvasing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. [ASK IF Mail FL=1] Mailing Materials	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. [ASK IF Email FL=1] Email Messaging	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. [ASK IF Social media FL=1] Social Media Messaging	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. [ASK IF WOM FL=1] Word Of Mouth Communication	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. [ASK IF Rebate FL=1] Rebate or Discount Coupon	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. [ASK IF Previous FL=1] Previous Program You Participated In	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9. [ASK IF Meetings FL=1] Recurring Local Government Partnership Meeting	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10. [ASK IF Audit FL=1] Audit or Benchmarking Services	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11. [ASK IF Strategies FL=1] Energy/Climate Action Plans and Municipal Strategy	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12. [ASK IF Certification FL=1] Training and Certification	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13. [ASK IF TA FL=1] Project Technical Assistance and Program Communication	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Energy-Efficiency Related Activity	Not at All Influential 0	1	2	3	4	5	6	7	8	9	Extremely Influential 10	Not Sure
14. [ASK IF Other FL=1] Other Activity You Mentioned	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

[ASK IF ANY EE1 = 1 THROUGH 00]

IN2a. Now we would like to ask you about the importance of [PIPE:TEXT_SHOWN_organization] program in your decision to install energy saving equipment compared to other factors that may have influenced your decision.

If you were given a TOTAL of 10 points to rate the importance of the [PIPE:TEXT_SHOWN_organization] program in your decision to [SHOW “install energy saving equipment” if EE1≠ 98 OR 99], and you had to divide those 10 points between all your overall interactions with (1) the [PIPE:TEXT_SHOWN_method], and (2) any OTHER factors, how many points would you give to the importance of your interaction with the [PIPE:TEXT_SHOWN_organization] program? Your best estimate is fine.

Influencing Factors	Influence Score
1. All your interactions with the [PIPE:TEXT_SHOWN_organization] Program.	
2. Other Influencing Factors	

[ASK IF IN2a-2 > 2]

IN3a. Please list up to three other factors that influenced your decision to install energy saving equipment. [OPEN END – ALLOW FOR UP TO THREE RESPONSES]

[ASK IF ANY EE1 = 1 THROUGH 00]

IN4a. Now please think about the actions you would have taken with regard to installing energy saving equipment if you hadn't interacted with the [PIPE:TEXT_SHOWN_organization] program.

Using a scale from 0 to 10, where 0 is “Not at all likely” and 10 is “Extremely likely”, if you had not interacted with the [PIPE:TEXT_SHOWN_organization] program, including the [PIPE:TEXT_SHOWN_method], what is the likelihood that you would have installed EXACTLY the same ENERGY SAVING equipment either at the same time or later?

Not at All Likely 0	1	2	3	4	5	6	7	8	9	Extremely Likely 10	Not applicable	Not sure
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

[ASK IF IN4a>0]

IN5. Using the same scale from 0 to 10, if you had NOT interacted with the [PIPE:TEXT_SHOWN_organization] program including the [PIPE:TEXT_SHOWN_method], what is the likelihood that you would have installed exactly the same energy saving equipment within 12 months of when you did it?

Not at All Likely 0	1	2	3	4	5	6	7	8	9	Extremely Likely 10	Not applicable	Not sure
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

[ASK IF IN5>0]

IN5a. When do you think you would have installed the energy saving equipment had you not interacted with the [PIPE:TEXT_SHOWN_organization] Program? Please answer relative to the date that you actually installed the energy saving equipment:

- 0. At the same time
- 1. Within 6 months
- 2. More than 6 months up to 1 year later
- 3. More than 1 year up to 2 years later
- 4. More than 2 years up to 3 years later
- 5. More than 3 years up to 4 years later
- 6. More than 4 years later
- 8. Not sure

[ASK IF IN5a=6]

IN6a. Why do you think it would have been over 4 years later? [OPEN END]

[Ask IN7a if any response in IN1a = 9 or 10 and IN4a = 9 or 10]

IN7a. Some of your answers suggest that the [PIPE:TEXT_SHOWN_organization] program was very important in your decision to purchase energy efficient equipment while others suggest that it was not. When asked how influential the program was in your decision to install energy efficient equipment, you indicated it was very influential. However, when asked how likely you would have been to install the energy efficient equipment without your interaction with the program, you said you would have been very likely to.

Can you clarify? On a scale of 0 to 10, where 0 is “Not at All Influential” and 10 is “Extremely Influential”, how influential was the [PIPE:TEXT_SHOWN_organization] program including the [PIPE:TEXT_SHOWN_method] in your decision to install energy saving equipment?

Energy-Efficiency Related Activity	Not at All Influential 0	1	2	3	4	5	6	7	8	9	Extremely Influential 10	Not Sure
1. [ASK IF Community event FL=1] Community Event	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. [ASK IF Canvassing FL=1] Canvassing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Energy-Efficiency Related Activity	Not at All Influential 0	1	2	3	4	5	6	7	8	9	Extremely Influential 10	Not Sure
3. [ASK IF Mail FL=1] Mailing Materials	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. [ASK IF Email FL=1] Email Messaging	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. [ASK IF Social media FL=1] Social Media Messaging	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. [ASK IF WOM FL=1] Word Of Mouth Communication	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. [ASK IF Rebate FL=1] Rebate or Discount Coupon	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. [ASK IF Previous FL=1] Previous Program You Participated In	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9. [ASK IF Meetings FL=1] Recurring Local Government Partnership Meeting	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10. [ASK IF Audit FL=1] Audit or Benchmarking Services	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11. [ASK IF Strategies FL=1] Energy/Climate Action Plans and Municipal Strategy	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12. [ASK IF Certification FL=1] Training and Certification	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13. [ASK IF TA FL=1] Project Technical Assistance and Program Communication	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
14. [ASK IF Other FL=1] Other Activity You Mentioned	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

[Ask IN8a if any response in IN1a = 9 or 10 and IN4a = 9 or 10]

IN8a. Again, using a scale from 0 to 10, where 0 is “Not at all likely” and 10 is “Extremely likely”, if you hadn’t interacted with the [PIPE:TEXT_SHOWN_organization] program including the [PIPE:TEXT_SHOWN_method], what is the likelihood that you would have installed EXACTLY the same ENERGY SAVING equipment either at the same time or later?

Not at All Likely 0	1	2	3	4	5	6	7	8	9	Extremely Likely 10	Not applicable	Not sure
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

[Ask IN9a if any response in IN1a = 0,1, or 2 and IN4a = 0,1, or 2]

IN9a. Some of your answers suggest that the [PIPE:TEXT_SHOWN_organization] was very important in your decision to purchase energy efficient equipment while others suggest that it was not. When asked how influential the program was in your decision to install energy efficient equipment, you indicated it was NOT very influential. However, when asked how likely you would have been to install the energy efficient equipment without your interaction with the program, you said you would NOT have been very likely to.

Can you clarify? On a scale of 0 to 10, where 0 is “Not at All Influential” and 10 is “Extremely Influential”, how influential was the [PIPE:TEXT_SHOWN_organization] including the [PIPE:TEXT_SHOWN_method] in your decision to install energy saving equipment?

Energy-Efficiency Related Activity	Not at All Influential 0	1	2	3	4	5	6	7	8	9	Extremely Influential 10	Not Sure
1. [ASK IF Community event FL=1] Community Event	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. [ASK IF Canvassing FL=1] Canvassing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. [ASK IF Mail FL=1] Mailing Materials	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. [ASK IF Email FL=1] Email Messaging	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. [ASK IF Social media FL=1] Social Media Messaging	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. [ASK IF WOM FL=1] Word Of Mouth Communication	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. [ASK IF Rebate FL=1] Rebate or Discount Coupon	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. [ASK IF Previous FL=1] Previous Program You Participated In	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Energy-Efficiency Related Activity	Not at All Influential 0	1	2	3	4	5	6	7	8	9	Extremely Influential 10	Not Sure
9. [ASK IF Meetings FL=1] Recurring Local Government Partnership Meeting	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10. [ASK IF Audit FL=1] Audit or Benchmarking Services	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11. [ASK IF Strategies FL=1] Energy/Climate Action Plans and Municipal Strategy	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12. [ASK IF Certification FL=1] Training and Certification	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13. [ASK IF TA FL=1] Project Technical Assistance and Program Communication	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
14. [ASK IF Other FL=1] Other Activity You Mentioned	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

[Ask IN10a if any response in IN1a = 0,1, or 2 and IN4a = 0,1, or 2]

IN10a. Again, using a scale from 0 to 10, where 0 is “Not at all likely” and 10 is “Extremely likely”, if you hadn't interacted with the [PIPE:TEXT_SHOWN_organization] program including [PIPE:TEXT_SHOWN_method] what is the likelihood that you would have installed EXACTLY the same ENERGY SAVING equipment either at the same time or later?

Not at All Likely 0	1	2	3	4	5	6	7	8	9	Extremely Likely 10	Not applicable	Not sure
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Behavioral Actions

Next, we would like to learn about any Behavioral Actions you or your municipality's staff may have taken toward saving energy, either on your own or by participating in an energy saving programs. Our definition of 'behaviors' are changes in how existing equipment is operated, not decisions to replace with more efficient equipment. This includes, for example, changing the run hours for lighting systems, dimming lights to make use of ambient lighting, or adjusting temperature set points for HVAC systems to better match comfort needs, etc.

B1. For the municipal facilities you're engaged with, have there been any Behavioral Actions taken to change the way equipment operates in order to save energy, AFTER your engagement with the [PIPE:TEXT_SHOWN_organization] program?

1. Yes
2. No [SKIP TO Next]

[GENERATE REB_FL=1 IF ANY L7=1, H16=1, HE2=1, WH4=1, R6=1, CA4=1, SOL2=1, OT3=1, ELSE REB_FL=0]

[ASK IF B1=1]

B2. In your opinion, how would you characterize the energy savings as a result of Behavioral Changes or Enhancements your municipality has made AFTER engaging with the [PIPE:TEXT_SHOWN_organization] program? In general, would you say these are...?

1. Significant energy savings
2. Moderate energy savings
3. Measurable but insignificant energy savings
4. Not measurable

[ASK IF B1=1]

B3 A list of potential Behavioral Energy-saving Actions is provided below. For the facilities where these actions were taken to change the way equipment operates in order to save energy, please indicate if this action was taken BEFORE and/or AFTER your engagement with the [PIPE:TEXT_SHOWN_organization] program. Please select at least one answer for each item below. [RANDOMIZE]

Action Type	Action Taken Before Engaging with the Program	Action Taken After Engaging with the Program	Action not taken	Don't Know
1. Boiler/Hot Water/ Steam System Changes	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Chiller / Chilled Water System Changes	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Cooling tower optimization	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. Domestic Hot Water changes such as new faucets, showerheads or water heaters	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. Economizer and Ventilation control changes	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. HVAC Equipment Scheduling or Space Temperature changes	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. Fan optimization/Air Distribution upgrades	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Action Type	Action Taken Before Engaging with the Program	Action Taken After Engaging with the Program	Action not taken	Don't Know
8. Optimize lighting system run hours	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9. Water Pump optimization changes	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10. Package/Split-System HVAC Changes	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11. OTHER changes not mentioned above	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

[ASK IF B3-11<>Action not taken OR Don't Know]

B4. You indicated that you had taken Behavioral Actions to save energy that were not described on the previous list. Please tell us briefly what actions those were. [OPEN END]

[Skip to AW1a if B1 != 1]

Level of Influence of Non-Resource Activity on EE Actions

[DISPLAY SENTENCE BELOW ON SAME PAGE AS IN1a]

The following questions are about the level of influence of the [PIPE:TEXT_SHOWN_organization] program on your municipality's decision to change staff behavior to reduce their energy use. Our definition of 'behaviors' are changes in how existing equipment is operated, not decisions to replace with more efficient equipment. This includes, for example, changing the run hours for lighting systems, dimming lights to make use of ambient lighting, or adjusting temperature set points for HVAC systems to better match comfort needs, etc.

First, we're going to ask about specific types of interactions that the program offered and how influential these were in your municipality's behavioral changes, then we're going to ask about the overall level of influence the program had on your municipality's behaviors.

[ASK IN1a – IN6a IF SF_FL = 1]

IN1b. On a scale of 0 to 10, where 0 is "Not at All Influential" and 10 is "Extremely Influential", how influential was the [PIPE:TEXT_SHOWN_organization] program including the [PIPE:TEXT_SHOWN_method] in your municipality's decision to carry out energy savings actions".

Energy-Efficiency Related Activity	Not at All Influential 0	1	2	3	4	5	6	7	8	9	Extremely Influential 10	Not Sure
1. [ASK IF Community event FL=1] Community Event	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. [ASK IF Canvassing FL=1] Canvassing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Energy-Efficiency Related Activity	Not at All Influential 0	1	2	3	4	5	6	7	8	9	Extremely Influential 10	Not Sure
3. [ASK IF Mail FL=1] Mailing Materials	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. [ASK IF Email FL=1] Email Messaging	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. [ASK IF Social media FL=1] Social Media Messaging	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. [ASK IF WOM FL=1] Word Of Mouth Communication	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. [ASK IF Rebate FL=1] Rebate or Discount Coupon	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. [ASK IF Previous FL=1] Previous Program You Participated In	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9. [ASK IF Meetings FL=1] Recurring Local Government Partnership Meeting	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10. [ASK IF Audit FL=1] Audit or Benchmarking Services	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11. [ASK IF Strategies FL=1] Energy/Climate Action Plans and Municipal Strategy	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12. [ASK IF Certification FL=1] Training and Certification	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13. [ASK IF TA FL=1] Project Technical Assistance and Program Communication	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Energy-Efficiency Related Activity	Not at All Influential 0	1	2	3	4	5	6	7	8	9	Extremely Influential 10	Not Sure
14. [ASK IF Other FL=1] Other Activity You Mentioned	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

[ASK IF ANY B1 = 1 THROUGH 11 OR 00]

IN2b. Now we would like to ask you about the importance of the [PIPE:TEXT_SHOWN_organization] program including the [PIPE:TEXT_SHOWN_method] in your municipality's decision to carry out energy saving actions compared to other factors that may have influenced your decision.

If you were given a TOTAL of 10 points to reflect the importance of the [PIPE:TEXT_SHOWN_organization] program's energy saving related activity in your municipality's decision to carry out energy saving actions, and you had to divide those 10 points between (1) all your overall interactions with [PIPE:TEXT_SHOWN_method], and (2) any OTHER factors, how many points would you give to the importance of your interaction with the [PIPE:TEXT_SHOWN_organization] program? Your best estimate is fine.

Influencing Factors	Influence Score
1. All your municipality's interactions with the [PIPE:TEXT_SHOWN_organization] Program.	
2. Other Influencing Factors	

[ASK IF IN2b-2 > 2]

IN3b. Please list up to three other influencing factors on your decision to take energy saving actions. [OPEN END – ALLOW FOR UP TO THREE RESPONSES]

[ASK IF ANY B1 = 1 THROUGH 00]

IN4b. Now please think about the energy saving action(s) your municipality would have taken if you had not interacted with [PIPE:TEXT_SHOWN_organization] program.

Using a scale from 0 to 10, where 0 is “Not at all likely” and 10 is “Extremely likely”, if your municipality had not interacted with the [PIPE:TEXT_SHOWN_organization] program including the [PIPE:TEXT_SHOWN_method], what is the likelihood that you would have taken the exact same energy saving action(s) either at the same time or later?

Not at All Likely 0	1	2	3	4	5	6	7	8	9	Extremely Likely 10	Not applicable	Not sure
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

[ASK IF IN4b>0]

IN5b. Using the same scale from 0 to 10, if you had NOT interacted with the [PIPE:TEXT_SHOWN_organization] program including the [PIPE:TEXT_SHOWN_method], what is the likelihood that your municipality would have taken the same energy saving action(s) within 12 months of when you did it?

Not at All Likely 0	1	2	3	4	5	6	7	8	9	Extremely Likely 10	Not applicable	Not sure
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

[ASK IF IN5b>0]

IN5c. When do you think your municipality would have taken the energy saving action(s) had you not interacted with [PIPE:TEXT_SHOWN_organization] program including the [PIPE:TEXT_SHOWN_method] ? Please answer relative to the date that you started taking the energy saving action(s):

- 0. At the same time
- 1. Within 6 months
- 2. More than 6 months up to 1 year later
- 3. More than 1 year up to 2 years later
- 4. More than 2 years up to 3 years later
- 5. More than 3 years up to 4 years later
- 6. More than 4 years later
- 8. Not sure

[ASK IF IN5b=6]

IN6b. Why do you think it would have been over 4 years later? [OPEN END]

Awareness of EE PA Resource Programs

[ASK IF REB_FL=0]

AW1a. Prior to this study, were you aware of any energy saving program(s) offered by California energy service providers and other energy-related organizations (like the [PIPE:TEXT_SHOWN_organization] program) that offer rebates or incentives for installation of equipment such as energy saving lighting, heating or cooling equipment, water saving equipment, or insulation and air sealing?

- 1. Yes
- 2. No

[ASK IF REB_FL=1]

AW1b. You mentioned that your municipality received rebates and/or incentives from California energy service providers or other energy related organizations for some of the energy equipment you had installed.

Are you aware of any other energy saving program(s) offered by California energy service providers or other energy related organizations that offer rebates or incentives for installation of energy efficient equipment?

1. Yes
2. No

[ASK IF AW1a OR AW1b=1]

AW2. What energy saving program(s) have you heard of? [OPEN END] [ADD CHECKBOX FOR PREFER NOT TO ANSWER]

☐ Prefer not to answer

[ASK IF AW1a OR AW1b=1]

AW2a. Where did you first hear about the energy saving program(s)?

1. eNewsletter
2. Energy Bill
3. Word-of-Mouth (i.e. Colleague)
4. Contractor
5. Social Media (e.g., Facebook, Twitter, Instagram)
6. Energy Provider or Utility Website
7. Local government
8. Community group
9. Community event
10. Local Government Partnership meeting
11. Training or certification
0. Something else, please specify [OPEN END] [Anchor]
12. Not sure [Anchor]

[ASK IF REB_FL=1]

AW3. Thinking about the energy saving upgrades you completed, how did you learn about the rebates or incentives offered for upgrading or installing equipment at the municipality facilities you're engaged with? [OPEN END] [ADD CHECKBOX FOR PREFER NOT TO ANSWER]

☐ Prefer not to answer

Drivers and Barriers to Participation in PA EE Resource Programs

[DISPLAY SENTENCE BELOW ON SAME PAGE AS BD1]

Next, we'd like to learn about what drivers would motivate the municipality facilities you're engaged with to install energy saving equipment as well as any challenges that may have been encountered.

[ASK IF REB_FL=0]

BD1. What would encourage your municipality to install or upgrade energy saving equipment through your utility or energy service provider? [OPEN END, CHECKBOX FOR NOT SURE]

BD1a Using a scale from 0 to 10, where 0 is "Not at important" and 10 is "Extremely important", please rate the following actions that would encourage your municipality to install or upgrade energy saving equipment through your utility or energy service provider?

	Not at All Important	1	2	3	4	5	6	7	8	9	Extremely Important 10	Not applicable	Not sure
1. Understanding the potential for energy efficiency across all of the facilities we operate	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Expanded access to low cost financing for energy efficiency equipment replacements	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Assistance in identifying which utility programs can be used for energy efficiency equipment replacements	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. OTHER changes not mentioned above	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

[ASK IF BD1a_4 = 1 to 10]

BD1b. You indicated that OTHER changes not mentioned above would encourage you to install or upgrade energy saving equipment through your utility or energy service provider. Please tell us briefly these other changes might be. [OPEN END]

98. Prefer not to answer

[ASK ALL]

Firmographics

D1. Which utilities or energy efficiency service providers currently provide your municipal property's electric service?

1. [Show if EBEW_FL or FEW_FL] Pacific Gas & Electric Company (PG&E)

- 2.
3. [Show if WSide_FL or SGab_FL] Southern California Edison (SCE)
4. [Show if SAND_FL] San Diego Gas and Electric (SDG&E)
5. Municipal utility, please specify [OPEN END]
6. Electric Cooperative, please specify [OPEN END]
7. Another organization, please specify [OPEN END]

98. Not sure

D14. Which utilities or energy efficiency service providers currently provide your property's natural gas service?

1. [Show if EBEW_FL or FEW_FL] Pacific Gas & Electric Company (PG&E)
- 2.
3. Show if WSide_FL or SGab_FL or FEW_FL] Southern California Gas (SCG)
4. [Show if SAND_FL] San Diego gas and Electric (SDG&E)
5. Municipal utility, please specify [OPEN END]
6. Propane delivery company, please specify [OPEN END]
7. Another organization, please specify [OPEN END]

8. No gas service

99. Not sure

Closing

C1. Should we have any questions or need clarification regarding any of your responses in this survey, would it be okay to contact you again in the future?

1. Yes
2. I am not the best person to contact, please specify the full name of the person to contact [OPEN END]
3. No

[ASK IF C1 = 1 or 2]

C3. What is the best phone number and email address to contact you, please specify in the text box below. [FORCE AT LEAST ONE ANSWER TO PHONE NUMBER]

Phone Number:

Email:

Those are all of our questions. We appreciate your time and participation. On behalf of the California Public Utilities Commission, Thank you!

Appendix D. Survey Response Rate Methodology

The survey response rate is the number of completed interviews divided by the total number of potentially eligible respondents. We calculated RR3 using the standards and formulas set forth by the AAPOR. The formulas used to calculate RR3 are presented below. The definitions of the letters used in the formulas are displayed in the Survey Disposition tables (Table 7 and Table 8). The RR for this survey was 17.2%.

Equation 2. Response Rate Formula

$$RR3 = \frac{I}{(I + N + e1(U1 + e2 * U2))}$$

Where:

$$e1 = \frac{(I + N)}{(I + N + X1)}$$

$$e2 = \frac{(I + N + X1 + U1)}{(I + N + X1 + U1 + X2)}$$

Appendix E. Resource Tracking Data Observations

The purpose of this appendix is to observe the savings claims for municipal/local government projects reported in the IOU resource tracking databases for each of the LGPs included in this evaluation. This resource tracking data observation also provides an opportunity to compare resource savings reported in the IOU resource tracking databases with resource savings reported in the CPUC's CEDARS database. This analysis is for observational purposes only and is not meant to represent definitive resource savings of the LGPs.

The information in each IOU resource tracking database, which was provided in response to our data request, varied significantly even among databases from the same IOU and LGP (i.e., some provided claim IDs and gross savings, while others did not). Consequently, the evaluation team applied the following methodology for compiling energy savings from the disparate IOU resource tracking databases:

- Reviewed, organized, and assessed the evaluability of each discrete resource tracking database, including identifying the sectors served, types of activities, dataset year(s), and whether or not the database contained gross savings or IDs capable of matching the IOU resource records to CPUC tracking data.
- Applied one of the following three methods, based on the available information in each IOU resource database, to identify the gross municipal energy savings:
 - **Method 1:** For IOU resource databases that already included documentation of gross energy savings, the evaluation team used other available fields such as sector, project type, customer name, and email address to identify municipal/public sector customers and any associated gross energy savings.
 - **Method 2:** For IOU resource databases that did not document gross energy savings but did include claim IDs, we matched these record level claim IDs to the CPUC tracking database and then filtered using other available fields to identify municipal/public sector customers and any associated gross energy savings.
 - **Method 3:** For IOU resource databases that did not document gross energy savings or claim IDs, we attempted to match other record level fields from the IOU databases to the CPUC tracking database. Although this method was only attempted on one SCG Western Riverside database, our efforts were inconclusive due to no clear matches between databases.
- Appended together the gross energy savings from the various IOU resource databases.

Table 36 provides a summary of the LGPs gross first year electric and gas savings reported in the IOU tracking databases for program years 2017-2019.²⁵

²⁵ Emerging Cities resource tracking database only included projects from 2017.

Table 36. LGP Savings from IOU Resource Tracking Databases – Municipal/Local Government Projects

LGP Municipal Resource Savings Datasets - Municipal Savings from IOU Tracking						
LGP	Total LGP Electric Savings (kWh)	LGP Direct Install Electric Savings (kWh)	LGP Non-DI Electric Savings (kWh)	Total LGP Gas Savings (Therms) ²⁶	LGP Direct Install Gas Savings (Therms)	LGP Non-DI Gas Savings (Therms)
ECP ²⁷	636,111	34,525	601,587	-236	-127	-109
WRP ^{28, 29}	1,743,301	3,919	1,739,381	63,360	2,878	60,482
VCP	1,248,864	251,750	997,114	116,980	6,123	110,856
RCEW	981,629	958,490	23,139	-1,432	-10,023	8,591
SBEW	13,826,071	256	13,825,816	23,338	-1	23,338
Total	18,435,976	1,248,940	17,187,037	202,010	-1,149	203,159

Table 37 provides a summary of first year electric and gas savings reported for each program in the CEDARS program-level reports for 2017-2019. Table 36 and Table 37 highlight an inconsistency in savings values for the LGPs across the IOU resource tracking and CEDARS. This difference is attributable to several factors, including:

- Savings reported in Table 36 summarize savings associated with municipal projects, whereas Table 37 summarizes energy savings across all sectors.
- Savings associated with the SCG partnerships do not appear in CEDARS because they are considered non-resource projects, and therefore do not appear in Table 37.

²⁶ Total LGP Gas Savings includes interactive effects in the SCE and PG&E resource tracking databases.

²⁷ SDG&E provided two datasets for Emerging Cities. The evaluation team compared the two datasets and found that the majority of records were identical, but that a handful of select records were unique or had the same IDs but different savings values. For this analysis we used the dataset with the most recent dates and more detailed savings information, and then added any unique records from the other dataset.

²⁸ Western Riverside's savings in Table 36 are net savings as gross savings were not provided in the IOU resource dataset.

²⁹ As noted previously, the savings for Western Riverside does not include gas savings associated with the dataset provided by SoCal Gas as it did not document gross energy savings or claim IDs, and we were unable to match records to CEDARS using the available fields.

- Quality of the data in the IOU resource tracking datasets varied and there was lack of standardization across the IOU's LGP resource tracking, resulting in several caveats for the savings figures in Table 36.

Table 37. CEDARS LGP Savings Rollup - All claims, all sector activity from CEDARS program level report³⁰

LGP	Total LGP electric Savings (kWh)	Total LGP Gas Savings (Therms)
WRP	2,879,111	-189
VCP	1,248,864	36,736
RCEW	3,548,250	-28,107
SBEW	3,928,644	-12,631
Total	11,604,869	-4,189

The following subsections detail the methods applied to each Partnership's tracking data as well as additional background information regarding each Partnership's resource savings.

SDG&E's Emerging Cities Partnership

Method one was used for recording Emerging Cities' savings in Table 36. The SDG&E Emerging Cities Partnership IOU resource tracking database available to the evaluation team only featured Orange County city accounts, and not San Diego accounts. This is because the Emerging Cities Partnership was not responsible for resource activities in San Diego County. In addition, the energy savings reported in SDG&E's resource tracking database could not be compared with CEDARS because ECP is designated as a non-resource program.

SCE and SCG's Ventura County Partnership

Method one was employed for capturing Ventura's savings in Table 36. Ventura's electric savings were the only savings reported in the IOU tracking database that matched its reporting in CEDARS. This indicated that any non-public sector savings are likely being attributed to other programs that the Ventura program channels participation into.

³⁰ CEDARS does not include savings for Emerging Cities and SCG's Partnerships because they were considered non-resource programs from 2017-2019, and a portion of its energy savings is claimed by its collaborator, SANDAG.

SCE and SCG's Western Riverside Partnership

Western Riverside's reporting in Table 36 reflects the IOU resource tracking databases from SCE and SCG. The difference in electric savings is likely, in part, due to Western Riverside's savings being reported as net savings in the IOU resource tracking database. Additionally, gas savings are not reported in Table 36 because SCG's WRP is a non-resource program.

PG&E's Redwood Coast Energy Watch Partnership

Method 2 was used to summarize Redwood's electric and gas savings from PG&E's resource tracking data, in Table 36. Savings are lower in Table 36 because it is only reporting the municipal savings in the database, as opposed to all sectors in Table 37.

Table 38. Redwood Coast IOU Tracking Database Savings Summary- Municipal

Measure	Sum First-Year Gross kWh
Redwood Coast - SMB Deemed Downstream	1,951
Redwood Coast - Custom Direct Install	21,644
Redwood Coast - Deemed Downstream	21,188
Redwood Coast - Non-Res Direct Install	936,845
Grand Total	981,629

Table 39. Redwood Coast IOU Tracking Database Savings Summary- All Sectors

Measure	Sum of First-Year Gross kWh
Redwood Coast - SMB Deemed Downstream	1,951
Redwood Coast - Custom Direct Install	21,644
Redwood Coast - Deemed Downstream	37,813
Redwood Coast - Non-Res Direct Install	3,922,626
Redwood Coast - Residential DI	32,787
Total	4,016,821

PG&E & SCG's Northern Santa Barbara Partnership

Method 2 was used to summarize Santa Barbara's gas and electric savings from the PG&E tracking database, and Method one was used to summarize its gas savings from the SCG tracking databases. Apart from any discrepancies that would result from excluding non-municipal savings reported in the IOU tracking database, Table 36 and Table 37 reveal a significant discrepancy between the electric savings values reported in the PG&E resource tracking database and CEDARS. Trying to account for this discrepancy, we discovered that the savings reported for the Santa Barbara Deemed Downstream Streetlights program is accounted for differently in PG&E's resource tracking database and in CEDARS, resulting in the higher electric savings for Santa Barbara in Table 36 compared to Table 37.

Table 40. Santa Barbara IOU Tracking Database Savings Summary- Municipal

Measure	Sum of First-Year Gross kWh
Santa Barbara - Deemed Downstream Streetlights	13,825,816
Santa Barbara - Direct Install	256
Total	13,826,071

Table 41. Santa Barbara IOU Resource Tracking Database Savings Summary- All Sectors

Measure	First Year Gross kWh
Santa Barbara - Deemed Downstream Streetlights	13,825,816
Santa Barbara - Custom Direct Install	565,349
Santa Barbara - Direct Install	3,371,132
Total	21,779,117

Appendix F. Response to Public Comments

Table 42 below presents the public comments received on the Year 2 Assessment of LGPs report and the evaluation team's response.

Table 42. Public Comments on Year 2 LGP Report and Responses

Comment #	Commenter	Page in Report	Comment/Feedback	Response
1	IOU Response to Recommendations (RTR) Policy Team	Overarching	On behalf of the IOU Response to Recommendations (RTR) Policy Team, we'd like to request that the recommendations be put in a table following the CPUC Energy Division Impact Evaluation Standard Reporting Guidelines (even for non-impact evaluations). ³¹ Thank you!	The Evaluation team has added Appendix G. Standardized Recommendations to this report, which follows Guideline 3 of the CPUC Energy Division Impact Evaluation Standard Reporting Guidelines.

³¹CPUC Energy Division Impact Evaluation Standard Reporting Guidelines, November 2015.
https://pda.energydataweb.com/api/downloads/1399/IESR_Guidelines_Memo_FINAL_11_30_2015.pdf

Appendix G. Standardized Recommendations

Table 43 provides a catalog of recommendations resulting from this study’s evaluation research, in accordance with “Guideline 3” of the CPUC’s Impact Evaluation Standard Reporting Guidelines. The table below summarizes the findings and recommendations found in Section 9, the target for each recommendation and, if needed, where more detailed information that supports the recommendation can be found.

Table 43. Standardized Reporting Table

Study ID	Study Type	Study Title	Study Manager			
17PS5017	Non-resource Evaluation	Assessment of Local Government Partnerships CPUC Contract Group B: Deliverable 22A Year 2 Study		CPUC		
Recommendation	Program or Database	Summary of Findings	Additional Supporting Information	Best Practice / Recommendations	Recommendation Recipient	Affected Workpaper or DEER
1	LGP/Public Sector Non-Resource Tracking Databases	Based on the evaluability assessment of select LGPs' non-resource activity data, the evaluation team found the quality and completeness of the non-resource program data provided by the IOUs to be much improved compared to the year one study with many of the datasets containing fields mergeable with CPUC and IOU resource databases. However, the organization and quantity of data provided varied among LGPs relative to the non-resource activities they listed in their response to the data request and other planning documents. Our in-depth interviews and review of data request materials also revealed that there are not any established protocols pertaining to non-resource tracking, which explains the lack of standardized tracking found in both this year and last year's study.	Detailed Evaluability Assessment results are presented in Section 4.	The ongoing transition to third-party implementation, which is significantly impacting the design of LGPs going forward, should be leveraged to improve non-resource data collection protocols and reporting. Newly selected LGP implementers should adopt processes that facilitate the collection of non-resource participant information including, at a minimum, tracking customer names, phone numbers, email addresses, service addresses, dates of participation in the non-resource activity, and type of non-resource activity participated in. We also recommend the collection of any associated customer IDs used by the PAs in their data-tracking systems. As data quality and completeness improve, evaluators can more fully capture the attributable energy savings from non-resource activities. Analysis of this sort goes far to demonstrate the benefits of non-resource activities and the unique value that LGPs provide. Additionally, data systems should be designed to track non-resource participants over a multi-year time frame to better understand how ongoing engagement with LGPs drives program participation.	All IOUs/LGPs	N/A
2	LGP/Public Sector Non-Resource Tracking Databases	By identifying matches in the CPUC and IOU resource program databases, the channeling analysis found that 20% (85 out of 430) of the LGP non-resource participants identified in the non-resource datasets took part in a PA resource program after engaging in an LGP non-resource activity. This was a great improvement compared to the year one study, and in large part could be attributable to more complete non-resource data.	Detailed Channeling Analysis results are presented in Section 5.	To further improve future channeling analyses, LGPs should clearly identify the date in which each customer participates in a non-resource activity in their non-resource tracking datasets, and also provide the capacity to enter project records, such as claim IDs, should these participants go on to complete projects through a PA program. This will improve the accuracy of matching non-resource and resource databases.	All IOUs/LGPs	N/A
3	LGP/Public Sector Non-Resource Tracking Databases	Reinforcing the year one study findings, the LGP non-resource activities evaluated in this year's study were more successful at influencing municipalities' decisions to install EE equipment and engage in energy saving behaviors. For EE upgrades, the average influence scores of LGP non-resource activities versus other factors ranged from 5.3 to 8.3 out of 10, with an overall average of 6.3 among respondents. Regarding energy savings behaviors, the average influence scores of LGP non-resource activities versus other factors ranged from 5.0 to 7.2 out of 10, with an overall average of 6.2 among respondents.	Average Influence Scores of LGP Non-Resource Activities versus Other Factors on EE upgrades can be found in Figure 8. Average Influence Scores of LGP Non-Resource Activities versus Other Factors on energy saving behaviors can be found in Figure 11.	N/A	All IOUs/LGPs	N/A

Appendix G. Standardized Recommendations

4	LGP/Public Sector Non-Resource Tracking Databases	Based on the results of the engineering and attribution analysis, the evaluation team found that the success of LGPs in driving customers to install EE equipment was mixed. For the five LGPs studied in this evaluation, we estimate the net electric savings attributable to LGP non-resource activities to be 95 MWh. Based on survey participants' responses of which EE upgrades were rebated, approximately 55% of those savings are accounted for in the CPUC and IOU resource program databases. In the case of natural gas, of the attributable first-year net therm savings from EE equipment installations (1,572 therms), approximately 60% resulted from installing EE equipment outside of a PA resource program.	Detailed Engineering and Attribution Analysis results are presented in Sections 7 and 8 respectively.	N/A	All IOUs/LGPs	N/A
5	LGP/Public Sector Non-Resource Tracking Databases	RCEW's single comprehensive non-resource tracking dataset was a significant improvement compared to the disparate databases provided by the LGPs studied in the year one evaluation, and by other LGPs for this year's evaluation. The single dataset improved the evaluation team's ability to conduct the channeling analysis for RCEW's non-resource activities. The majority of non-resource tracking data fields were sufficiently populated and of good quality for our channeling analysis. This is likely why the channeling analysis was able to identify a significantly higher percentage (74%) of municipal customers who went on to participate in a resource program after engaging in a RCEW non-resource activity compared with the percentages identified for the other LGPs in this study. A comparison of non-resource activities tracked in RCEW's database to the non-resource activities listed in the various marketing, education and outreach (ME&O) materials provided to the team for review indicates that RCEW is very comprehensive in the number of total possible non-resource activities being tracked. The quality of RCEW's non-resource activity tracking data puts it in a much better position to receive full credit for these tracked activities.	Detailed Evaluability Assessment results for RCEW are presented in Section 4.1. Detailed Channeling Analysis results are presented in Section 5.	N/A	PG&E's Redwood Coast Energy Watch	N/A
6	LGP/Public Sector Non-Resource Tracking Databases	Among LGPs included in this study, RCEW's non-resource activities had the highest average influence score versus that of other factors for both municipal EE upgrades (8.3 out of 10) and behavioral changes (7.2 out of 10).	Average Influence Scores of LGP Non-Resource Activities versus Other Factors on EE upgrades can be found in Figure 8. Average Influence Scores of LGP Non-Resource Activities versus Other Factors on energy saving behaviors can be found in Figure 11.	N/A	PG&E's Redwood Coast Energy Watch	N/A
7	LGP/Public Sector Non-Resource Tracking Databases	SBEW provided significantly more municipal records (171) of unique contact information in their non-resource databases than the other LGPs evaluated, accounting for 55% of the total municipal records in this year's study. The evaluation team also found a number of non-resource activities targeting municipalities that were listed in SBEW's narrative description of its non-resource activities but did not have associated tracking databases. Despite SBEW providing the most non-resource municipal records, the inconsistency of data collection across its non-resource activities limited the extent to which the evaluation team could assess the benefits of SBEW's non-resource activities.	Detailed Channeling Analysis results are presented in Section 5. Detailed Evaluability Assessment results for SBEW are presented in Section 4.2.	SBEW should expand its collection of customer data to include as many of its non-resource activities as possible. This will enable future evaluations to better examine and quantify the impact of these activities, thereby capturing the value of their non-resource activities more comprehensively. Considering that the Energy Division seems to be increasingly interested in the value of PA non-resource activities, other LGPs and programs offering non-resource activities, including SBEW, should follow RCEW's standardized approach to tracking these types of activities using a single comprehensive and high-quality database as discussed previously in Finding #5.	PG&E and SCG's Santa Barbara Energy Watch	N/A
8	LGP/Public Sector Non-Resource Tracking Databases	Three of SBEW's five non-resource-tracking databases were lacking phone numbers and email addresses, which can be used to match non-resource data to resource databases. This likely limited the number of municipal customers identified in the channeling analysis as having gone on to participate in a resource program after engaging in a SBEW non-resource activity (14%).	Detailed Evaluability Assessment results for SBEW are presented in Section 4.2. Detailed Channeling Analysis results are presented in Section 5.	SBEW should establish data collection protocols that ensure consistent collection of non-resource activity participant email addresses and phone numbers.	PG&E and SCG's Santa Barbara Energy Watch	N/A

Appendix G. Standardized Recommendations

9	LGP/Public Sector Non-Resource Tracking Databases	Prior to the data request response, SDG&E staff indicated that the ECP's contributions to EE savings in San Diego County are primarily through reach code ordinances and climate action planning and cautioned that ECP's non-resource activities would likely have limited corresponding resource activities represented in the resource databases. Additionally, many of their non-resource activities outside of Orange County are conducted in partnership with their SANDAG LGP and were captured in those tracking databases. SDG&E policy and program staff recommend that savings be calculated with methods similar to those that Codes and Standards uses in order to measure the impact of these activities. However, given the evaluation team's limited budget, timeline, and focused scope, it was not feasible to develop a new methodology for quantifying the impacts of reach code ordinances and climate action planning support. The evaluation team did receive a limited set of ECP non-resource databases useable for the channeling analysis and participant survey from SDG&E's data request response, including jurisdictions that received ordinance/climate action planning support. Although the channeling analysis did not identify any municipal customers as having gone on to participate in a resource program after engaging in a ECP non-resource activity (0%), we did find that 17% of ECP non-resource participants participated in a resource program the same year.	Detailed Evaluability Assessment results for ECP are presented in Section 4.3. Detailed Channeling Analysis results are presented in Section 5.	ECP should expand its collection of customer data to include as many of its non-resource activities as possible. This will enable future evaluations to better examine and quantify the impact of these activities, thereby capturing the value of their non-resource activities more comprehensively. Considering that the Energy Division seems to be increasingly interested in the value of PA non-resource activities, other LGPs and programs offering non-resource activities, including ECP, should follow RCEW's standardized approach to tracking these types of activities using a single comprehensive and high-quality database as discussed previously in Finding #5. During the year two LGP study implementation staff and local municipalities raised the importance of LGP's supporting local reach code ordinances and climate action planning in in-depth interviews and participant surveys. Staff across LGPs and IOU territories raised concern that there may become a gap in funding for CAP support going forward if LGPs reduce funding for these types of activities. Similar sentiments were also mentioned by LGPs interviewed in year 1 which leads us to believe this is a widespread concern across local governments. The CPUC should consider a study to develop a methodology for quantifying the impacts of reach code ordinance/climate action planning support using methods similar to those used for the Codes and Standards program, especially if new third-party, public-sector implementers choose to continue to offer this non-resource activity.	SDG&E's Emerging Cities Partnership	N/A
10	LGP/Public Sector Non-Resource Tracking Databases	The evaluation team found the non-resource data provided by VCP to be sufficient in completeness and quality. It contained enough fields mergeable with CPUC and IOU resource databases (e.g., contact name, phone number, email, etc.) to conduct the channeling analysis. In total, however, VCP provided only two non-resource related tracking databases. One originated from SCE and one from SCG (in PDF file format), which consisted of lists of the partnership's primary local government contacts. In SCE's VCP response to Question 3 of our data request, which asked for all non-resource tracking databases, they stated that "SCE does not track customer level information from LGP non-resource activities." The implementing partner did provide a list of 59 VCP events between 2017–2019, which detailed the type of event (e.g., outreach, training, or workshop), and the city where the event took place, but did not list customer tracking data. This limited the team's ability to conduct this study's channeling and surveying tasks. Consequently, a limited number of municipal customers were identified in the channeling analysis as having gone on to participate in a resource program after engaging in a VCP non-resource activity (10%).	Detailed Evaluability Assessment results for VCP are presented in Section 4.4. Detailed Channeling Analysis results are presented in Section 5.	We recommend expanding customer tracking to include non-resource activities and using a single database to record both customer contact information and details on the types of non-resource activities in which each contact participates.	SCE's Ventura County Energy Leader / SCG's Ventura County Partnership	N/A
11	LGP/Public Sector Non-Resource Tracking Databases	Similar to VCP, WRP provided only three non-resource related tracking databases, two of which were generic contact lists. This limited the team's ability to conduct this study's channeling and surveying tasks.	Detailed Evaluability Assessment results for WRP are presented in Section 4.4.	We recommend expanding customer tracking to include non-resource activities and using a single database to record both customer contact information and details on the types of non-resource activities in which each contact participates.	SCE's Western Riverside Energy Leader Partnership / SCG's Western Riverside Energy Partnership	N/A

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12	LGP/Public Sector Non-Resource Tracking Databases	Many of the email addresses and phone numbers provided in WRP's non-resource-tracking databases were not complete. This made it more difficult to perform the channeling analysis and participant survey. Despite these issues, the channeling analysis did find that 31% of municipal customers listed in their non-resource databases went on to participate in a resource program after engaging in a WRP non-resource activity. This was the second highest percentage among the LGPs assessed in this evaluation and leads us to believe that with improved data collection protocols, an even higher percentage of customers may have been found.	Detailed Evaluability Assessment results for WRP are presented in Section 4.4. Detailed Channeling Analysis results are presented in Section 5.	SCE and SCG should establish data collection protocols that ensure consistent collection of non-resource activity participant email addresses and phone numbers. As noted previously, the evaluation team didn't expect for the year 1 data collection protocol recommendations to have been implemented and reflected in our year 2 study due to the timing of the studies.	SCE's Western Riverside Energy Leader Partnership / SCG's Western Riverside Energy Partnership	N/A
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