Local Government Partnership Quantification of Co-Benefits and Local Economic Benefits in Hard-to-Reach and Disadvantaged Communities

Submitted by Evergreen Economics

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1 Executive Summary

This study was conducted by Evergreen Economics to identify co-benefits that result from Local Government Partnership (LGP) program activities that focus on hard-to-reach (HTR) communities and disadvantaged communities (DACs), and evaluate how these co-benefits could be measured in the future. The first research step was a literature review of non-energy benefit research, which helped inform discussions with the investor-owned utility (IOU) Study Team regarding development of the following definition of co-benefits:

- **Co-Benefits:** *Co-benefits result **directly** from an activity done by an LGP whose savings are **not already claimed** by the IOUs. Co-benefits include energy—both resource (direct savings claims) and non-resource (no direct savings claims)—and non-energy benefits that are **not already directly claimed** by the IOUs. Co-benefits do not include non-energy benefits that are **indirectly** associated with energy savings that are already claimed by the IOUs.*

Using this definition of co-benefits, Evergreen conducted in-depth interviews and web surveys with implementing partners, local governments, the Local Government Sustainable Energy Coalition (LGSEC), and the Rural Hard to Reach Working Group to solicit their input on what co-benefits LGPs are providing. This primary research also explored what data could be tracked to identify and assess reported co-benefits.

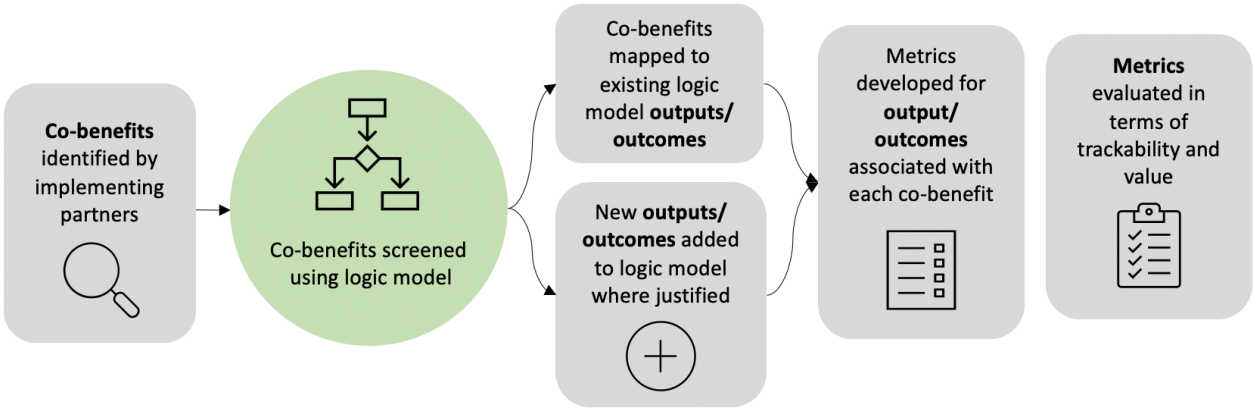
The IOUs embarked on this research in response to a recent CPUC Decision (18-05-041) that directed them to:

> *"…work with Local Government Partnership partners to improve cost-effectiveness and to meet the local governments' needs with respect to data sharing and contract terms that align with local government budgeting, legal, and other constraints; quantify co-benefits and local economic benefits of Local Government Partnerships in hard-to-reach and disadvantaged communities; and support local governments' efforts to increase local capacity to conduct energy efficiency activities."*[1]

[1] Decision 18-05-041, California Public Utilities Commission, 6/5/2018, https://www.pge.com/pge_global/common/pdfs/for-our-business-partners/energy-efficiency-solicitations/D-18-05-041-EE-Business-Plan-Final-Dec-CPUC-20180531.pdf

Evergreen applied a screening process to the full set of reported co-benefits based on whether they meet the study definition, developed metrics, and assessed their trackability and value. The process shown in Figure 1 is discussed in more detail following the figure.

Figure 1: Analysis Process to Develop Metrics for Measurement of Co-Benefits



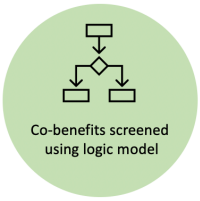
Co-benefits identified by implementing partners

Through interviews and web surveys, implementing partners identified a wide range of co-benefits that Evergreen placed into 12 high level categories.

Co-Benefit Category
Education
Staff support/job creation
Project identification
Monetary savings from reduced energy bills
Leveraging relationships
Customized/tailored messaging
Bundling/combining energy efficiency resources with other programs/offerings
Greenhouse gas (GHG) reductions
Providing source of trusted information
Increased Climate Action Plan (CAP) goals
Health/comfort
Proof of concept for broader industry

Each of these co-benefit categories were further categorized based on implementing partner-reported characteristics including applicability to HTR

communities and DACs, importance, trackability, and which are considered to be economic.



Evergreen leveraged the existing LGP program logic models to develop a generic logic model that covered the variation in program activities, outputs, and outcomes that exist across LGPs and across the different IOUs. Activities are events undertaken by the program to produce desired outcomes. Outputs are the direct, tangible results of the activities, and outcomes are the desired results of the program. We used the logic model to systematically screen the full set of reported co-benefits against the study definition.

The following co-benefits identified were screened out because they were either tied to an existing logic model activity[2] or because they were indirectly associated with energy savings that may be already claimed by the IOUs:

- Project identification (program activity)
- Monetary savings from reduced energy bills (*Co-benefits do not include non-energy benefits that are **indirectly** associated with energy savings that are already claimed by the IOUs.)*
- GHG reductions (*Co-benefits do not include non-energy benefits that are **indirectly** associated with energy savings that are already claimed by the IOUs.*)
- Increased CAP goals (program activity)
- Health/comfort (*Co-benefits do not include non-energy benefits that are **indirectly** associated with energy savings that are already claimed by the IOUs.*)

Co-benefits that passed the screening were added to the logic model. These new additions to the logic model ensure that the program design fully captures the program intent as reflected by the identification of co-benefits through this research.

[2] LGP activities that are already captured in the logic model do not meet the study definition of co-benefits, which should be benefits that are not already claimed by the IOUs. The study approach assumes that the IOUs claim benefits for all program activities that are captured in the LGP logic models. Co-benefits are intended to be additional benefits that are not already reported.

Metrics developed for **output/ outcomes** associated with each co-benefit

After the co-benefits were added to the logic model, Evergreen developed data tracking fields for the associated outputs and outcomes that may be used to evaluate co-benefits. Below each category, we show how the tracking data can later be converted to metrics that would help to ensure each LGP is meeting its goals related to co-benefit delivery.

1. Pre/post survey to assess acquired knowledge (8 items for tracking)
   - *Improvement in awareness scores by a certain percent*
2. Examples of material shared (6)
   - *Percentage of marketing material developed*
3. Event date and name (4)
   - *Total events hosted out of goal, by type*
4. Event attendees (4)
   - *Average number of attendees, out of average targeted amount*
5. Staff tracking information (3)
   - *Percent of staff that remained after a year*
6. Contractor tracking information (1)
   - *Percent of contractors who had done prior work related to partnership referrals*

Metrics evaluated in terms of trackability and value

Evergreen requested data from implementing partners to get a sense of the feasibility and usability of co-benefits tracking. Implementing partners are not currently required to collect all of the data we requested, so what we collected is illustrative but not representative of the potential for future data collection on co-benefits. Data on co-benefits are not currently tracked by all partnerships, nor is data collection consistent across these partnerships.

Based on this study's research, Evergreen recommends the following:

- Update the LGP program logic models to include the new activities, outputs, and outcomes that were identified as co-benefits through this research (Figure 2 in Section 4.2)
- To test this methodology, the IOUs should require a small number of LGPs to report on the co-benefits tracking data associated with the activities conducted by their specific partnerships. We suggest using the partnerships that were identified by the IOU Study Team as high priority for our in-depth interviews that are not slated for closure in the near future including:
    - Sierra Nevada Energy Watch (PG&E)
    - Ventura County Partnership (SoCalGas and SCE)
- Use this initial set of data to perform an evaluability assessment to understand how collection of these metrics could scale to all partnerships in the future to support evaluation of co-benefits, where partnership efforts are continuing.

IOUs could also consider adding data collection covering specific metrics to LGP contracts in the future, along with protocols to ensure consistency and completeness.

If the IOUs added a requirement to report on co-benefit tracking data and goals set to their contracts with LGPs, each metric should be tied to the output/outcome from the selected activities that the implementing partner plans to adopt. This customized nature is important given the unique nature of each partnership and the activities that they conduct.

2 Background

This report presents findings from a study to quantify co-benefits and local economic benefits of local government partnerships (LGPs) in hard-to-reach (HTR) and disadvantaged communities (DACs) for the California investor-owned utilities (IOUs). Throughout this report, 'LGP' will refer to the partnership between the IOU and the implementing partners[3]

in HTR communities and DACs. 'Local government' will refer to the local government in HTR communities and DACs that is served by the partnership.

Co-benefits were not defined in PG&E's scoping document, but there is extensive literature on non-energy benefits (NEBs) that was useful for this study. We conducted a literature review to develop an initial definition of co-benefits that was then refined through discussions with the IOU Study Team, which is comprised of staff from each IOU and from the California Public Utilities Commission's (CPUC's) Energy Division:

- **Co-Benefits:** *Co-benefits result **directly** from an activity done by an LGP whose savings are **not already claimed** by the IOUs. Co-benefits include energy—both resource (direct savings claims) and non-resource (no direct savings claims)—and non-energy benefits that are **not already directly claimed** by the IOUs. Co-benefits do not include non-energy benefits that are **indirectly** associated with energy savings that are already claimed by the IOUs.*

The IOUs embarked on this research in response to a recent CPUC Decision (18-05-041) that directed them to:

> *"…work with Local Government Partnership partners to improve cost-effectiveness and to meet the local governments' needs with respect to data sharing and contract terms that align with local government budgeting, legal, and other constraints; quantify co-benefits and local economic benefits of Local Government Partnerships in hard-to-reach and disadvantaged communities; and support local governments' efforts to increase local capacity to conduct energy efficiency activities."*

The same decision noted that "increasing and streamlining support of the LGPs is an effective and essential component in serving hard-to-reach and disadvantaged communities. The Local

Government Sustainable Energy Coalition (LGSEC) business plan includes quantification of co-benefits and local economic benefits as well as local capacity building and greater financial support for higher service cost regions as effective intervention strategies in rural, hard-to-reach and disadvantaged communities."[4] The Energy Division noted the best practice of including quantification of co-benefits is not currently occurring.

The LGSEC Business Plan from 2017 included quantification of co-benefits and economic benefits as an intervention strategy to address the problem of "Rural and HTR communities being underserved due to higher costs, more diverse circumstances and lack of institutional capacity."[5] The report included the following metrics, all of which are explored further through this research:

- Increased program(s) utilization rates;
- Local economic benefits (jobs created, costs avoided, etc.);
- Dollar value of local/regional and statewide economic benefits created by the LGP Statewide Business Plan;
- Number of jobs created; and
- Commercial property values.

For the final four bullets above, the business plan proposal suggests that half of the LGPs will have their performance converted "into a uniform menu of equivalencies and co-benefit quantification, e.g., jobs created and/or sustained, cost savings, etc." within the first four years, and in the long term, they expect this to be the case for all LGPs. While some partnerships utilize a quarterly reporting form to track their progress on adopted activities, we did not see wide standardization of tracking on identified metrics across the board at the time of our review. The most widely tracked reporting we reviewed covered educational/outreach events, though this was reported differently across partnerships.

2.1 Study Objectives

The objective of this study is to identify and quantify high value co-benefits of LGPs in HTR communities and DACs across the IOUs' service territories. The Study Team developed the following research questions:

1. What do stakeholders consider to be "co-benefits" and how do they differ from "non-energy benefits"?

[4] LGSEC Statewide Local Government Partnerships Business Plan Proposal Attachment B, page 18, https://4930400d-24b5-474c-9a16-0109dd2d06d3.filesusr.com/ugd/0c9650_ac8143f9df234d96b946f23a26975ecb.pdf

[5] LGSEC Statewide Local Government Partnerships Business Plan Proposal Attachment B, page 18, https://4930400d-24b5-474c-9a16-0109dd2d06d3.filesusr.com/ugd/0c9650_ac8143f9df234d96b946f23a26975ecb.pdf

- For the established list of possible NEBs, how many of them are relevant for the purpose of the "co-benefit" analysis?

2. What do stakeholders consider to be "local economic benefits" and how do they differ from "co-benefits"?
3. What co-benefits do LGPs intend to provide to their communities?
4. What method should be used to quantify these co-benefits? What co-benefits require too complex an evaluation to quantify, outweighing their relative benefit? Which co-benefits may involve issues of double counting of energy savings?
5. What data are being collected by the implementing partners? What additional data needs to be collected? What protocols should the implementing partners institute in order to collect the data? Who should the implementing partners report the data to, and how frequently? How should the data be used?
6. Given the data already collected by the implementing partners, what co-benefits can be quantified now?
7. If the current data and data collection efforts are not sufficient, this study should recommend a list of required data to make the quantification of co-benefits possible.
    - Are primary research and data collection needed?
    - Are any modeling efforts required to produce the co-benefit estimate?
    - Can these co-benefits be justified from the perspective of quality, reliability and confidence?
    - What are the strengths and weaknesses of the study recommendations and conclusions?

The research covered of two study objectives:

- **Identify and Quantify Co-Benefits** – Based on outreach to implementing partners and other stakeholders, identify all the potential co-benefits and local economic benefits, their relative value; identify which are high value that will justify the costs of tracking and assessment; determine appropriate methods for quantifying high value co-benefits and local economic benefits; and based on data collected from implementing partners, quantify the high value co-benefits and local economic benefits of LGPs.
- **Develop and Implement Co-Benefits Data Tracking Protocols** – Identify what data are already being collected by LGs, how robust and widespread is that collection, and what additional data could be collected for the high value co-benefits; develop protocols for LGs to appropriately track co-benefits data, with a focus on the highest value / most widespread co-benefits across the IOUs.

The study deliverables are linked to each section in which they appear below.

1. List of high value co-benefits of LGPs, with input and feedback from stakeholders mentioned in the Decision (such as, but not limited to: LGSEC, IOU staff, and LGs): **Sections 4.1 and 4.2**
2. Description of local government data collection protocols and output of currently tracked data: **Section 4.3**
3. Quantification of co-benefits supported by currently tracked data: **Section 4.3**
4. Recommendations for cost-efficient data tracking protocols for additional co-benefits that are high value and should be tracked: **Section 4.4**

3 Methodology

Evergreen conducted the following research activities:

- **Literature Review** – To identify and determine methods to quantify co-benefits. The literature review was used to develop interview guides for the following tasks.
- **Interviews with the Investor-Owned Utilities (IOUs), Stakeholders such as Implementing Partners,[6] the Rural Hard to Reach Working Group, and the LGSEC** – To solicit feedback on the expected co-benefits and local economic benefits, their perceived value, and the methods to quantify them. This was used to guide the development of the web survey that was sent to all implementing partners and their respective local governments that serve HTR communities and/or DACs.
- **Field Implementing Partner Web Survey** – To identify what co-benefits and local economic benefits the LGPs may be realizing, the expected size of those benefits, what data implementing partners are already tracking, and what additional tracking they could feasibly implement. To understand tracking feasibility, we also reviewed findings from current Energy Division evaluation efforts.
- **Comparison to Logic Model** - Compare the co-benefits identified in the survey against the high level program theory and logic model, focusing on new co-benefits or expected program benefits.
- **Collect Implementing Partner Data** – Where implementing partners were already collecting and tracking data on co-benefits and local economic benefits, we set up a process to gather and combine the data to support quantification and analysis.

Each of these activities are described in more detail below.

3.1 Literature Review

The first effort to identify benefits that may be reported by the LGPs was based on a literature review of studies on NEBs and results from LGPs. The full list of sources referenced for this step is located in Appendix A. The sources we covered spanned a wide variety of programs and were not necessarily specific to LGPs or DACs and HTR populations.

The exhaustive list developed from this effort, and the fact that many of these sources were not specific to DACs or HTR populations, led the Study Team to decide that for the web surveys and in-depth interviews, respondents should *not* be prompted with a list of co-benefits to select from,

[6] Implementing partners are either a local government or a quasi-governmental agency that contracts with a single or multiple IOUs to bring LGP programming to a specific region.

but rather, they should be prompted to share which co-benefits they consider result from partnership activities.

3.2 Interviews with Prominent Implementing Partners, IOUs, and Key Stakeholders

After the literature review, Evergreen conducted high-level in-depth telephone interviews with the IOUs, implementing partners that are prominent in discussions of HTR communities and DACs, and other key stakeholders (identified in consultation with the IOUs) such as the LGSEC, Rural Hard to Reach Working Group, and others. The goal of the in-depth interviews was to solicit feedback on the expected co-benefits and local economic benefits from 5 to 10 IOU LGP implementing partners and stakeholders. These interviews asked specifically about activities included in the LGP generalized logic model created through a review of Evergreen's 2017 LGP research to encourage respondents to tie any mentioned co-benefits to partnership activities.

Evergreen selected an initial list of targeted implementing partners to account for a mix of IOU partners and for experience with DAC and HTR regions. The Study Team further refined the list based on their knowledge of the LGPs. Evergreen completed a total of six in-depth interviews covering seven partnerships or organizations, as shown in Table 1. The San Joaquin Valley Partnership and the Rural Hard to Reach Working Group interview was an interview with a single person involved in both.

Table 1: LGPs and Organizations Interviewed

Type	Name
LGP	Sierra Nevada Energy Watch (PG&E)
	Solano County Energy Watch (PG&E)
	City of San Diego (SDG&E)
	San Joaquin Valley Partnership (PG&E, SCE, SoCalGas)
	Ventura County Partnership (SCE, SoCalGas)
Organization	LGSEC
	Rural Hard to Reach Working Group

3.3 Web Survey with Implementing Partners and Local Government Staff

Evergreen requested a list of implementing partners that serve either HTR communities and/or DACs across the four IOU service territories. Where utilities had not identified which LGPs were believed to serve DAC or HTR communities, Evergreen reviewed the lists and analyzed them at the county/city level. Table 2 includes the number of implementing partner and local government staff web survey completions. This table is expanded for each LGP in Appendix E. The definitions used to identify those LGPs are shared below. LGPs are identified as DAC or HTR in the table even if just a single city covered by the partnership qualified according to these definitions.

- **DACs**: [7] DAC is a formal designation created through a tool called CalEnviroScreen 3.0. This tool was developed on behalf of the California Environmental Protection Agency and identifies census tracts that are "disproportionately burdened by, and vulnerable to, multiple sources of pollution."[8]
- **HTR**: Evergreen utilized the definition adopted in D.18-05-041[9] for hard to reach for both households and businesses. Considerations for residences and small businesses include language (primary language other than English and being located in DACs and/or

[7] We identified DACs that were utilized for SB535 based on CalEnviroScreen 3.0 tool.
[8] https://oehha.ca.gov/calenviroscreen/report/calenviroscreen-30
[9] D.18-05-041 May 31, 2018, page 160 https://www.pge.com/pge_global/common/pdfs/for-our-business-partners/energy-efficiency-solicitations/D-18-05-041-EE-Business-Plan-Final-Dec-CPUC-20180531.pdf

specifically defined regions) in addition to specific considerations based on customer type. These are summarized below:

Household criteria:

- Customers qualify for the California Alternative Rates for Energy or the Family Electric Rate Assistance Program and/or
- Renters or lessees that reside in multifamily and mobile homes

Small business criteria:

- Less than 10 employees or classified as small based on energy usage
- Leased or rented facilities

For three of the partnerships, two separate staff members responded to the web survey. In one case, this was because each staff member covered different aspects of the partnership, but this may have resulted in more emphasis being placed on responses from those partnerships. We did not limit analysis of responses based on described role or time in their position. For these reasons, responses to the web surveys should be considered qualitative in nature.

Table 2: Web Survey Completions

IOUs	DAC	HTR	Implementing Partner Web Survey	Local Government Staff Web Survey
Number of Completed Web Surveys (of 31 in total)	23	24	21 across 18 LGPs	10 across 5 LGPs

The approach for gathering contact information and recruitment differed between implementing partners and non-implementing local governments. For each implementing partner, Evergreen collected contact information (email and phone numbers) from the IOUs. Each implementing partner then received no fewer than four email contacts and a phone call (one with a voice mail).

In addition to the outreach done by Evergreen staff, Evergreen created a generic web survey link to be distributed to implementing partners through multiple channels, including emails from the following contacts in advance of Evergreen's survey invitation:

- IOU project managers;

- The Statewide Local Government Best Practices Coordinator;[10]
- Local Government Sustainable Energy Coalition;
- The Rural Hard to Reach Working Group; and
- The CPUC Disadvantaged Communities Advisory Group (listserv and announcement on November 2020 webinar)

After an implementing partner completed a survey, Evergreen emailed them with a request for the implementing partner to reach out to their local government contacts to let them know about the web survey and to distribute the link. The IOUs did not have contact information available for the local governments served by the implementing partners, with the exception of Southern California Gas (SoCalGas). Evergreen also offered to contact the local governments directly and requested to be copied on emails to the local governments so that Evergreen could conduct email follow-ups to encourage participation. The final disposition for the implementing partner interviews and web surveys and the local government web surveys are shown in Table 3 and Table 4. Table 4 shows that we received contacts for local governments from two sources; the first was from SoCalGas, covering five partnerships in its region. The second set of contacts were distributed a link by the implementing partners who completed the surveys. Seven of the 10 completed web surveys came from the second set of contacts, and three completed surveys came from the contacts provided to Evergreen Economics by SoCalGas.

Table 3: Implementing Partner Web Survey Disposition

Web Survey Invitations Sent		Web Surveys Completed	
Implementing Partners	LGPs	Implementing Partners	LGPs
36	27	21	18

Table 4: Local Government Web Survey Disposition

Local Government Contacts	Web Survey Invitations Sent	Web Surveys Completed
Unique Contacts from SoCalGas, filtered for LGPs in HTR communities/DACs	86 contacts from 5 LGPs	3
Implementing partners who completed the web survey were asked to send a link to the survey to their contacts.	6 of 18 contacts said they would pass along the survey information. We were cc'd on 3 responses.	7

[10] D.09-09-047, CPUC, page 250, https://docs.cpuc.ca.gov/PUBLISHED/GRAPHICS/107829.PDF

3.4 Identification of Co-Benefits/Benefits

Evergreen organized the co-benefits reported by the implementing partners into a set of 12 categories. These categories were then characterized in terms of who they serve (HTR communities and/or DACs), how they tie to program activities, which are economic in nature, how important they are considered to be by implementing partners, and how trackable they are.

Evergreen then took the same 12 high level co-benefit categories and then broke them out into sub-categories that we mapped to the LGP program logic model. This approach allowed for the filtering out of co-benefits that did not fit our developed definition of co-benefits (including co-benefits that were actually activities, not outputs or outcomes and that were derived from program activities that were already indirectly associated with energy savings that are already claimed by the IOUs.) This process resulted in a list of seven high level co-benefits that could be mapped to outputs and outcomes in the logic model.

Evergreen also reviewed the reported frequency of co-benefits, trackability, and rated importance, and identified a similar list of seven high level co-benefits. Five of the co-benefits identified from this exercise mirrored those that resulted from the logic model exercise.

3.5 Data Collection from Local Governments

Twelve of the implementing partners who responded to the web survey reported that they collected data on at least one co-benefit. Evergreen requested data from each of those 12 implementing partners. Of those 12 implementing partners, Evergreen received data from seven of them, representing six LGPs.

These data were used to assess tracking ability and to give summaries of currently tracked metrics.

4 Findings

Findings are divided into the following subsections:

4.1 Summary of Self-Reported Co-Benefit Characteristics
4.2 Screening of Co-Benefits Using the Program Logic Model
4.3 Feasibility of High Value Co-Benefit Metrics Collection
4.4 Suggested Tracking Metrics

The outputs and outcomes that were identified through the screening of co-benefits using the logic model in Section 4.2 were used to create a list of metrics in Section 4.3.

4.1 Summary of Self-Reported Co-Benefit Characteristics

To identify a list of self-reported co-benefits, Evergreen gathered responses from the following primary research sources:

- **In-depth interviews with Implementing Partners**: In-depth interviews were completed with a total of five implementing partners representing five LGPs; three of these implementing partners later took the web survey. Implementing partners are either a local government or a quasi-governmental agency that contracts with a single IOU or multiple IOUs to bring LGP programming to a specific region. Our analysis ensured that responses from a single implementing partner were only counted once. These interviews informed Evergreen's design of the web survey such that respondents would need to mention co-benefits themselves, rather than reply to a prepared list (such as the list developed from our literature review); the interviews also led Evergreen to develop a question in the web survey that asked implementing partners to tie their reported co-benefits to specific partnership activities.
- **Web Surveys with Implementing Partners**: Twenty-one implementing partners representing 18 LGPs responded to a web survey. This was the main data source used to develop a list of co-benefits in the following sections. It was the strongest data source, as it had 21 responses representing 18 of the 29 LGPs and was grounded in activities from the logic model (unlike the in-depth interviews). Three of the 21 respondents reported seeing no co-benefits.
- **Web Surveys with Local Governments:** Ten local government staff representing five LGPs completed a web survey that covered benefits that they see. Three of the 10 respondents did not identify any co-benefits. Due to the low number of responses from this group and their disproportionate coverage across partnerships and IOU service territories, these responses are used only to confirm examples of co-benefits given by implementing

partners. Implementing partners who completed our web survey helped with outreach to LGs, which may help explain the disproportionate coverage.

Co-benefits, as reported by implementing partners via in-depth interviews and web surveys, were placed in one of 12 categories. Table 5 shows the categories of co-benefits and the number of times a co-benefit in each category was mentioned by an implementing partner.[11] Co-benefits most commonly fell into the following six categories and then were later screened to a smaller set of categories:

1. Education
2. Staff support/job creation
3. Project identification
4. Monetary savings from reduced energy bills
5. Leveraging relationships
6. Customized/tailored messaging

The table also shows that when including the co-benefits mentioned from the in-depth interviews, the total number of co-benefits mentioned nearly doubles. This is partly due to the fact that the phone interview format allowed respondents to be less concise in their responses. Note that these self-reported benefits are filtered down in Section 4.2.

[11] It is possible that a single implementing partner mentioned multiple co-benefits that fell into the same high level category more than one time.

Table 5: Co-Benefits Reported by Implementing Partners (In-Depth Interviews [IDIs] and Web Survey Respondents)

Benefit Category	Number of LGPs that Mentioned Co-Benefit (Web and IDIs)	Number of Implementing Partners that Mentioned Co-Benefit (Web and IDIs)	Number of Total Times Co-Benefit in Category Was Mentioned (Web and IDIs)	Number of Times Co-Benefit in Category Was Mentioned - Web Only
Education	11	12	29	11
Staff support/job creation	7	7	20	5
Project identification	8	9	11	8
Monetary savings from reduced energy bills	6	6	9	6
Leveraging relationships	7	7	8	6
Customized/tailored messaging	5	5	5	4
Bundling/combining energy efficiency resources with other programs/offerings	4	4	5	3
GHG reductions	4	4	5	3
Providing source of trusted information	4	4	4	3
Increased CAP goals	2	2	2	0
Health/comfort	1	1	2	2
Proof of concept for broader industry	2	2	2	2
Total			**102**	**53**

See Appendix B for a review of how the web survey respondents characterized the 53 co-benefits that they reported, including:

- Which logic model activities they are tied to;
- Who (HTR communities and DACs) the co-benefits serve; and
- Which of the benefits could be considered economic in nature.

4.2 Screening of Co-Benefits Using the Program Logic Model

Evergreen reviewed the 12 co-benefit categories from the primary research and mapped them to a generalized LGP program logic model. The generalized logic model, and the mapping of all 12 co-benefits to the activities, outputs, and outcomes, is shown in Appendix C. This exercise allowed for the screening out of co-benefits that did not meet the study definition, and showed which co-benefits are already accounted for in the logic model (i.e., already built into the LGP program planning and presumably, reporting and evaluation). The co-benefits that were already accounted for in existing logic model activities included:

- GHG reductions (activity)
- Project identification (activity)
- Some but not all co-benefits that were summarized in the overarching categories of:
  - Customized / tailored messaging (activity and output)
  - Bundling / combining energy efficiency resources with other programs (activity)
  - Staff support / job creation (output, activity, outcome)

Additional co-benefits were not included in the updated logic model because they did not meet the Study Team's definition of co-benefits:

- Monetary savings from reduced energy bills (outcome)
- Health / comfort (outcome)

The revised logic model shown in Figure 2 adds the outcomes, outputs, and activities that were revealed through the logic model screening exercise. Where a co-benefit maps to an activity, outcome, or output that already existed in the logic model, the item is **bolded and underlined**. There are new rows with darker shading to show the new activities, outcomes, or outputs once they were integrated into the logic model. The single new output added is reduced travel time to rural consumers. Three new outcomes were added, including:

- Consistency through city staff turnover by the LGP acting as a resource center for historical information;
- Local government staff feel assured that projects will be completed (increase LGP staff confidence); and
- An increased level of trust amongst local governments (increase LGP participant confidence).

Figure 2: Updated Logic Model

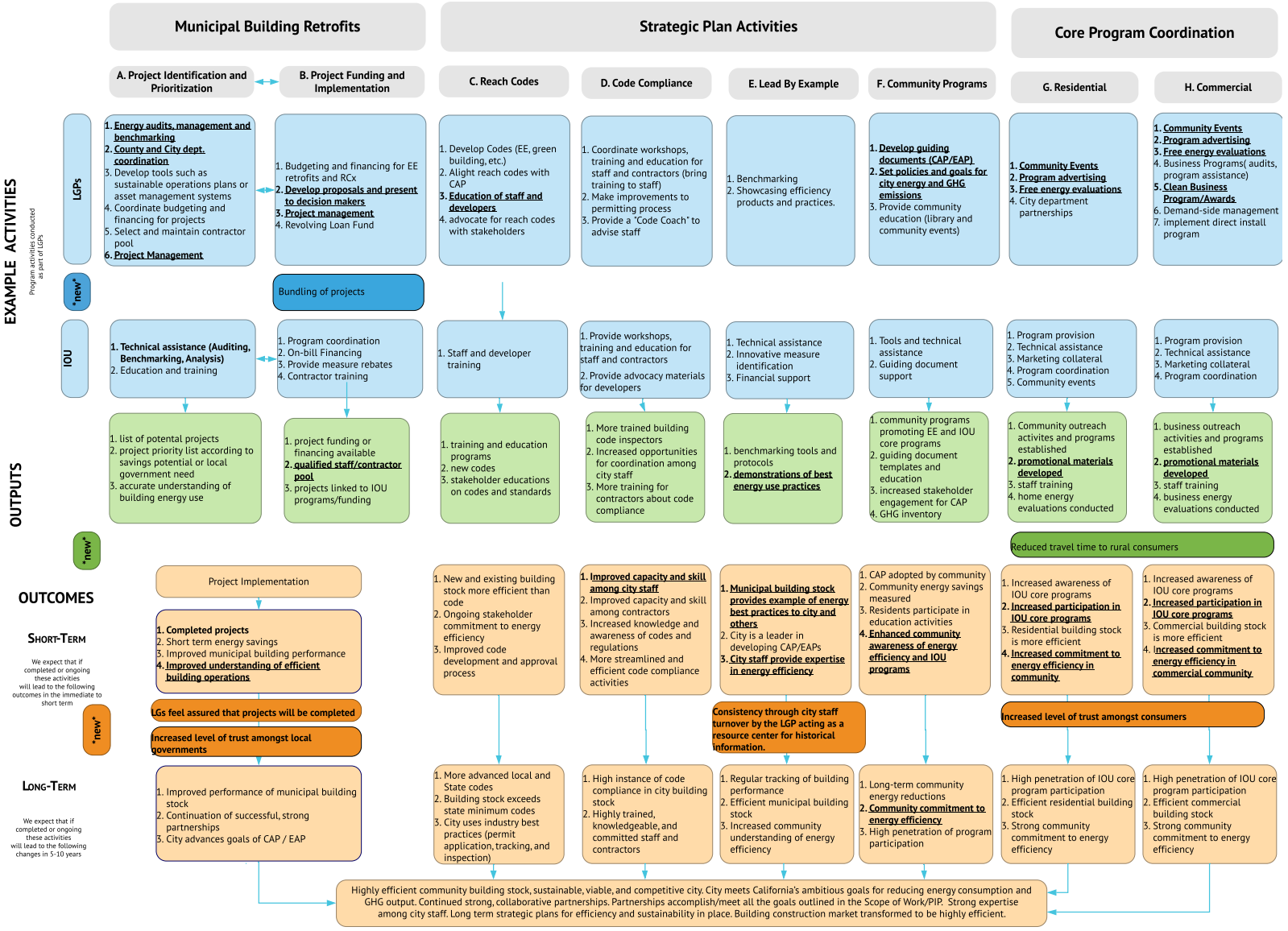


Table 6 shows the seven co-benefit categories that remained after the logic model screening exercise. Each category is mapped to more specific co-benefits, which are mapped to an element in the logic model. The majority of co-benefits tied to existing outcomes or outputs.

Table 6: Full Qualified Co-Benefit List with Mapping to Logic Model Integration (n = number of mentions of co-benefit in a category across all web survey implementing partner responses)

	Benefit Sub Category	n	Logic Model Element
Education	Increased energy literacy amongst local governments and businesses	6	Outcome - Existing (*Short-term AB4, E3)* improved understanding of efficient building operations, city staff provide expertise in energy efficiency
	Behavioral changes amongst businesses or local government staff	5	Outcome - Existing *(Long term F2*) Community commitment to energy efficiency
	Increased energy efficiency awareness amongst the community	3	Outcome - Existing *(Short-term F4, G4, H4*) Enhanced community awareness of energy efficiency and IOU programs. Increased commitment to energy efficiency in community
	Increased participation in other IOU programs	1	Outcome - Existing (*Short-term G2, H2*) increased participation in IOU core programs
Staff support/job creation	Energy efficiency job creation (employing contractors to do projects)	7	Output - Existing (*B2*) qualified staff/contractor pool
	Increased staff time through support from the LGP	2	Outcome - Existing (*Short-term D1*) Improved capacity and skill among city staff
	Consistency through city staff turnover by the LGP acting as a resource center for historical information	1	Outcome - New (Consistency through city staff turnover by the LGP acting as a resource center for historical information)
Leveraging relationships	Assurance to local governments that projects will be completed	1	Outcome - New (LGs feel assured that projects will be completed)
Customized/tailored messaging	Offerings designed to be tailored to certain groups or demographics to boost participation in programs or to make programs more attractive	2	Output - Existing (G2, H2) promotional materials developed

	Benefit Sub Category	n	Logic Model Element		
Bundling/combining energy efficiency resources	Bundling of projects that creates economies of scale and allows public agency dollars to go further	2	Activity - New (bundling of projects)	Converted to output or outcome →	Meets existing outcome of completed projects
	Leveraging multiple program resources to provide a full offering of sustainable incentives and practices	1			
Providing source of trusted information	Locally trusted and experienced staff are more effective in breaking down initial barriers with public agency staff and building trust with consumers	2	Outcome - New (increased level of trust amongst local governments)		
	The LGP acting as the lead entity for activities making cities, businesses, and residents more likely to participate	1	Outcome - New (increased level of trust amongst local governments)		
	Local staff not only reduce travel time to rural consumers but also are more successful than outside contractors to be trusted for projects	1	Output - New (reduced travel time to rural consumers)		
Proof of concept for broader industry	Demonstrating to the industry that concepts work	1	Output - Existing (*E2*), Outcome -Existing (E1)		
	Knowledge sharing of what municipalities are doing to take advantage of incentives offered by utilities	1			

Summarizing Table 6 above, the co-benefit categories that passed the logic model screening are:

- Education
- Staff support/job creation
- Leveraging relationships
- Customized/tailored messaging
- Bundling/combining energy efficiency resources with other programs
- Providing source of trusted information

- Proof of concept for broader industry

These map to the following outputs and short- and long-term outcomes in the logic model, which are shown in Table 6. These outputs and outcomes are used to develop a set of metrics in Section 4.3. New outputs and outcomes that were not in the original logic model are in bold below.

Outputs:

- B2. Qualified staff/contractors
- E2. Demonstrations of best energy use practices
- E1. Municipal building stock provides example of energy best practices to city and others
- G2 and H2. Promotional materials developed
- **New 1. Reduced travel time to rural customers**

Short-term outcomes:

- A1. Completed projects
- A4. Improved understanding of efficient building operations
- D1. Improved capacity and skill among city staff
- E1. Municipal building stock provides example of energy best practices to city and others
- E3. City staff provide expertise in energy efficiency
- F4. Enhanced community awareness of energy efficiency and IOU programs
- G2 and H2. Increased participation in IOU core programs
- G4 and H4. Increased commitment to energy efficiency in the community

Long term outcomes:

- F2. Community commitment to energy efficiency
- **New 2. Local governments feel assured that projects will be completed**
- **New 3. Increased level of trust amongst local governments**
- **New 4. Consistency through city staff turnover by the LGP acting as a resource center for historical information**

4.3 Feasibility of High Value Co-Benefit Metrics Collection

Evergreen staff developed a set of metrics tied to each of the outputs and outcomes derived from the logic model screening exercise. Each metric was evaluated for feasibility of tracking in the future. Implementing partners who took the web survey were asked to share any data that they reported to have tracked on the co-benefits that they mentioned. This section includes:

- Tracking data for consideration: What additional data should be collected that have sufficient quality, reliability, and confidence?
- Data collection status/summary: What data are currently being collected? How can those current data be quantified?

4.3.1 Tracking Data for Consideration and Relation to Co-Benefits

The outputs and outcomes identified in the updated logic model were mapped to a set of tracking data developed by Evergreen, as shown in Table 7. The tracking data fell into six broad categories. Below each category, we show how the tracking data can later be converted to metrics that would help to ensure each LGP is meeting its goals related to co-benefit delivery.

1. Pre/post survey to assess acquired knowledge (8 items for tracking)
   - *Improvement in awareness scores by a certain percent*
2. Examples of material shared (6)
   - *Percentage of marketing material developed*
3. Event date and name (4)
   - *Total events hosted out of goal, by type*
4. Event attendees (4)
   - *Average number of attendees, out of average targeted amount*
5. Staff tracking information (3)
   - *Percent of staff that remained after a year*
6. Contractor tracking information (1)
   - *Percent of contractors who had done prior work related to partnership referrals*

Table 7 organizes the tracking data by output/outcome as identified in the logic model. The self-reported co-benefit that led to the output/outcome in the logic model is also included. In the far-right column is a trackability score that Evergreen developed that indicates whether data collection is justified based on data quality, reliability, and confidence. Each tracking data group is scored on a scale of 1 to 3, with 1 being the easiest to track, 2 being somewhat difficult to track but worthwhile, and 3 being too challenging to track to justify the effort. The justification for each tracking item that scored a 2 or 3 is discussed following the table.

Table 7: Tracking Score of Suggested Tracking Data, Tied to Outputs and Outcomes

Outputs/Outcomes from Logic Model	Relation to Co-Benefit(s)	Suggested Tracking Data	Tracking Score
Outputs			
B2. Qualified staff/contractors	Staff support/job creation	❒ Number of staff (and full or part time status) that worked on partnership implementation	1
		❒ For each staff working on partnership implementation, how many years of experience do they have working in energy efficiency	1
		❒ Number of contractors hired for completed retrofit projects	3
E2. Demonstrations of best energy use practices	Proof of concept in the broader industry	❒ Date of event where retrofit project information was shared	1
		❒ Number of attendees at event where retrofit project was shared	2
		❒ Any published material covering building retrofit and type of distribution	1
G2 and H2. Promotional materials developed	Customized/ tailored messaging	❒ Promotional materials developed and for which projects	1
New 1. Reduced travel time to rural customers	Providing a source of trusted information	❒ Name, date, and location of hosted events or outreach	1
		❒ Number of attendees to events	2
		❒ Staff travel time to reported events/outreach efforts	1

Outputs/Outcomes from Logic Model	Relation to Co-Benefit(s)		Suggested Tracking Data	Tracking Score
Short-Term Outcomes				
A1. Completed projects (output)	Bundling/combining energy efficiency resources	❒	*Assessing program participation may be doubling up counting of savings that already occurs for IOU Core Programs.*[12]	N/A
A4. Improved understanding of efficient building operations (increased energy literacy amongst local governments and businesses)	Education	❒	Pre/post survey to relevant city staff asking about their knowledge about energy efficiency before and after a year of the partnership	3
		❒	Pre/post survey to general population of the businesses in covered LG communities about their awareness of energy efficiency programs before and after a year of LGP implementation	3
		❒	Pre/post survey to specific businesses served by an education program about their awareness of energy efficiency programs before and after the educational programming.	1[13]
D1. Improved capacity and skill among city staff	Staff support/job creation	❒	Pre/post survey to relevant city staff asking about their knowledge about energy efficiency before and after a year of the partnership	3

[12] A recent report released by Opinion Dynamics Corporation (*Assessment of LGPs*, Deliverable 22 Year 1 Study, November 25, 2020) came to the conclusion that not *all* energy savings achieved in municipal buildings are claimed through IOU Core Programs. In an effort to not duplicate study efforts, we suggest the reader refer to that report which makes recommendations for collecting data to tie completed projects back to actions taken by the partnerships. https://pda.energydataweb.com/api/view/2451/Assessment%20of%20LGPs%20Final%20Report%202020-11-25.pdf

[13] The Port of San Diego program implementer provided data in the form of a report on the port's Green Employee Engagement Campaign that demonstrated that data of this nature can and is being collected.

Outputs/Outcomes from Logic Model	Relation to Co-Benefit(s)		Suggested Tracking Data	Tracking Score
E1. Municipal building stock provides example of energy best practices to city and others	Proof of concept in the broader industry	❒	Date of event where retrofit project information was shared	1
		❒	Number of attendees at event where retrofit project was shared	2
		❒	Any published material covering building retrofit and type of distribution	1
E3. City staff provide expertise in energy efficiency (output, perhaps in the form of completed energy audit or education activities)	Education	❒	Name, date, and location of meetings, hosted events, or outreach by city staff covering energy efficiency information	1
		❒	Number of attendees to events or meetings hosted by city staff	2
		❒	Summary of energy efficiency subject matter provided by city staff	2
F4. Enhanced community awareness of energy efficiency and IOU programs	Education	❒	Pre/post survey to general population of the covered LG communities about their awareness of energy efficiency programs before and after a year of LGP implementation	3
G2 and H2. Increased participation in IOU core programs	Education	❒	*Assessing program participation would be doubling up counting of savings that already occurs for IOU Core Programs.*	N/A
G4 and H4. Increased commitment to energy efficiency in the community	Education	❒	Pre/post survey to general population of the covered LG communities about their actions that show commitment to energy efficiency before and after a year of LGP implementation	3
Long-Term & Intermediate-Term Outcomes				

Outputs/Outcomes from Logic Model	Relation to Co-Benefit(s)		Suggested Tracking Data	Tracking Score
F2. Community commitment to energy efficiency	Education	❒	Pre/post survey to general population of the covered LG communities about their level of commitment to energy efficiency before and after a year of LGP implementation	3
New 2. Local governments feel assured that projects will be completed	Leveraging relationships	❒	Pre/post survey to relevant local staff asking about their confidence in projects being complete before and after a year with the partnership	3
New 3. Increased level of trust amongst local governments	Providing source of trusted information	❒	Pre/post survey to relevant local staff asking about their level of trust in utility programs after a year of activity by the partnership	3
New 4. Consistency through city staff turnover by the LGP acting as a resource center for historical information	Staff support/job creation	❒	List of documents available to staff to help with onboarding	1
		❒	Names of current staff compared to prior year	1
		❒	Screenshots of how these data are organized and what files are available	1

Two types of metrics were scored a 2, acknowledging that they may be challenging to track, but the effort of collecting the data is reasonable, when considering the value for collecting this data:

1. Attendees at events where:
    - City staff provide expertise and share information about energy efficiency;
    - Best energy use practices are demonstrated;
    - Information is given to rural customers (for the output of reduced travel time); and
    - Occasions when municipal building stock provides an example of energy best practices to city and others.
2. A summary of information provided by city staff when they "provide expertise in energy efficiency"

These metrics are somewhat difficult to track due to the informal nature that these communications can take. Education of local government staff or others on energy efficiency may not always take place at a formal event; it may take the form of coworkers sharing information in a meeting on another topic, or an upcoming program offering in a small business district in a more rural town may be shared by word of mouth. Tracking who learns what type of information and when they learn it would require constant monitoring of outreach efforts, but doing so could be valuable in demonstrating the type of information sharing that happens on behalf of the LGPs.

Two types of metrics were scored a 3, indicating that Evergreen believes they are too challenging to track to justify the effort:

1. Pre/post surveys of certain populations (local constituents, local government staff) to understand if they are more aware/knowledgeable/trusting/confident with regards to energy efficiency efforts and programs.
2. The number of contractors hired to complete retrofit projects.

Pre/post surveys would be costly to execute, difficult to encourage completes, and may not yield results that can be specifically attributed to the actions of the partnership.

While implementing partners encourage projects, they are not always involved at the time of project completion, which may make it challenging to track down the contractors hired for projects. Additionally, to connect back to the expected output to which this metric is tied (qualified staff/contractors), it would be necessary to also track the number of LGP-encouraged projects that a single contractor has worked on to see if the qualified pool of contractors is able to sustain project work related to the partnership. This too would be challenging information to collect.

4.3.2 Data Collection Status and Summary

For each co-benefit that implementing partners reported, Evergreen asked the respondent if they tracked any data related to that benefit, and if they knew of data or information that could be tracked in the future. For co-benefits that led to additions to the logic model, there was no expectation of the partners collecting data.

Data requested by Evergreen were used to assess if additional data would need to be collected to account for new metrics or if current data would suffice. Of the 21 implementing partners who responded to the web survey, 12 reported currently tracking some form of data related to the co-benefits they reported. Of those 12, seven responded to our data request. This suggests that additional data will need to be collected to account for the new metrics developed in this research.

The data request was done in parallel to the logic model screening exercise. This parallel process led to the delivery of some data that were no longer relevant after the logic model exercise because their associated co-benefits were screened out (the final two rows in Table 8). Implementing partners responded that they tracked data in some way for over half of the co-benefits reported. For the co-benefits that made it through the logic model screening process, tracking data were submitted for under half of the co-benefits where Evergreen had requested data.

There does not appear to be systematic or uniform data collection across all of the co-benefit data tracking items. Table 8 shows that on average, respondents “reportedly tracked” the co-benefits they mentioned about half of the time. When looking at what was tracked, and what Evergreen was able to confirm through a data request, this number decreases. Only a few co-benefits were reported as too difficult to track, such as providing a trusted source of information.

Table 8: Co-Benefits, Expected Outputs/Outcomes, and Data Tracking Status

Co-Benefit	Expected Output/Outcome Associated with Co-Benefit			Data Tracking Status		
	Output	Short-Term Outcome	Long-Term Outcome	Reportedly Tracked	Reported and Confirmed Tracked Data	Reportedly Too Difficult to Track
Education		A4, E3, F4, G4, G2, H2, H4	F2	7/11	3/7	1/11
Staff support/job creation	B2	D1	new	4/5	2/4	none
Leveraging relationships			new	5/6	3/5	none
Customized/ tailored messaging	G2, H2			2/4	1/2	1/4
Bundling/combining energy efficiency resources w/ other programs/offerings		A1		2/3	1/2	none
Providing source of trusted Information	New		new	0/3	none	2/3
Proof of concept for broader industry	E2	E1		1/2	0/1	none
GHG reductions	*Removed through logic model screening.*			3/3	3/3	none
Project identification				5/8	4/5	2/8

Note: Output/outcome numbers are tied to the numbers included in the revised logic model. The denominator for the data tracking status is the number of co-benefits reported by implementing partners in the web survey.

In some instances, after reviewing the tracked data that were delivered by the implementing partners, Evergreen discovered that some of the data applied more to data tracking items developed for other co-benefit categories than for the original co-benefit reported by the implementing partner. This meant that of the 10 instances of currently tracked data, some of the data shifted to demonstrate a data tracking item associated with a different co-benefit, and some shifted to co-benefits that were screened out through the logic model exercise.

Data that applied directly to the metrics that passed the screening are shown in Table 9. Information on educational events is the most common type of data that we were able to review, but even with the small quantity of data to review, data are provided in a wide variety of formats,

which will make future analysis somewhat challenging. The variation in data provided showed that some implementing partners place importance on what other organizations they are able to partner with (and therefore show that they are leveraging relationships), and some focus more on *where* they are holding events to show that they are serving DACs. Where the data demonstrate an example of the metrics that Evergreen identified, there is a box with a check mark. The next section includes our recommended protocols for tracking data and forming metrics in the future.

Table 9: Currently Tracked Data tied to Recommended Metrics

Relevant Co-Benefit	Description of Data Provided	Relevant Activity, Output, or OUtcome	Needed Data Fields
Education	One implementing partner provided a record of meetings, presentations, and webinars put on for city staff. Includes date, type of meetings, which cities had staff in attendance, and event titles. A second implementing partner delivered a list of events attended, the number of attendees, and the number of referrals made at each event by zip code, which could be utilized to identify service to DACs. This same partner presented a list showing the events where they had collaborated with other groups in the region. A third implementing partner provided documents tracking each event hosted and the location and date. They also included samples of presentations given.	E3. City[14] (or IP) staff provide expertise in energy efficiency	☑ Name, date, and location of meetings, hosted events, or outreach by city staff covering energy efficiency information ☑ Number of attendees to events or meetings hosted by city staff ☑ Summary of energy efficiency subject matter provided by city staff
Education	Green Employee Engagement Campaign Program Report, which surveyed local business staff before and after participation to gauge their level of knowledge about energy efficiency	A4. Improved understanding of efficient building operations	☑ Pre/post survey to businesses in covered LG communities about their awareness of energy efficiency programs before and after a year of LGP implementation.

[14] Logic model should be updated to reflect that this could also be the implementing partner, which is not always a staff person from a city or local government.

Relevant Co-Benefit	Description of Data Provided	Relevant Activity, Output, or OUtcome	Needed Data Fields
Education	The Port of San Diego shared results from a pre and post survey of local businesses that had participated in the port's Green Employee Engagement Campaign. The survey results can be shared as an example of how to measure effectiveness in providing the co-benefit of education to local businesses. It is important to recognize that the Port of San Diego partnership is unique in that it focuses its activities on a business district, and this type of tracking may not be beneficial for other LGPs that do not focus on similar activities. It would also be valuable to assess the size of the local businesses that participated in this program to understand if this program benefits businesses that would be considered hard to reach.	A4. Improved understanding of efficient building operations (increased energy literacy amongst local governments and businesses)	☑ Pre/post survey to specific businesses served by an education program about their awareness of energy efficiency programs before and after the educational programming.
Proof of concept to broader industry	PowerPoint covering results from retrocommissioning project at County Jail	E2. City staff provide expertise in energy efficiency	☒ Date of event where retrofit project information was shared ☒ Number of attendees at event where retrofit project was shared ☑ Any published material covering building retrofit and type of distribution
Staff support/job creation	Screenshots of the Dropbox utilized to track projects and activities to show content available to new staff	New: Consistency through city staff turnover by the LGP acting as a resource center for historical information	☑ List of documents available to staff to help with onboarding ☑ Screenshots of how data are organized and what files are available

Relevant Co-Benefit	Description of Data Provided	Relevant Activity, Output, or OUtcome	Needed Data Fields
Bundling/ combining energy efficiency resources with other programs/ offerings	Documentation of solar monitoring data that was utilized to inform local governments about additional work they could do along with retrofit projects	A1. Completed projects	No relevant metrics: Assessing program participation would be doubling up counting of savings that already occurs for IOU Core Programs.

4.4 Protocols for Tracking Co-Benefit Data

Each partnership takes on a unique set of activities, each of which are represented in the generic LGP logic model developed from prior evaluations and leveraged for this study. For future tracking, we recommend that each implementing partner identify the activities they plan to conduct from the logic model; review the data tied to that activity, output, and/or outcome; and then set a goal to develop a metric.

The IOUs should require implementing partners to provide data on the metrics that tie to the expected outputs/outcomes that result from the activities they have decided to take on as part of their partnership on an annual basis.

New partnerships should be required to submit data on a quarterly basis for their first year to ensure that data tracking meets utility expectations. IOUs should review the data to confirm that they reflect the expected metrics.

5 Research Limitations

We acknowledge that there are limitations to this research related to the variation in partnerships and the subjectivity of what is or is not a co-benefit. Table 10 shows challenges and limitations related to this research along with our approach to mitigate these issues. The largest limitations are presented first.

Table 10: Limitations and Challenges and Mitigation Strategies

Challenge/ Limitation	Description	Mitigation Strategy
Data and staff availability	We found that it was particularly difficult to reach local government staff to complete interviews and surveys; many staff members hold multiple roles, and the LGP may represent a relatively minor part of their day to day responsibilities. Local government response rates for the interviews and surveys was low, so we cannot consider the responses we did receive to be representative	Evergreen used local government staff responses to corroborate the co-benefits listed by implementing partners, but did not include their responses when summarizing co-benefit counts. LGP activities were a larger part of the responsibilities of our primary sources (the implementing partners). Evergreen leveraged communication from implementing partners and IOU staff in parallel to our outreach to encourage local government staff participation in this research.
Subjectivity of criteria	Identification of co-benefits and economic benefits and their importance was subject to the interpretation of implementing partners. Based on the definition of co-benefits developed for this research, Evergreen screened out the benefit of project identification because it is "indirectly associated with energy savings that are already claimed by the IOUs." A recent report released by Opinion Dynamics	Evergreen worked with the Study Team to develop a single definition of co-benefits to use for this research. Evergreen also aimed for consistent evaluation of the importance of various benefits by having respondent rank both the importance of the benefits and the ease of collecting data on them, and having interviewees give descriptions and support for the reason they selected certain responses. We also asked

Challenge/ Limitation	Description	Mitigation Strategy
	Corporation[15] came to the conclusion that not *all* energy savings achieved in municipal buildings are claimed through IOU Core Programs. Depending on how the determination of savings occurs and how they are claimed after LGP project identification, the co-benefit of project identification may need to be reassessed.	interviewees to rank the identified co-benefits at the end of the surveys to understand which ones they feel are the most important.
Limited usefulness of data	Data were requested only from implementing partners that responded to the web survey; therefore, we do not have data to review from three of the implementing partners that responded to the in-depth telephone survey but did not complete the web survey. The data requests were also submitted based on co-benefits before Evergreen screened them through the logic model. For this reason, not all the data we received applied specifically to the metrics developed by Evergreen. The data reviewed for this research represent examples of data that could be collected in the future. Much of the data requested by Evergreen may not currently be required to be tracked by implementing partners.	In the future, we suggest data be collected based on the logic model screening exercise rather than directly using the co-benefits reported in the web surveys. We treated the data as examples of how data could be collected in the future. In the future, it could be useful for the IOUs require the tracking of data by a smaller number of partnerships and then conduct an evaluability assessment before requiring data collection of the newly developed metrics from each partnership.
Inapplicability of prior non-energy benefit (NEB) research	Evergreen reviewed NEB research to get a sense for what co-benefits might come up in this research. Co-benefits and NEBs do not overlap perfectly.	Evergreen did not prompt interviewees with a list of NEBs from our literature review; rather, we shared our definition of a co-benefit and asked research participants to share the co-benefits that they believed they were providing.

[15] Opinion Dynamics Corporation. 2020. *Assessment of LGPs, Deliverable 22 Year 1 Study.*

Challenge/ Limitation	Description	Mitigation Strategy
Cross-program comparability	Prior research indicates that given the nature of LGPs, they are very difficult to compare to one another given differences in the communities they serve, the activities they choose to implement, and the priorities of a given local government.[16]	Evergreen's recommendations take into account that each LGP takes on different issues and will ultimately need to collect data on metrics tied only to their selected activities.

[16] Evergreen Economics. 2013. *Program Assessment Study: Local Government Partnership Programs Final Report*. http://calmac.org/publications/LGP_Program_Assessment_Report_-_final.pdf and Research Into Action. 2016. *Targeted Processing of the Local Government Partnership Program.* http://calmac.org/publications/LGP_TPE_Final_Report_11.28.16.pdf

6 Summary of Findings, Recommendations

Evergreen asked for feedback from implementing partners to identify a set of initial co-benefits and assessed the suggested co-benefits for their ability to be tracked, their importance, and their application to HTR communities and DACs. These co-benefits were then screened using a logic model. Through the exercise of screening recommended co-benefits, Evergreen identified a process that further can integrate co-benefits into the LGPs, including:

- A careful review of program logic models to confirm that each logic model includes any new activities, outputs, and outcomes covering identified co-benefits, and that the existing logic models reflect the current intent of the partnerships. Note that many of the co-benefits identified through this research are already tied to existing items in the logic model.
- Addition of required tracking data that will enable reporting on metrics that measure progress towards goals identified in the logic models. This research identified tracking data related to both old and new outputs and outcomes that related to the screened co-benefits.

This section summarizes the research findings, orients them to the study's research questions, and provides recommendations. The IOUs' LGP programs are evolving, and some IOUs may terminate or significantly redesign their programs. This report can be used for partnerships that continue in the future but can also show the usefulness of a logic model approach for any redesign going forward.

As a preliminary study step, Evergreen Economics, based on a NEB literature review and input from the IOU Study Team, developed the following definition of co-benefits. This definition ensures that any quantification of co-benefits will not double count energy savings already claimed by LGPs.

> ➢ **Co-Benefits:** *Co-benefits result **directly** from an activity done by an LGP whose savings are **not already claimed** by the IOUs. Co-benefits include energy—both resource (direct savings claims) and non-resource (no direct savings claims)—and non-energy benefits that are **not already directly claimed** by the IOUs. Co-benefits do not include non-energy benefits that are **indirectly** associated with energy savings that are already claimed by the IOUs.*

Our findings are presented in the form of answers to the study's research questions in the next two subsections.

6.1 Identification and Evaluation of Co-Benefits

What do stakeholders consider to be "co-benefits"? What co-benefits do LGPs intend to provide to their communities?

Through interviews and web surveys, implementing partners identified a wide range of potential LGP co-benefits that Evergreen placed into the following 12 high level categories. These categories were later narrowed down to ensure they fit the study definition of co-benefits.

1. Education
2. Staff support/job creation
3. Project identification
4. Monetary savings from reduced energy bills
5. Leveraging relationships
6. Customized/tailored messaging
7. Bundling/combining energy efficiency resources with other programs/offerings
8. Greenhouse gas (GHG) reductions
9. Providing source of trusted information
10. Increased Climate Action Plan (CAP) goals
11. Health/comfort
12. Proof of concept for broader industry

How do implementing partner-identified co-benefits differ from "NEBs"? From the list of NEBs, how many of them are relevant for the purpose of the "co-benefit" analysis?

Table 11 shows that four of the 12 co-benefits identified by implementing partners also came up in Evergreen's review of NEB literature. Co-benefits that utilized the unique positioning of the partnership implementer (such as leveraging relationships, bundling retrofits, and customizing messaging to constituent needs and interests) did not appear in our literature review and demonstrate how co-benefits differ from NEBs. NEBs that appeared in our research but were not mentioned by implementing partners include reduced arrearages, improved safety, water bill savings, and reduction of environmental externalities.

Table 11: Overlap of Self-Reported Co-Benefits with NEBs

Co-Benefit Category	Appeared in NEB Literature Review
Education	**Yes**
Staff support/job creation	**Yes**
Project identification	No
Monetary savings from reduced energy bills	**Yes**
Leveraging relationships	No
Customized/tailored messaging	No
Bundling/combining energy efficiency resources with other programs/offerings	No
Greenhouse gas (GHG) reductions	No
Providing source of trusted information	No
Increased Climate Action Plan (CAP) goals	No
Health/comfort	**Yes**
Proof of concept for broader industry	No

What do stakeholders consider to be "local economic benefits" and how do they differ from "co-benefits?"

Implementing partners were asked to identify whether they considered each potential co-benefit they reported as a "local economic benefit." The following co-benefits were considered to be local economic benefits most of the time (70% or more of the times that they were mentioned by implementing partner respondents).

- Project identification
- Leveraging relationships
- Customized/tailored messaging
- Bundling/combining energy efficiency resources with other programs/offerings
- Providing source of trusted information

Co-benefits that were reported to be considered local economic benefits were generally justified by implementing partners because the co-benefit was believed to lead to retrofit work that allowed either local governments or businesses to take the money that they saved on energy bills and spend it elsewhere.

Which co-benefits reported by implementing partners did not meet the definition of co-benefits developed by the study team?

Evergreen systematically screened the full set of reported co-benefits against the study definition by comparing them to an LGP logic model. LGP activities that are already captured in the logic model do not meet the study definition of co-benefits, which should be benefits that are not already claimed by the IOUs.[17]

The following co-benefits that were reported by implementing partners were screened out because they were either tied to an existing logic model activity (and already part of LGP program claims) or because they were indirectly associated with energy savings that may be already claimed by the IOUs:

- Project identification

[17] The study approach assumes that the IOUs claim benefits for all program activities that are captured in the LGP logic models. Co-benefits are intended to be additional benefits that are not already reported.

- Monetary savings from reduced energy bills
- GHG reductions
- Increased CAP goals
- Health/comfort

Co-benefits that passed the screening were added to a revised LGP program logic model. These new additions to the logic model are intended to update the documentation of LGP program design to encompass the co-benefits identified by this research.

6.2 Co-Benefits Data Collection

- What co-benefits require too complex an evaluation to quantify, outweighing their relative benefit?
- Are these co-benefits justified from the perspective of quality, reliability, and confidence?
- What method should be used to quantify these co-benefits? What additional data need to be collected?

Evergreen mapped reported co-benefits to their expected outputs and outcomes in the revised LGP program logic model and developed a set of associated tracking data that may support measurement and reporting. Next, Evergreen evaluated each tracking data based on quality, reliability, and confidence along with trackability using a scale of 1 to 3 (as shown in Table 12 on the next page):

1. Easy to track
2. Challenging but worth the effort to track
3. Too challenging to track and will likely not be a reliable source for substantiating expected outputs or outcomes.

In the third column of Table 12, Evergreen explains concerns with requiring tracking data ranked as 2 or 3. Due to the variation in how partnerships are implemented, it is likely that implementing partners will use different methods to track the recommended metrics. An evaluability assessment of collected data and related metrics from a smaller group of partnerships could be useful in identifying valuable tracking methods going forward.

Table 12: Trackability

Tracking Data Category (# of metrics in category)	Track-ability Score	Reason for Score
Examples of material shared (6 metrics)	1	Already tracked by multiple implementing partners, though tracking format and type of data collected varies.
Event date and name (4)	1	
Staff tracking information (3)	1	This may require additional internal data collection.
Contractor tracking information (1)	2	Tracking data related to contractors becomes challenging because implementing partners are generally involved at the implementation stage and not always during retrofit implementation.
Educational event attendees (4)	2	Educational information sharing can be informal, making it difficult to know what type of communication to track, and with what frequency. What one partnership may consider outreach, another partnership may consider a casual conversation.
Pre/post survey to assess acquired knowledge (8)	3	Pre/post surveys of a certain population (business owners, local constituents, local government staff) to understand if they are more aware/knowledgeable/ trusting/confident with regards to energy efficiency efforts would be costly to evaluate. Results may not be able to be attributed only to LGP activities.

What data are being collected by the implementing partners? Given the data already collected by the implementing partners, what co-benefits can be quantified now?

Evergreen requested data from implementing partners to get a sense of the feasibility and usability of co-benefits tracking. Implementing partners are not currently required to collect all of the data we requested, so what we collected is illustrative but not representative of the potential for future data collection on co-benefits. Data on co-benefits are not currently tracked by all partners, nor are data collected in a consistent manner by those who do track data.

In reviewing data already collected by implementing partners, it appears that metrics related to the co-benefit of education are closest to being able to be quantified at this current point in time. However, our review of this data identified that what is currently available varies widely by format and level of detail, suggesting that even though it would be possible to start to quantify this metric now, it would be an intensive undertaking.

Regarding future data collection:

- Are primary research and data collection needed?
- Are any modeling efforts required to produce the co-benefit estimate?

Our recommendations for data collection will require ongoing tracking and data collection and will likely not be easily gathered in the same format across partnerships. No modeling is required to analyze the provided metrics related to co-benefits.

What protocols should the implementing partners institute in order to collect these data? Who should the implementing partners report these data to, and how frequently? How should these data be used?

For future tracking of metrics, we recommend that each implementing partner identify the activities they plan to conduct from the logic model.

The IOUs could require implementing partners to provide data on the metrics that tie to the expected outputs/outcomes that result from the activities they have decided to take on as part of their partnership on an annual basis.

New partnerships can be required to submit data on a quarterly basis for their first year to ensure that data tracking meets utility expectations. IOUs should review the data to confirm that they reflect the expected metrics.

What are the strengths and weaknesses of the study recommendations and conclusions?

Strengths of this study include the gathering of input directly from 24 implementing partners that was then corroborated by 10 local government representatives and two stakeholders. The process for screening data was transparent and grounded in the logic model. This research used a combination of more in-depth interviews alongside web surveys and staged research so that activities could build on one another. Recommendations are built off of real data rather than data that are reported to be collected.

Weaknesses of the study recommendations and conclusions include:

- A level of subjectivity built into the criteria used to conduct the analysis that resulted in the suggested metrics.
- A lack of a substantiative number of responses from local government staff.

6.3 Recommendations

Some of the co-benefits identified through this research are not already addressed by the existing program logic model.

- Evergreen recommends updating the LGP program logic models to include new activities, outputs, and outcomes that were identified through this research (Figure 2 in Section 4.2).

Evergreen identified a set of metrics that could be used in the future to assess the program's ability to deliver the co-benefits identified in the form of logic model outputs and outcomes.

- Evergreen recommends that the IOUs require a small number of LGPs to report on the co-benefits metrics associated with the activities conducted by their specific partnerships. We suggest using two of the five partnerships that were identified by the IOU Study Team as high priority for our in-depth interviews that are not slated to end in the near future (two of the five), including:
  - Sierra Nevada Energy Watch
  - Ventura County Partnership
- Evergreen recommends that this initial set of data can then be used to do an evaluability assessment to understand how collection of these metrics could scale to all partnerships in the future to support evaluation of co-benefits.

IOUs could also consider adding data collection covering specific metrics to LGP contracts in the future, along with protocols to ensure consistency and completeness.

If the IOUs added a requirement to report on co-benefits metrics to LGP contracts, each metric should be tied to the output/outcome from the selected activities that the implementing partner plans to adopt. This customized nature is important given the unique nature of each partnership and the activities that they conduct.

Appendix A: Literature Review Reference List

We reviewed the following documents to increase our background knowledge for this project:

- Prior non-energy benefits (NEB) research along with investor-owned utility (IOU) and Energy Division public comments on past reports. This will be used as a starting point for defining co-benefits, which are currently understood as different than local economic benefits.
- Prior Evergreen research of NEBs and of local government partnerships (LGPs).
- NEB update for low-income programs conducted by the IOUs (with the understanding that the conclusion was to collect more primary data).
- LGP Program Theory documentation (to ensure benefits identified tie back to program theory).
- SB 350 Doubling Energy Savings by 2030 Report.

Prior Non-Energy Benefits (NEB) Research Along with IOU and Energy Division Public Comments on Past Reports

Existing NEB research provided examples of the scope of benefits currently recognized by a variety of sources and include how they have been classified and defined. Synapse Energy Economics (2014), Weinsziehr and Skumatz (2016), MEEA (2017), TRC (2019), Skumatz Economic Research Associates (2010), and Navigant (2018) were particularly helpful in providing examples of reported NEBs.

Lawrence Berkeley National Laboratory. 2017. *2025 California Demand Response Potential Study.* https://www.cpuc.ca.gov/WorkArea/DownloadAsset.aspx?id=6442452698

Midwest Energy Efficiency Alliance (MEEA). 2020. *Non-Energy Benefits of Energy Economics.* https://www.mwalliance.org/sites/default/files/media/NEBs-Factsheet_0.pdf

Navigant. 2018. *Quantifying Non-Energy Benefits from ComEd's Income Eligible Programs: Findings and Recommendations from Secondary Research.* https://s3.amazonaws.com/ilsag/ComEd_Income_Eligible_Programs_NEBs_Secondary_Research_Report_Draft_2018-03-06.pdf

Opinion Dynamics. 2018. *California Public Utilities Commission Energy Efficiency Program Oversight and Evaluation of the Group B Sectors.* https://pda.energydataweb.com/api/view/2124/Research%20Sector%20Workplan%20Year%201%20Revised%20Final_LGPRENCCA_2018-11-20.pdf

Skumatz Economic Research Associates. 2010. *Non-Energy Benefits: Status, Findings, Next Steps, and Implications for Low Income Program Analyses in California.* https://assets.ctfassets.net/ntcn17ss1ow9/1LNLp3UBSjYLSaWv5BGyss/0d5ba231613515132a285ece4beba657/LIEE_Non-Energy_Benefits_Revised_report.pdf

Skumatz Economic Research Associates. 2016. *Non-Energy Benefits / NEBs – Winning at Cost-Effectiveness Dominos: State Progress and TRMs.* https://www.aceee.org/files/proceedings/2016/data/papers/6_1147.pdf

Synapse Energy Economics Inc. 2014. *Driving Efficiency with Non-Energy Benefits.* https://www.aceee.org/files/pdf/conferences/mt/2014/D4-Malone.pdf

TRC. 2019. *Commercial ZNE Market Characterization – Final Report.* http://www.calmac.org/publications/IOU_-_TRC_Comm_ZNE_Mkt_Char_Final.pdf

Weinsziehr, Theresa. and Lisa A. Skumatz. 2016. *Evidence for Multiple Benefits of NEBS: Review on Progress and Gaps from the IEA Data and Measurement Subcommittee.* https://energy-evaluation.org/wp-content/uploads/2019/06/2016-paper-skumatz.pdf

Prior Evergreen Economics Research of NEBs and LGPs

Prior Evergreen Economics projects on NEBs and LGPs helped us to define and ground the co-benefits of this project into a logical framework based on LGP activities. The logic models in process evaluations for various LGPs including San Mateo (Evergreen, 2017) and Los Angeles County (Evergreen, 2017) were used as a framework to defining co-benefits within this research.

Evergreen Economics. 2013. *Needs Assessment for the Energy Savings Assistance and the California Alternative Rates for Energy Programs – Volume 1: Summary Report.* http://www.calmac.org/publications/LINA_report_-_Volume_1_-_final.pdf

Evergreen Economics. 2013. *Needs Assessment for the Energy Savings Assistance and the California Alternative Rates for Energy Programs – Volume 2: Detailed Findings.* http://www.calmac.org/publications/LINA_report_-_Volume_2_-_final.pdf

Evergreen Economics. 2013. Program Assessment Study: Local Government Partnerships – Final Report. http://calmac.org/publications/LGP_Program_Assessment_Report_-_final.pdf

Evergreen Economics. 2017. *Process Evaluation of the Los Angeles County Local Government Partnership Program.* http://calmac.org/publications/LGP_LA_County_Report_092217.pdf

Evergreen Economics. 2017. *Process Evaluation of the San Mateo County Energy Watch Local Government Partnership Program.* http://calmac.org/publications/LGP_SanMateo_Report_091617.pdf

NEB Update for Low-Income Programs

The NEB update to low-income programs (Skumatz Economic Research Associates, 2019) and SB 350 Doubling Energy Savings by 2030 (California Energy Commission, 2017) were reviewed for background purposes of this research and were useful in informing the relevance of NEBs in terms of energy projects and ways they are being calculated.

Skumatz Economics Research Associates. 2019. *Non-Energy Benefits and Non-Energy Impact (NEB/NEI) Study for the California Energy Savings Assistance (ESA) Program – Volume 1*. https://pda.energydataweb.com/api/view/2289/ESA%20NEB%20Study%20Draft%20Report%20Volume1.pdf

LGP Program Theory

In addition to prior Evergreen research on program theory, SoCalREN (2017) also informed how co-benefits should be grounded in a logic model.

CADMUS. 2013. *Appliance Recycling Program Evaluation and Market Characterization – Volume 1*. http://www.calmac.org/publications/SCE_PGE_ARP_Final_Report_Vol.1_09-18-13.pdf

Local Government Commission and Local Government Sustainable Energy Coalition. 2017. *Statewide Local Government Program Business Plan.* https://4930400d-24b5-474c-9a16-0109dd2d06d3.filesusr.com/ugd/0c9650_ac8143f9df234d96b946f23a26975ecb.pdf

Public Utilities Commission of the State of California. 2018. *Decision Addressing Energy Efficiency Business Plans*. https://docs.cpuc.ca.gov/PublishedDocs/Published/G000/M215/K706/215706139.PDF

Southern California Regional Energy Network (SoCalREN). 2017. *2013-2017 Energy Efficiency Programs Southern California Regional Energy Network Program Implementation Plan*. https://socalren.com/sites/default/files/Public_Agency_PIP.pdf

SB 350 Doubling Energy Savings by 2030 Report

SB 350 Doubling Energy Savings by 2030 provided insight into how current policies take NEBs into account for selecting projects and some examples of common NEBs such as health and safety.

California Energy Commission. 2017. *Senate Bill 350: Doubling Energy Efficiency Savings by 2030.* https://efiling.energy.ca.gov/getdocument.aspx?tn=221631

California Energy Commission. 2020. *Proposition 39: California Clean Energy Jobs Act.* https://efiling.energy.ca.gov/getdocument.aspx?tn=233007

Appendix B: Evaluation of Co-Benefits, Based on Self-Reported Importance, Trackability, and Frequency

This shows how the web survey respondents characterized the 53 co-benefits that they reported, including:

- Which logic model activities they are tied to;
- Who (HTR communities and DACs) the co-benefits serve; and
- Which of the benefits could be considered economic in nature.

Co-Benefits/Benefits Grounded in LGP Activities

Because staff who implement partnerships or local government staff who are involved with the LGPs also take on additional roles to those specified in their agreement with the IOU(s), we asked them to only consider co-benefits that were directly tied to their partnership for the purpose of our research. Partnership activities fall broadly into three categories: municipal building retrofits, strategic planning, and core program coordination (Figure 3). The full list provided to interviewees was derived from a generalized logic model that is included in Appendix C.

Figure 3: Summary of LGP Activities from the Program Logic Model

Strategic Plan Support Activities	Municipal Building Retrofits	Core Program Coordination
• Reach codes • Code compliance • Lead by example • Community Programs • Funding Climate Action Plans	• Municipal Building Retrofits	• Residential • Commercial • Low-Income Programs • Third Party Programs • Outreach and Education

Table 13 shows that respondents felt that the co-benefits they listed could be derived from a wide variety of the activities that they take on as part of their partnership. Each "n" listed in the first column represents the number of times that a benefit was mentioned in a category. Benefits were tied more often to activities in the categories of municipal

building retrofits and core program coordination compared to strategic plan support activities.

Table 13: How Respondents Reported Co-Benefits Mapped to Logic Model Activities (number of mentions of a co-benefit by web survey respondents)

Benefit Category	Strategic Plan Support Activities	Municipal Building Retrofits	Core Program Coordination	Other
Education (n=11)	8	9	4	4
Staff support/job creation (n=5)	3	5	3	1
Project identification (n=8)	5	6	3	3
Leveraging relationships (n=6)	4	4	3	0
Customized/tailored messaging (n=4)	3	2	1	0
Bundling/combining energy efficiency resources with other programs/offerings (n=3)	3	2	2	0
Providing source of trusted information (n=3)	2	3	3	1
Monetary savings from reduced energy bills (n=6)	5	5	3	1
GHG reductions (n=3)	3	3	1	0
Increased Climate Action Plan goals (n=0)				
Health/comfort (n=2)	1	2	2	0
Proof of concept for broader industry (n=2)	2	1	0	0

Co-Benefits Serving Hard-to-Reach and Disadvantaged Communities

Implementing partners representing 18 LGP responded to the web survey. Of those 18 LGPs, 15 were reported to serve DACs and 14 were reported to serve HTR communities, with 11 serving both groups. The majority of the LGPs that serve both HTR communities and DACs are located inland.

Table 14 identifies the number of implementing partners that reported the various traits associated with the definition of HTR from D.18-05-041. Web survey respondents were asked to share the traits of their community that they used to consider if they are serving HTR populations.

Evergreen then categorized their responses within the definition from D.18-05-041. The most commonly reported traits for HTR populations were that the language spoken is not English, that they are low-income households, and they are small businesses.

Table 14: Hard-to-Reach Traits Reported by Interviewed LGP Implementing Partners

D.18-05-041 Definition for Hard to Reach	Number of LGPs Interviewed that Reported the Trait (n=14 HTR LGPs)
Primary language spoken is other than English	8
Customers qualify for California Alternative Rates for Energy (CARE) or Family Electric Rate Assistance Program (FERA) – Low income	7
Live in multifamily or mobile home and/or rent their home and face the split incentives barrier	5
Businesses renting space and/or limited in size (less than 10 employees) or demand is less than 20kW and/or under 10,000 therms annually	7
Geographically difficult to reach (high desert, mountains), not part of metropolitan areas of Sacramento, San Francisco, Los Angeles, and San Diego	5

Table 15 shows the number of times that the implementing partner reported that the HTR population receives the intended benefit. This analysis is limited only to respondents who reported that their LGP served HTR communities. Two co-benefits were reported as always serving HTR communities: customized/tailored messaging and providing a source of trusted information. Education was the most frequently reported co-benefit and was also the most frequently reported as being an intended benefit for HTR communities.

Table 15: Number of Co-Benefits Reported to Serve Hard-to-Reach Populations

Co-Benefit	Total Number of Co-Benefits Reported by Partnerships that Serve HTR Communities	# of Times the Co-Benefit Was Said to Serve HTR Communities
Education	10	6
Staff support/job creation	4	2
Project identification	7	5
Leveraging relationships	6	4
Customized/tailored messaging	4	4
Bundling/combining energy efficiency rces with other programs/offerings	3	2
Providing source of trusted information	3	3
Monetary savings from reduced energy bills	5	2
GHG reductions	3	2
Health/comfort	2	0
Proof of concept for broader industry	2	0

Table 16 shows the number of times that an implementing partner reported that a co-benefit mentioned by an implementing partner that serves DACs was believed to accrue to that population. Similar to the table above, the co-benefits of customized/tailored messaging and providing a source of trusted information were reported to serve DACs 100 percent of the time. Two additional co-benefits were also reported to serve DACs each time they were mentioned: staff support/job creation and bundling of resources. Once again, education was reported with the most frequency.

Table 16: Number of Co-Benefits Reported to Serve DACs

Co-Benefit	Total # of Co-Benefits Reported by Partnerships that Serve DACs	# of Times the Co-Benefit Was Said to Serve DACs
Education	9	6
Staff support/job creation	3	3
Project identification	3	2
Leveraging relationships	5	4
Customized/tailored messaging	2	2
Bundling/combining energy efficiency resources with other programs/offerings	3	3
Providing source of trusted information	2	2
Monetary savings from reduced energy bills	5	1
GHG reductions	3	2
Health/comfort	2	0
Proof of concept for broader industry	2	0

Co-Benefits that are Economic in Nature

Implementing partners were asked to identify which of their reported co-benefits they considered to be economic in nature. The majority of co-benefits labeled as economic were considered as such because they were expected to increase participation in IOU retrofit programs, which then saved municipalities, local businesses and residents money on their energy bills.

Table 17 shows the number of times that each mentioned co-benefit was reported to be considered an economic benefit by the implementing partner web survey respondents. These counts are rolled up by co-benefit category. Co-benefits that were reported as economic in nature were justified because the co-benefit was believed to lead to retrofit work that allowed either local governments or businesses to utilize the money that they saved on energy bills and spend it elsewhere. One exception to this was greenhouse gas (GHG) reductions, which are considered economic due to the need to encourage local governments to make the upfront investments to address the reductions. Health and comfort related co-benefits were not considered economic in nature by any respondents. Project identification was the co-benefit most frequently reported to be an economic benefit.

Table 17: Number of Times Mentioned Co-Benefits Considered as Economic Benefits

Co-Benefit Category	Number of Co-Benefits Reported as Economic
Education (n=11)	4
Project identification (n=8)	7
Leveraging relationships (n=6)	5
Monetary savings from reduced energy bills (n=6)	2
Staff support/job creation (n=5)	3
Customized/tailored messaging (n=4)	3
Bundling/combining energy efficiency resources with other programs/offerings (n=3)	3
Providing source of trusted information (n=3)	3
Greenhouse gas (GHG) reductions (n=3)	2
Proof of concept for broader industry (n=2)	1
Increased Climate Action Plan (CAP) goals (n=0)	0
Health/comfort (n=2)	0

Co-Benefit Importance

To identify which co-benefits were considered to be the most important from the standpoint of the implementing partners, the web survey included a question asking respondents to identify the top two co-benefits they believe to be the most important.

Table 18 shows that greenhouse gas (GHG) reductions were mentioned three times by the respondents, and for two out of those three times, the respondent labeled it as the most important co-benefit. While co-benefits that fell into the education category were rarely noted to be the most important co-benefit, they were listed as the second most important co-benefit over half of the time. It is important to note that the frequency each co-benefit was mentioned (at all) varied, with educational co-benefits mentioned 11 times, and GHG reductions only 3 times. For this reason, we sorted the co-benefits in order of those that were reported with the most frequency.

Table 18: Importance of Co-Benefits as Ranked by Implementing Partners Responding to Web Survey (n = number of time co-benefit was mentioned)

Co-Benefit	# of Times Benefit Reported as Most Important	# of Times Benefit Reported as Second Most Important
Education (n=11)	1	6
Project identification (n=8)	4	1
Monetary savings from reduced energy bills (n=6)	1	0
Leveraging relationships (n=6)	4	1
Staff support/job creation (n=5)	2	2
Customized/tailored messaging (n=4)	1	1
Providing source of trusted information (n=3)	0	2
GHG reductions (n=3)	2	0
Bundling/combining energy efficiency with other resources/options to create a full package for decision making (n=3)	1	1
Proof of concept for broader industry (n=2)	1	1
Health/comfort (n=2)	0	0

Co-Benefit Trackability

To understand the feasibility of tracking data, we asked respondents to report which of their mentioned co-benefits were tracked, which untracked co-benefits could be tracked in the future, and which co-benefits were considered too challenging to track. Table 19 shows whether implementing partners who responded to the web survey reported that they tracked data to support co-benefits, saw that as feasible in the future, or if they did not track it currently or did not think it could be tracked in the future. The co-benefit of providing a source of trusted information was not tracked at all, and two out of three times it was mentioned, respondents reported that they did not see tracking as feasible in the future. Based on self-reported responses, leveraging relationships, staff support and job creation, and GHG reduction are most likely to be currently tracked.

Table 19: Reported Feasibility of Tracking Co-Benefits Mentioned by In-Depth Interview and Web Survey Implementing Partner Respondents (n = number of time co-benefit was mentioned)

Co-Benefit	# of Times Partner Reported Tracking Data	# of Times Partner Reported Benefit Could be Tracked in Future	# of Times Partners Consider Data Untrackable or Unsure
Education (n=11)	7	3	1
Project identification (n=8)	5	1	2
Monetary savings for LGs (n=6)	3	1	2
Leveraging relationships (n=6)	5	1	0
Staff support and job creation (n=5)	4	1	0
Customized/tailored messaging (n=4)	2	1	1
Providing source of trusted information (n=3)	0	1	2
GHG reductions (n=3)	3	0	0
Bundling/combining energy efficiency with other resources/options to create a full package for decision making (n=3)	2	1	0
Proof of concept for broader industry (n=2)	1	1	0
Health/comfort (n=2)	1	1	0

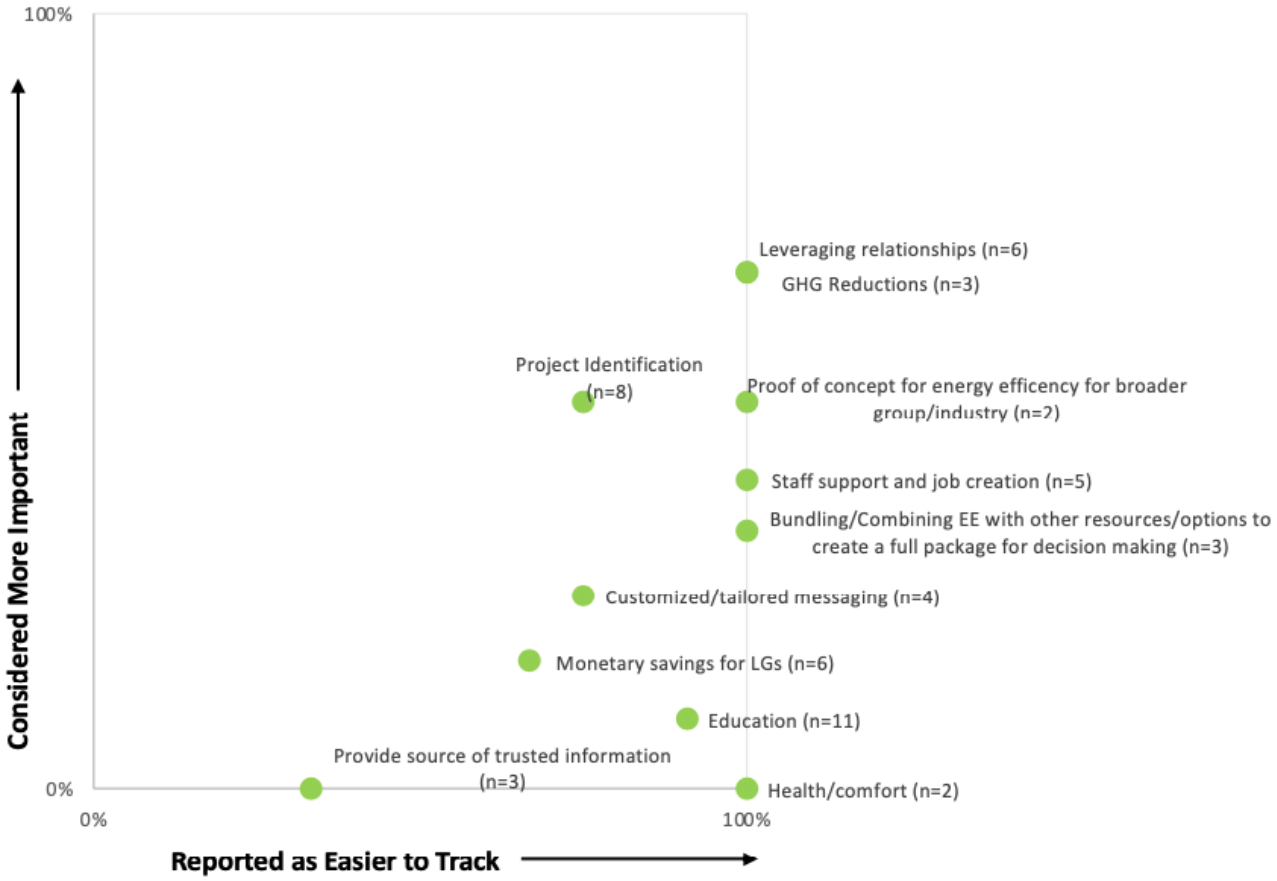
We looked at three implementing partner-reported factors as a way to consider which identified co-benefits could be considered for the list of high value co-benefits. This included a review of the following co-benefit characteristics:

- **Importance:** Percent of time the benefit was reported as being the most important benefit of all by an implementing partner.
- **Tracking feasibility:** Reported current tracking status or ability to track in the future.
- **Frequency:** Frequency of reporting of co-benefit in broader categorization of 12 co-benefits.

When we combine the importance and feasibility of tracking co-benefits (Figure 4), it becomes apparent that some of the co-benefits reported as more difficult to track (monetary savings for local governments and providing education) are also lower in their overall rank of importance as reported by implementing partners. The X axis reports the percentage of co-benefits in a category that are reported as currently tracked or that could be tracked in the future. The Y axis tracks the

percent of time the co-benefit is reported as the most important co-benefit by the implementing partner. Co-benefits appearing in the top right quadrant are the most important and easiest to track.

Figure 4: Comparison Tracking Feasibility with Considered Importance from Implementing Partner Web Survey Respondents

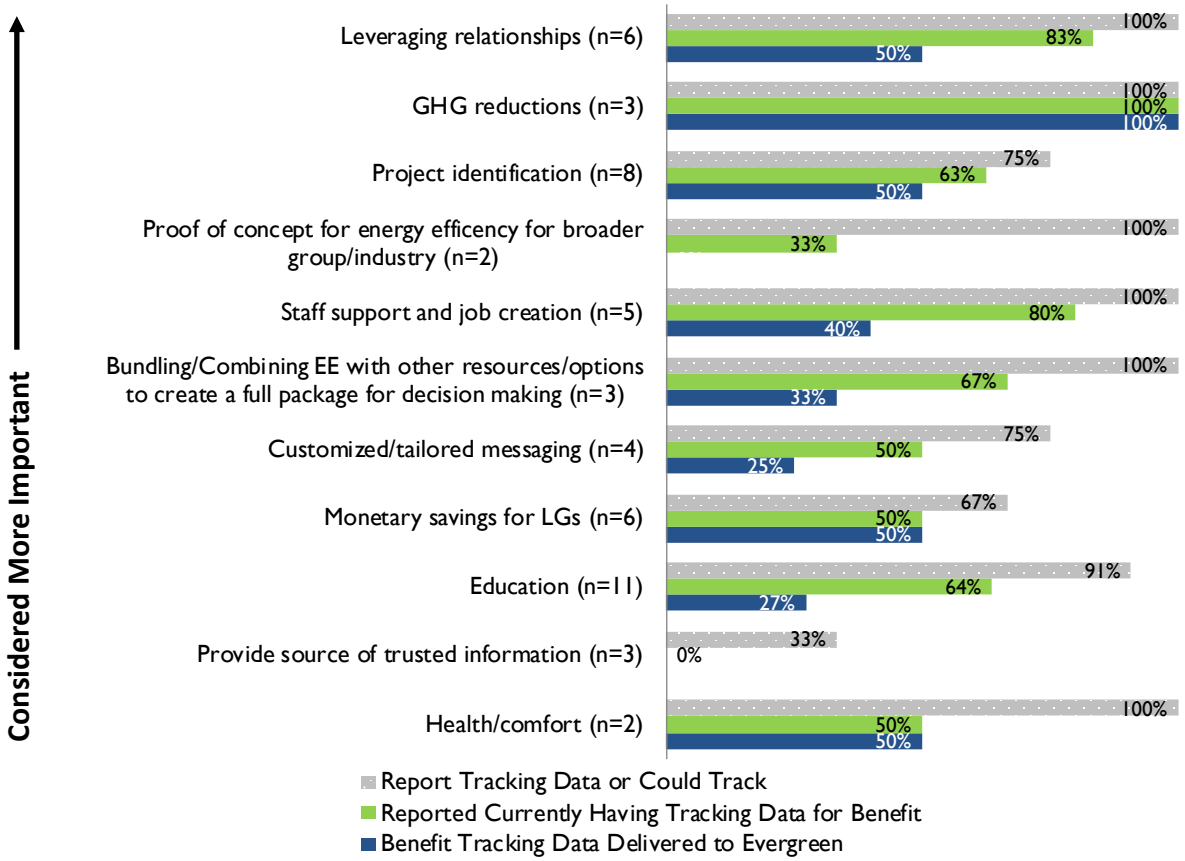


Before using these two variables to assess the recommended direction for tracking co-benefits in the future, this research also includes an assessment of what respondents *said* they tracked, and an analysis of *how* co-benefits were tracked, to corroborate the self-reported information regarding tracking feasibility.

After receiving responses about what data were tracked, Evergreen requested tracking data for the period January 2018 to December 2020 from a total of 11 LGPs that reported doing some type of tracking for at least one co-benefit that they mentioned. Across those 11 LGPs, 5 did not submit any data. The six LGPs that submitted data gave Evergreen tracking data covering nine of the listed co-benefit categories, giving Evergreen the opportunity to further evaluate the ability to track co-benefits.

The bar chart in Figure 5 shows the same percentages from the X axis in Figure 4 in green still ranked with the most important co-benefits at the top (Y axis above), but then shows how the data that are reported as *currently* tracked (in grey), and what data were *actually* tracked and delivered to Evergreen (in blue). Despite reports of tracked data from implementing partners, this figure shows that some of the reported data were not delivered in response to Evergreen's data request.

Figure 5: Reported Co-Benefits that Could be Tracked, Are Tracked, and Were Delivered to Evergreen

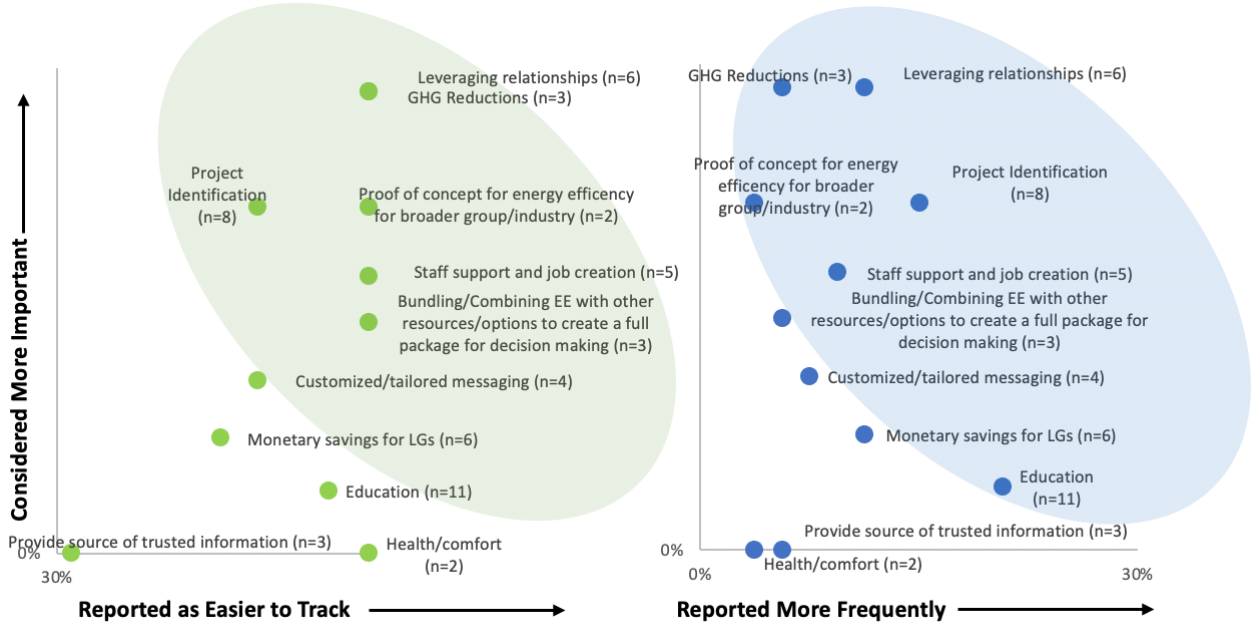


Frequency

In deciding which co-benefits are valuable to track in the future, Evergreen also analyzed web survey implementing partner responses by looking at how *frequently* co-benefits in each category were reported. By mapping the frequency or occurrence of co-benefits by importance, similarly to how we mapped feasibility of tracking in Figure 4, we can identify the highest priority co-benefits to inform a recommendation of which co-benefits should be tracked in the future. Figure 6 shows Figure 4 next to a new figure that has the same Y axis (importance) but a different X axis which shows how frequently the co-benefit was reported. By comparing these two diagrams, we can see

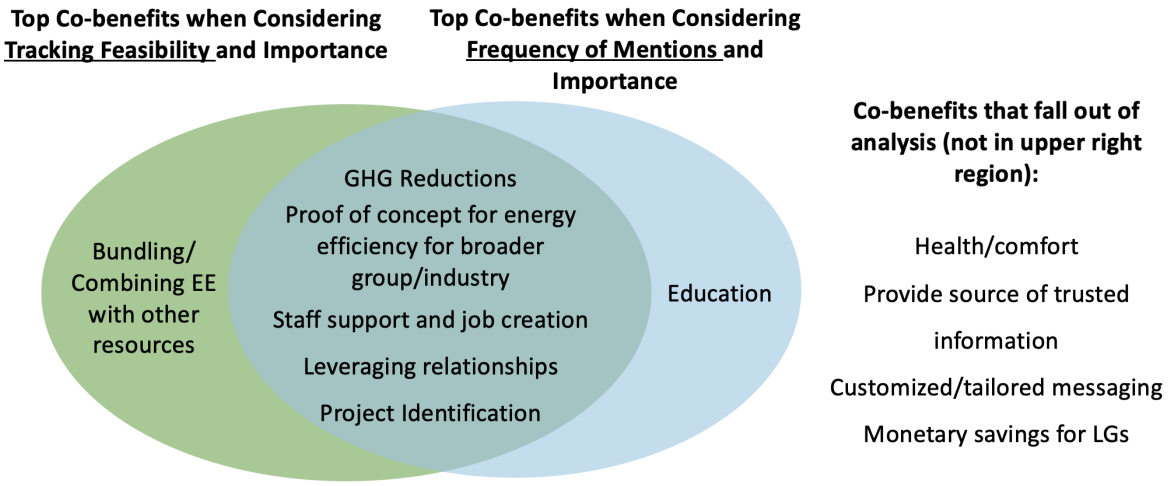
which co-benefits fall in to the upper right portion (shaded green and blue) of both diagrams and can narrow down the co-benefits that were reported as the most important, that were reported as easier to track, and that were reported the most frequently. We see that providing a source of trusted information, health/comfort, monetary savings, and customized/tailored messaging remain in the lower left portion of each figure, suggesting they are less valuable.

Figure 6: Reported Importance of Co-Benefits by Ease of Tracking and Frequency Reported



These same data are shown another way in Figure 8. The Venn diagram shows the overlap of co-benefits that fall in the upper right portion (in the shaded circles) in both diagrams. Four of the reported co-benefits fall out of the analysis due to being not as important, not as frequently reported, and more challenging to track.

Figure 7: Venn Diagram Showing Overlapping Top Co-Benefits



A comparison of the co-benefit categories that remain in Table 6 and the high level co-benefits deduced from the analysis in Section 4.2 shows that five of the same co-benefit categories were identified by both analysis strategies (Table 19).

Table 19: Comparison of Self-Reported vs. Logic Model Approach

Co-Benefit Category	High Level Co-Benefit Per Self-Reported Analysis	High Level Co-Benefit per Logic Model Analysis
Education	X	X
Staff support/job creation	X	X
Project identification	X	
Leveraging relationships	X	X
Customized/tailored messaging		X
Bundling/combining energy efficiency resources with other programs	X	X
Providing source of trusted information		X
Monetary savings from reduced energy bills		
Greenhouse gas (GHG) reductions	X	
Increased CAP goals		
Health/comfort		
Proof of concept for broader industry	X	X

The discrepancies in these two analyses are identified by co-benefit category below:

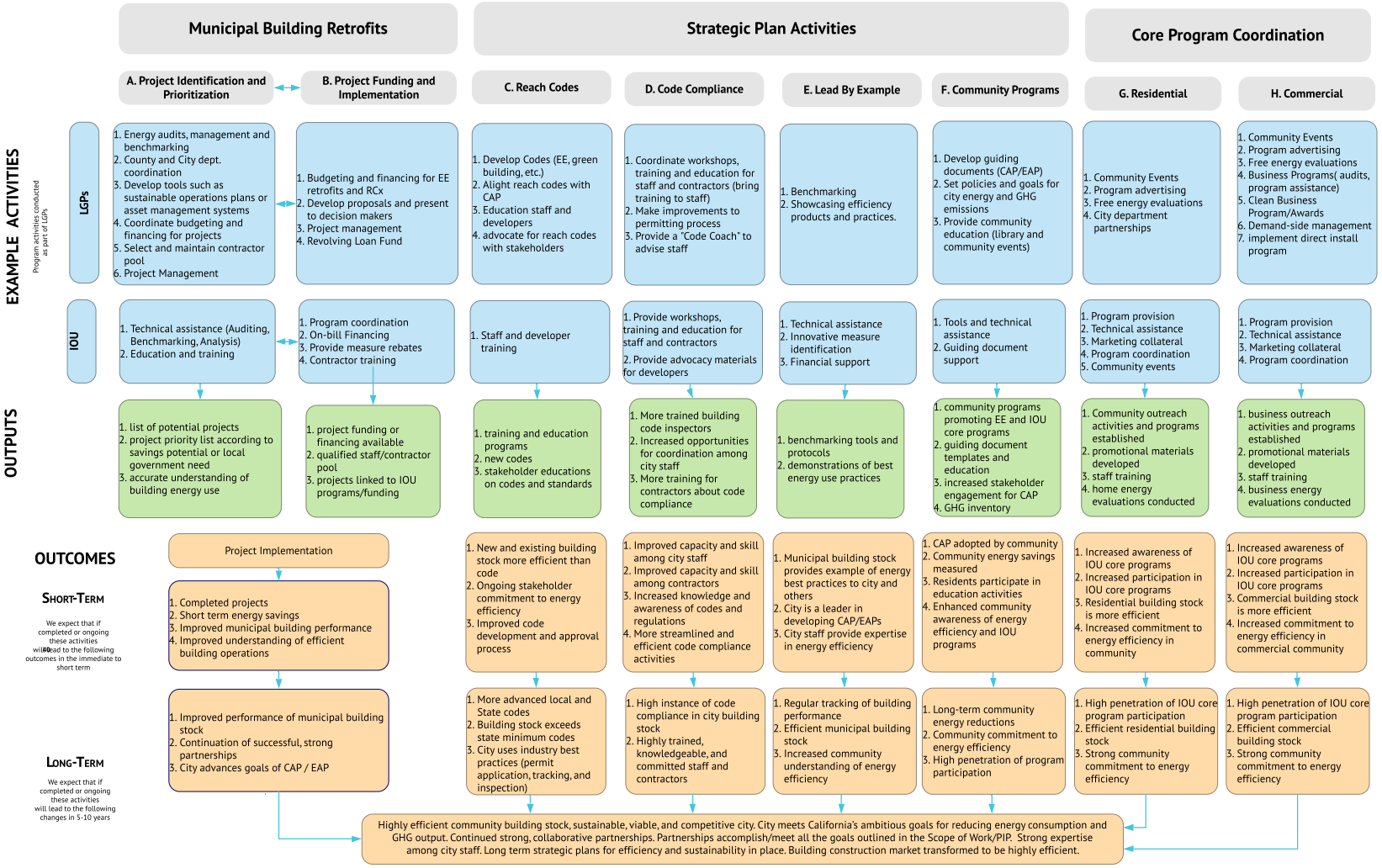
- **Project identification** was not included in the logic model analysis since it mapped to an existing activity of the LGPs. Per the definition of co-benefit, a co-benefit can only be a result of an activity, not the activity itself.
- **GHG Reductions** was not included in the logic model analysis because per the definition of co-benefits, "Co-benefits do not include non-energy co-benefits that are indirectly associated with energy savings that are already claimed by the IOUs" and because it mapped to an existing activity (set policies and goals for city energy and GHG emissions).
- **Customized/Tailored messaging** was not included in the self-reported analysis because it ranked lower than other co-benefit categories in terms of self-reported importance and tracking scores. However, this co-benefit category was reported to serve a population of interest (HTR communities or DACs) each of the four times it was mentioned, suggesting that it may be important to incorporate into the logic model going forward.
- **Providing a source of trusted information** was not included in the self-reported analysis because of low self-reported scores of importance and trackability, but it also was reported

to serve a population of interest (HTR communities or DACs) each of the three times it was mentioned, suggesting that it may be important to incorporate into the logic model going forward.

Appendix C: Logic Model Screening Methods

This section expands upon the process for screening the self-reported benefits using the generalized logic model in Figure 8.

Figure 8: General LGP Program Logic Model



To understand how the co-benefits mentioned by the implementing partners fit into the logic model, each of the 12 co-benefit categories was broken into co-benefit subcategories and reviewed to see if the subcategory mapped to an existing logic model component, or if it was a new activity, outcome, or output. Table 20 shows how each subcategory (column 2) fits into either a new or existing activity, output, or outcome (column 4). The colors for each logic model element map to the colors in the logic model on the previous page with the darker shade representing a new element that should be added to the logic model. Where the row matches to an existing element in the logic model, it is identified with the column letter and row number.

Existing activity
New activity that should be added to the logic model
Existing output
New output that should be added to the logic model
Existing outcome
New outcome that should be added to the logic model
Does not meet definition of co-benefit. "Co-benefits do not include non-energy co-benefits that are indirectly associated with energy savings that are already claimed by the IOUs."

Table 20: Full Co-Benefit List with Mapping to Logic Model Integration (n is number of mentions of co-benefit in a category across all web survey implementing partner responses)

	Self-Reported Co-Benefit Sub Category	n	Logic Model Element
Education	Educational and outreach support	7	Activity - Existing (*C3, G1, G2, H1, H2)*
	Increased energy literacy among local governments and businesses	6	Outcome - Existing (*Short-term A4, B4, E3)* improved understanding of efficient building operations, city staff provide expertise in energy efficiency
	Behavioral changes among businesses or local government staff	5	Outcome - Existing *(Long term F2*) Community commitment to energy efficiency
	Increased energy efficiency awareness among the community	3	Outcome - Existing *(Short-term F4, G4, H4*) Enhanced community awareness of

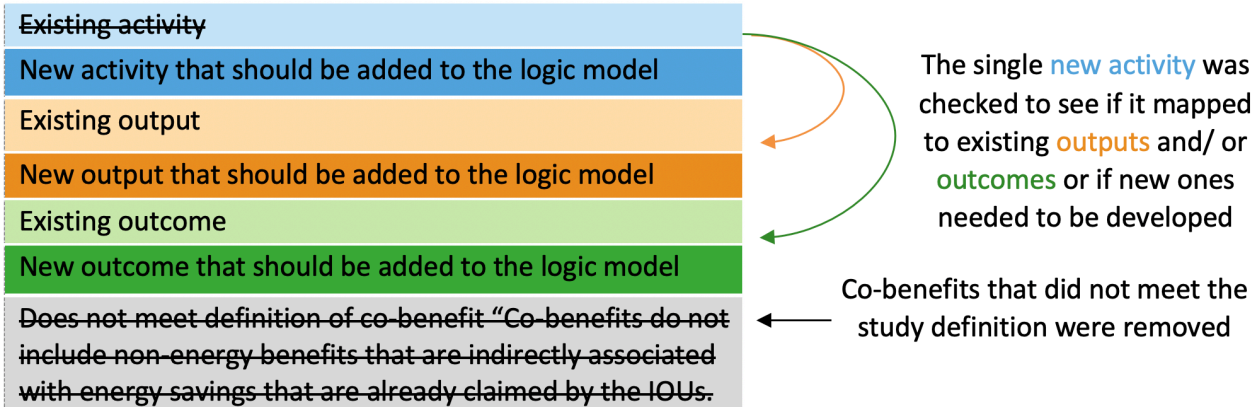
	Self-Reported Co-Benefit Sub Category	n	Logic Model Element
			energy efficiency and IOU programs. Increased commitment to energy efficiency in community
	Marketing support	3	Activity - Existing (*G1, G2, G3, H1, H2, H3*)
	Coordinating services to rural and hard-to-reach areas	2	
	Performing outreach to residents and contractors	2	
	Increased participation in other IOU programs	1	Outcome - Existing (*Short-term G2, H2*) increased participation in IOU core programs
Staff support/job creation	Energy efficiency job creation (employing contractors to do projects)	7	Output - Existing (*B2*) qualified staff/contractor pool
	Ongoing staff training and development	7	Activity - Existing (*C3*)
	Increased staff time through support from the LGP	2	Outcome - Existing (*Short-term D1*) Improved capacity and skill among city staff
	Planning and tracking support to Climate Action Plans	2	Activity - Existing (*F1, F2, A6, B3*)
	Assisting staff to prioritize projects	1	
	Consistency through city staff turnover by the LGP acting as a resource center for historical information	1	Outcome - New (Consistency through city staff turnover by the LGP acting as a resource center for historical information)
Project identification	Identification and vetting of programs for local governments to implement	6	Activity - Existing (*B2*)
	Support provided to local governments that lead to more	2	Activity - Existing (*B2)*

	Self-Reported Co-Benefit Sub Category	n	Logic Model Element
	project idea generation and capacity		
	Identification of accessible and necessary improvements to facilities and municipal buildings	2	Activity - Existing (*A1*)
	Presentation of programs to the community	1	Activity - Existing (*G1, G2, H1, H2*)
Leveraging relationships	Regional collaboration on projects and goals that maximize resource use in the area	6	Activity - Existing (*A2)*
	The creation of a local collaboration between tenants and business owners in an area with energy efficiency and sustainability goals	1	Activity - Existing (*H5*)
	Assurance to local governments that projects will be completed	1	Outcome - New (local governments feel assured that projects will be completed)
Customized/ tailored messaging	Offerings designed to be tailored to certain groups or demographics to boost participation in programs or to make programs more attractive	2	Output - Existing (G2, H2) promotional materials developed
	LGP partnership allowed local government staff more time to prioritize pertinent messaging to the community	1	Activity - Existing (*G2, G3, H2, H3*)
	Advertising done through local partners, social media, and by radio boosted attendance	1	
	Targeted marketing for benchmarking leading to compliance	1	Activity - Existing (*A1*)
Bundling/ combining energy efficiency	Bundling of projects that creates economies of scale and allows public agency dollars to go further	2	Activity - New (bundling of projects)

	Self-Reported Co-Benefit Sub Category	n	Logic Model Element
resources with other programs	Leveraging multiple program resources to provide a full offering of sustainable incentives and practices	1	
	Providing local governments the opportunity to leverage data access and make more informed decisions about projects	1	Activity - Existing (*A1-IOU*)
	Regional climate action plans leading to more efficient policy making	1	Activity - Existing (*H1*)
Providing source of trusted information	Locally trusted and experienced staff are more effective in breaking down initial barriers with public agency staff and building trust with consumers	2	Outcome - New (increased level of trust amongst local governments)
	The LGP acting as the lead entity for activities making cities, businesses, and residents more likely to participate	1	Outcome - New (increased level of trust amongst local governments)
	Local staff not only reduce travel time to rural consumers but also are more successful than outside contractors to be trusted for projects	1	Output - New (reduced travel time to rural consumers)
Monetary savings from reduced energy bills	Agencies saving money through LGP work and being able to use the savings to fund future projects or services	5	Does not meet definition of co-benefit. "Co-benefits do not include non-energy co-benefits that are indirectly associated with energy savings that are already claimed by the IOUs."
	Utility bill reductions	2	
	Cost reductions to taxpayers due to rebates	1	
	Businesses and residents see cost reductions through program participation	1	

Self-Reported Co-Benefit Sub Category		n	Logic Model Element
GHG reductions	Reducing regional GHG emissions	4	
	Demonstrating to local government leadership and other organizations that saving energy and GHG emission reduction is economically viable and worth the up-front investment	1	Activity - Existing *(F2)*
Health/ comfort	More comfortable buildings	1	Does not meet definition of co-benefit
	Healthier environment for agency staff, businesses, and residents	1	
Proof of concept for broader industry	Demonstrating to the industry that concepts work	1	Output - Existing (*E2*), Outcome - Existing (E1)
	Knowledge sharing of what municipalities are doing to take advantage of incentives offered by utilities	1	

To create a second list of co-benefits that excludes logic model elements that do not fit the definition of co-benefits, the list was filtered as shown below. This filtered list of *qualified* co-benefits is shown in Table 6.



Appendix D: Data Collection Instruments

In-Depth Interview Guide

MEMORANDUM

Date: July 14, 2020

To: IOU Study Team and Energy Division Team for the LGP Co-Benefits Study

From: Jenny Hughes, Evergreen Economics

Re: Final Interview Guide for LGP Co-Benefits Study

Evergreen is conducting a Local Government Partnership (LGP) Co-benefits study to identify co-benefits and economic benefits resulting from the LGPs. This study will also include a valuation of each co-benefit along with an assessment of current and future tracking possibilities.

One of the tasks of this study (Task 5B) is to conduct interviews with implementing partners for LGPs that are prominent in discussions of Hard to Reach and Disadvantaged Communities HTR/DAC, and other key stakeholders (based on consultation with the IOUs, such as Local Government Sustainability Energy Coalition (LGSEC), Rural Hard to Reach Working Group, etc.). The goal of these interviews is to **solicit feedback on the expected co-benefits and local economic benefits derived from the Local Government Partnerships.**

We are defining co-benefits as:

> *Co-benefits result **directly** from an activity done by an LGP whose savings are **not already claimed** by the IOUs.*

If needed:

> *Co-benefits include energy—both resource (direct savings claims) and non-resource (no direct savings claims)—and non-energy benefits that are **not already directly claimed** by the IOUs. Co-benefits do not include non-energy benefits that are **indirectly** associated with energy savings that are already claimed by the IOUs.*

Interviews we conduct based on this interview guide will be used to identify initial co-benefits that will be integrated into our web survey that will be distributed to a larger group of LGP implementing partners. Discussion of co-benefits will be grounded in activities taken on by LGPs.

In parallel to the review of the in-depth interview guide, Evergreen will ask stakeholders and IOU staff for assistance with the upcoming LGP web survey, including requesting a list of implementing partners with email addresses for the main points of contact, and discussion of ways to help boost the survey response rate (such as sending out a notification in advance of Evergreen's survey invitation, etc.)

While these interviews will be qualitative in nature, we will ask respondents to discuss how they do or would quantify the co-benefits they identify and rank them on a numerical scale to facilitate comparison across interviews.

Identification of Priority LGPs

Our interviews with LGSEC and the Rural Hard to Reach Working Group will occur first and will help us revisit our preliminarily list of which LGPs should be considered "prominent" for this research and thus should be interviewed as part of this process.

Our proposed interview list of five prominent LGPs is shown below and was developed based on ranking done by IOU Study Team members and was then reviewed by Evergreen to ensure we include LGPs that fit the HTR and DAC targets, and that cover the state with a mix of urban and rural communities. includes:

- Sierra Nevada Energy Watch
- Solano County Energy Watch
- City of San Diego
- San Joaquin Valley Partnership
- Ventura County Partnership

We will also ask the full set of interviewees about any expected changes to LGPs going forward to ensure our research is useful for future efforts. Given that interviews will occur when communities are dealing with COVID-19, we will probe further on certain co-benefits that we think may be unique or vary based on COVID-19 to ensure this research is more generalizable to future efforts.

Email Sent to LGP Program Implementors Prior to IDI

Please note that this email will be adapted and personalized for each interviewee.

Hi [Program implementor],

Evergreen Economics is working with [list IOU partners to the LGP] to identify and quantify the co-benefits that can be attributed to activities from Local Government Partnerships. Co-benefits result directly from an activity done by an LGP whose savings are not already claimed by the IOUs. This is important research that is being directed by the CPUC that will help inform future LGP program planning efforts – we are reaching out to a small sample of LGPs and it is crucial that we incorporate your feedback into our study.

You should have received an email from your utility partner notifying you that we would reach out to set up a one-hour phone interview during the week of [Date range] about co-benefits from [LGP name] activities.

Please let us know at least **three one-hour blocks of time** the week of [Date range] where you will be available.

Before the interview, please review the activities conducted by [LGP name] and be ready with any co-benefits that can be attributed to these activities.

We will be specifically asking about the following activities and possible co-benefits:

- *Strategic Plan Support Activities*
  - *Reach codes*
  - *Code compliance*
  - *Lead by example*
  - *Community Programs*
  - *Funding climate action plans*
- *Municipal Building Retrofits*
- *Core Programs Coordination*
  - *Residential*
  - *Commercial*
  - *Low-Income Programs*
  - *Third Party Programs*
  - *Outreach and Education*

If there are any activities not mentioned above that [LGP name] does, please also be prepared to talk about these activities.

We appreciate you taking time to provide important feedback on the broad range of LGP benefits to support future CPUC and IOU LGP planning efforts.

Sincerely,

Jenny Hughes

Methodology

For this research we plan to reach out to the following entities (in order) for a total of seven telephone interviews:

- The Rural Hard to Reach Working Group;
- The Local Government Sustainability Energy Coalition; and
- The program implementors of 5 Local Government Partners suggested by the IOU Study Team, reviewed by Evergreen and based input from the HTR Working Group and LGSEC from their interviews.

We will reach out to the main point of contact (the implementing partner lead) from each targeted organization a total of three times and will ask for an hour of their time. Where possible, we will also request that the study team members reach out to the contacts they have relationships with in order to inform them of our upcoming outreach.

Respondents will get a preview of the topics to be covered in the interviews in our initial recruitment outreach. This will ensure they can give some advance thought to potential LGP co-benefits. Note that part of what this research is meant to do is to define co-benefits.

Interview Guide

Part 1: Intro

For the purpose of this starting the discussion about co-benefits with stakeholders, we are beginning with this definition of co-benefits.

[Say co-benefits definition.]

Do you understand how we are distinguishing between direct and indirect benefits?

Do you understand our need to record only benefits that are not already claimed by the LGP or another entity/program?

Do you have any questions for me?

Part 2: Background

Can you start by telling me a little bit about your role at [name of organization or LGP]?

Probe if not obvious from context:

- How long have you been in that role?
- How do you interact with local government partnership programs?

- Are you familiar with the term disadvantaged communities as used by the CPUC?
- What about the term "hard-to-reach communities"?

Are you aware if the LGP is a resource program or a non-resource program? In other words, do you know if the LGP claims any energy savings?

[if resource: **Which activities yield claimed savings?**]

How does [name of organization or LGP] work with disadvantaged communities?

> *Note: For our research we are defining disadvantaged communities as "those which most suffer from a combination of economic, health, and environmental burdens. These burdens include poverty, high unemployment, air and water pollution, presence of hazardous wastes as well as high incidence of asthma and heart disease." We are using CalEnviroScreen to identify these communities for this research.*

- **Are there any special considerations you take in your work to address the needs of disadvantaged communities? If so, what are they?**

How does [name of organization or LGP] work with hard to reach communities?

> *Note: For our research we are defining hard to reach for both residential customers and business customers. In addition to geographic designations, residential customers who are hard to reach do not have easy access or high participation in EE programs due to the following:*
>
> - *Primary language spoken is other than English*
> - *Customers qualify for California Alternative Rates for Energy (CARE) or Family Electric Rate Assistance Program (FERA)*
> - *Live in multifamily or mobile home and/or rent their home and face the split incentives barrier)*
>
> *Businesses face many of the same barriers including language and renting space but are also limited in size (less than 10 employees) or demand is less than 20kW and/or under 10,000 therms annually.*

- **Are there any special considerations you take in your work to address the needs of hard to reach communities? If so, what are they?**

In our initial email to you we asked you to think about what "co-benefits" means to you and we gave you a starting definition. I'll repeat that now but I'd like to get your thoughts on what co-benefits you've seen or hope to see from LGPs.

[Repeat definition of co-benefits]

First of all, does this match with how you would define co-benefits? If not, how does your definition differ?

(Possible probe: if their understanding does not match, ask "How does that differ from your understanding of non-energy benefits?" We want them to know we see co-benefits different than NEBs because co-benefits can include both energy benefits (both unclaimed resource and non-resource) and non-energy benefits. We also want to stress that we are not interested in NEBs that indirectly result from the energy savings activities of LGPs.)

Part 3: Identifying Co-Benefits

We will now iterate through each of the activities from the LGP to determine what co-benefits may be associated with the activities.

Note: Activities will be directly from a logic model for the LGP. LGPs may not do all the activities. This interview will also explore the activities in which they do engage. Activities include:

- *Strategic Plan Support Activities (FIRST ACTIVITY)*
  - *Reach codes*
  - *Code compliance*
  - *Lead by example*
  - *Community Programs*
  - *Funding climate action plans*
- *Municipal Building Retrofits (SECOND ACTIVITY)*
- *Core Programs Coordination (THIRD ACTIVITY)*
  - *Residential*
  - *Commercial*
  - *Low-Income Programs*
  - *Third Party Programs*
  - *Outreach and Education*

First, let's go through the various activities an LGP can take on. Is/Are [FIRST ACTIVITY] something your LGP works on?

[only ask more about the activity if the LGP does it]

Which actions does the LGP do under this activity?

[Record all actions the LGP does under the activity, go through the following questions one activity at a time]

What benefits come to mind when you think about [FIRST ACTIVITY/FIRST ACTION] *outside of direct energy savings that are claimed*? What other direct benefits result from this activity? Examples you may give could include things that benefit residential customers, society, the utility, the local government, etc. [probe on any that may be specific to current Covid-19 situation and which apply regardless of Covid-19] Two examples: Referrals to residential customers that led them to enroll in other IOU programs; A building that was LEED certified may have used some construction policies that reduced the amount of waste and building specs that used daylighting and water conservation measures, leading to the direct benefits of less construction materials going into landfills, water savings, and energy savings from reduced lighting use.

- **[If activity is related to energy savings only:] Are the savings from any of these activities reported to the utility?**
- **Was [BENEFIT] an intentional goal of [ACTION] or did the LGP realize the benefit after planning to do [ACTION]?**

What about economic benefits? What comes time mind when you think about [FIRST ACTION] LGP economic benefits? [probe on any that may be specific to current Covid-19 situation and which apply regardless of Covid-19] One example would be bill savings from retrofit work used for hiring additional staff in a small business.

- **[If action is related to energy savings only ask:] Are the savings from any of these activities reported to the utility?**
- **Was [BENEFIT] an intentional goal of [ACTION] or did the LGP realize the benefit after planning to do [ACTION]?**

Are there any other co-benefits you have identified that result directly from this action?

Note: make sure the co-benefits mentioned here can be rationalized through the program design of the activity.

[Iterate through all actions and then through all other activities]

Part 4: Tracking and Valuing Co-Benefits

Great! We have a few more questions about the benefits you have identified from LGP activities. As a reminder, please remember that we are focused specifically on hard to reach or disadvantaged communities.

[Begin iterating through the identified co-benefits]

On a scale from 1-5 (with one being not at all valuable and 5 being extremely valuable) how valuable would you rank [co-benefit identified]?

Note to interviewer: we are trying to understand if this is a key benefit the utility is putting effort toward or if they do not make a large effort to work toward it. This will help us determine how direct the benefit is from the effort of the utility.

Who do you think this [co-benefit identified] benefits (residential customers, society, the utility, the local government, etc.)?

Is this benefit being tracked or documented in any way? If not, could it be in the future?

Probe if not clear:

- **How could the co-benefit be tracked in the future?**
- **Is this a benefit that should definitely be tracked?**

Note: An example of tracking could be number of people referred to a program (or the actual names). We are also okay hearing both formal and informal documentation/data.

We are planning to send out a data request in the coming months, would you be able to supply data on this benefit? If not, why not?

[Repeat questions for all co-benefits identified]

Part 5: Exploring Economic Benefits

How would you rate the following statements on a scale of 1 to 5 where 5 is strongly agree and 1 is strongly disagree?

1. **Business that have lowered their energy costs through energy efficiency are likely to hire additional workers.**
2. **Aside from hiring workers, reduced energy expense will cause local businesses to benefit the local economy in other ways, such as buying new equipment or increasing their purchase of locally sourced material.**
3. **Energy efficient buildings have a higher market value than non-efficient buildings, all other factors being equal, such as location.**
    - **If 4 or 5**
        - **Energy efficiency investments cause a building to be revalued by the local assessor when a code inspection is required.**

- **If 4 or 5**
    - **This revaluation increases local property taxes paid to the city/county**

When all things are considered (such as jobs, increases in sales, property, and income taxes, increases in property value, etc.), how much do you think $1M spent locally on energy efficiency is worth?

- **Less than $1M**
- **About the same**
- **More than $1M**
    - **More than $1M**
        - **About 1.5X**
        - **About 2x**
        - **More than 2x**

Part 6: End

[If not LGP] **For our next step in this research, we plan to talk directly with local governments who work with DACs or HTR communities through an LGP. Are there any local governments that come to mind that we should be sure to reach out to?**

My last question is regarding the future of LGPs. Are there any significant changes you see coming in the future that will impact the benefits we've discussed today?

Thank you so much for giving us your time. This has been very valuable for our research. Don't hesitate to reach out to us at Evergreen if you think of anything else.

Implementing Partner Web Survey Guide

MEMORANDUM

Date: October 22, 2020

To: LGP Study Teams (both IOU and Energy Division)

From: Evergreen Economics

Re: Local Government Partnerships (LGP) Program Co-Benefits Study Web Survey Methodology and Final Programmed Guide – with Study Team Edits Integrated

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This memo presents a survey battery for LGP implementing partners and members of local governments that aims to understand what co-benefits are generated by actions of LGPs. This survey will be sent out to LGP implementing partners that work within disadvantaged communities (DAC) and with hard to reach populations via email. In this memo we detail our methodology for outreach along with a draft of the questions that will be included in the web survey.

The objective of this survey is to collect the following information:

- Co-benefits and local economic benefits that their LGP may be generating as a result of program activities
- The expected size of those benefits (quantifying where possible, such as number of customers impacted, and substantiated by other data where possible, such as reported participation counts)
- What data they are already tracking (including format and data fields)
- What additional tracking they could feasibly implement (for co-benefits they list but do not track)

Methodology

Evergreen will create a generic web survey link that can be distributed to LGPs through multiple channels including emails from the following contacts in advance of Evergreen's survey invitation:

- IOU project managers (with an introduction to Evergreen Economics)
- Evergreen Economics
- The Statewide Local Government Best Practices Coordinator
- Local Government Sustainable Energy Coalition
- The Rural Hard to Reach Working Group and/or other stakeholders
- The CPUC Disadvantaged Communities Advisory Group

Below is our suggested initial outreach email text:

Initial Outreach Emails

From Evergreen:

Hello, The Investor Owned Utilities and Evergreen Economics are conducting a study mandated by the California Public Utilities Commission. The goal of this study is to identify and quantify past and/or present benefits of Local Government Partnerships like yours. As a first step in this study, we are requesting that you **respond to this web survey** no later than DATE.

Your thoughtful response to this survey will help us to create a report that **identifies the value of LGPs that have worked specifically with hard to reach customers and areas defined as disadvantaged communities** and will help us summarize how these benefits are and can be shared in the future.

If you have any questions about this study please contact [UTILITY PROJECT MANAGER] at [NUMBER]. If you have questions about the survey specifically, contact Jenny Hughes at [NUMBER]

From IOU Project Managers:

Hello, in the coming days you will receive an email from Jenny Hughes at Evergreen Economics. The email will contain a link to a **very important survey that is part of research we are doing to identify past and/or present benefits provided by your local government partnership**. This study will only be successful with your thoughtful responses so I thank you in advance for taking the time to complete the survey.

If you'd like to get a head start and take the survey now, use this link.

This survey is focused on benefits that serve hard to reach and disadvantaged communities. Given this new focus, it is critical that we hear from you about your partnership.

From Statewide Local Government Best Practices Coordinator, LGSEC, and Rural Hard to Reach Working Group (and CPUC Disadvantaged Communities Advisory Group if agreed)

Hello, in the coming days you will receive an email from Jenny Hughes at Evergreen Economics. The email will contain a link to a **very important survey that is part of research being done by the California Investor Owned Utilities (PG&E, SDG&E, SCE and SoCalGas) to identify past and/or present benefits provided by your local government partnership**. This study will only be successful with your thoughtful responses so I thank you in advance for taking the time to complete the survey.

If you'd like to get a head start and take the survey now, use this link.

This survey is focused on benefits that serve hard to reach and disadvantaged communities. Given this new focus, it is critical that we hear from you about your partnership.

Follow up Emails

We will send two rounds of follow up emails and will ask our contacts in the Rural Hard to Reach Working Group, LGSEC, IOU Project Managers and the best practice coordinator to follow up with LGPs who have not yet completed the survey.

Outreach to Local Governments

In order to involve the local governments served by these LGPs, we will take three paths to notify them of this survey:

1. We will prompt Implementing Partners to share a survey link with local governments after they have completed the survey.
2. We will reach out directly to local governments ourselves, to request that they take the survey; and
3. We will request that the IOU PMs, the RHTR working group and the LGSEC contacts email the relevant local government contacts to notify them of the study if they have preexisting relationships with the pre-identified contacts.

Web Survey

Codebook

Variables populated before survey started: **LGP, DAC, HTR**

Variables populated based on survey response:

ACTIVITY VARIABLES (1,0)

Strategic Plan Support: Reach codes
Strategic Plan Support: Code compliance
Strategic Plan Support: Lead by example (for example benchmarking of buildings)
Strategic Plan Support: Community programs
Strategic Plan Support: Funding Climate Action Plans
Strategic Plan Support: Other (specify:
Municipal Building Retrofits:
Core Program Coordination: Residential
Core Program Coordination: Commercial
Core Program Coordination: Low-Income Programs
Core Program Coordination: Third Party Programs
Core Program Coordination: Outreach and Education
Core Program Coordination: Other (specify)

The following variables will exist for each activity selected by a participant in the above list.

ACTIVITY_BENEFIT_1 (text)
ACTIVITY_BENEFIT_2 (text)
ACTIVITY_BENEFIT_3 (text)

Web Survey Questions

Introduction

Thank you for taking the time to complete this survey. Your feedback will be very important in identifying benefits of LGP work in hard to reach and disadvantaged communities.

Q1. Which Local Government Partnership are you affiliated with? Select from drop down menu.

- County of San Diego
- Desert Cities
- Eastern Sierra Partnership
- Gateway Cities ELP
- High Desert Regional ELP
- High Sierra Energy Foundation
- Kern County Energy Watch
- Long Beach Partnership
- Los Angeles County
- North Orange County Cities ELP
- Orange County Cities Partnership
- Port of San Diego
- Riverside County Partnership
- San Bernardino County
- San Bernardino Regional ELP (SANBAG)
- San Gabriel Valley Partnership
- San Luis Obispo Energy Watch
- SANDAG
- Santa Barbara County Partnership - (SCEEP with SCE) (Santa Maria Energy Watch with PG&E)
- Sierra Business Council
- Sierra Nevada Energy Watch
- Silicon Valley Energy Watch
- Solano Energy Watch
- Sonoma County Energy Watch
- South Bay Council of Governments
- Sutter Buttes Energy Partnership
- Valley Innovative Energy Watch (VIEW) (Also known as San Joaquin Valley Partnership)
- Ventura County Partnership
- Western Riverside COG
- Yolo County Energy Watch

Q2. What is your role within the partnership ([LGP mentioned in Q1])?

a. What is your job title?

_____
_____
_____

b. How long have you been in this role?

_____
_____
_____

Q3. [if DAC=1] We identified that your LGP is located in a region that includes areas defined as **disadvantaged communities** (hover for definition – may take a few seconds) for the purpose of this research. Please describe the disadvantaged community/communities that you work with.

- Location(s)
- Why are they considered disadvantaged?

_____
_____
_____

- Type of constituents

_____
_____
_____

- Specific needs

_____
_____
_____

Q4. [if DAC=1] What activities and/or special considerations does your LGP conduct that focus on the needs of disadvantaged communities?

_____
_____
_____

Q5. [if HTR=1] We identified that your LGP is located in a region that we consider to work with **hard to reach** (hover for definition – may take a few seconds) businesses or residents. Please describe the hard to reach community/communities that you work with.

- Location(s)
- Why are they considered disadvantaged?

_____
_____
_____

- Type of constituents

_____
_____
_____

- Specific needs

_____
_____
_____

Q6. [if HTR=1] What activities and/or special considerations does your LGP conduct that focus on the needs of hard to reach community members? If possible, please identify if this activity targets businesses. residents or both.

	Applies to businesses (check if yes)	Applies to residents (check if yes)
Activity/special consideration #1: _____		
Activity/special consideration #2: _____		
Activity/special consideration #3: _____		

Q7. We are interested in hearing from you about what key benefits you see as coming from this partnership. Before diving in to the benefits, please check off all of the LGP strategic plan support activities that your partnership works on:

Strategic Plan Support	Reach codes (for example adopting codes beyond Title 24)	☐
	Code compliance	☐
	Lead by example (for example benchmarking of buildings)	☐
	Community Programs	☐
	Funding climate action plans	☐
	My partnership does not work on strategic plan support activities	☐

Q8. Please check off whether your partnership works on municipal building retrofits:

Municipal Building Retrofits	☐
My partnership does not work on municipal building retrofits	☐

Q9. Please check off all of the LGP core program coordination activities that your partnership works on:

Core Program Coordination	Residential	☐
	Commercial	☐

Low-Income Programs	☐
Third Party Programs	☐
Outreach and Education	☐
My partnership does not work on core program coordination activities	☐

Q10. Please indicate any other activities your partnership works on:

Other 1 (specify):	☐ _____
Other 2 (specify):	☐ _____
My partnership does not work on other activities	☐

ACTIVITY	Code into: ACTIVITY2
Strategic Plan Support: Reach codes (i.e. adopting codes beyond Title 24)	Reach codes
Strategic Plan Support: Code compliance	Code compliance
Strategic Plan Support: Lead by example (i.e. benchmarking of buildings)	Leading by example
Strategic Plan Support: Community Programs	Community programs
Strategic Plan Support: Funding climate action plans	Climate action plans
Strategic Plan Support: Other (specify):	[text entered by respondent]
Municipal building retrofits	Municipal building retrofits
Core Program Coordination: Residential	Coordination with IOU residential offerings
Core Program Coordination: Commercial	Coordination with IOU commercial offerings
Core Program Coordination: Low-Income Programs	Coordination with IOU low income offerings
Core Program Coordination: Third Party Programs	Coordination with other third party programs
Core Program Coordination: Outreach and Education	Outreach and education about IOU core programs
Core Program Coordination: Other (specify)	[text entered by respondent]
Other 1 (specify)	[text entered by respondent]
Other 2 (specify)	[text entered by respondent]

Q11. [If Q7-10 = "No, my partnership does not work on ___"] Thank you for your time. Please click the "next" arrow to submit your responses. [Skip to end of survey]

Q12. Please tell us a little bit about the activities you do in the following areas; specifically, we are interested in who is served by that work and how that work is accomplished [repeat for each activity selected]

	Who benefits from these activities?	What does the activity entail?
[Selected activities displayed as unique rows]	[text entered by respondent]	[text entered by respondent]

Identifying Benefits

For this next part of the survey, we are going to ask you about **benefits that come from activities of your LGP**. Some examples we have heard include:

Performing outreach to small businesses and **bundling projects** to make travel to complete work more appealing to contractors

Using LGP staff time to **leverage the use of Americorps members** who then expand the overall resources available for LGP activities

Small businesses who end up making energy efficiency upgrades end up saving money that is later spent in the local economy **(multiplier effect)**

Now we'll ask you to give some of ***your own*** examples from actions of your specific partnership. We will ask you about each activity that you mentioned earlier, but it is OK if you can only think of benefits for some of the activities.

Q13. If there are no benefits you can think of, please indicate so below.

a. There are benefits I can think of
b. No benefits I can think of [Skip to end of survey -> Terminate]

Q14. [If Q13 = "There are benefits I can think of"] What benefits can you think of that come from the activities you mentioned on the last page? As a reminder, you listed the following activities: (list of selected activities displayed here): [respondents will fill in text]

Please list as many or as few as you'd like.

☐ Benefit 1	☐ Benefit 11
☐ Benefit 2	☐ Benefit 12
☐ Benefit 3	☐ Benefit 13
☐ Benefit 4	☐ Benefit 14
☐ Benefit 5	☐ Benefit 15
☐ Benefit 6	☐ Benefit 16
☐ Benefit 7	☐ Benefit 17
☐ Benefit 8	☐ Benefit 18
☐ Benefit 9	☐ Benefit 19
☐ Benefit 10	☐ Benefit 20

Q15. Which activities do each of these benefits apply to, if any??

	Different selected activities displayed in unique columns
List of benefits displayed as unique rows	Checkboxes

Q16. Thinking about the benefits you identified, how important would you say they are to the overall goals of the program?

	Extremely Important	Very Important	Somewhat Important	A little Important	Not at all Important
List of benefits displayed as unique rows					

Q17. [If # of Benefits > 1] Now I want to ask you about how important you think these benefits are in terms of the overall goals of the partnership. Select the two most important benefit you reported.

Select one *most important* (read in from Q12)

☐ *Core Program Coordination: Commercial*	*Performing outreach to small businesses and **bundling projects** to make travel to complete work more appealing to contractors*
☐ *Core Program Coordination: Outreach and Education*	*Using LGP staff time to **leverage the use of Americorps members** who then expand the overall time dedicated to LGP activities*

☐	*Core Program Coordination: Commercial*	*Small businesses who end up making energy efficiency upgrades end up saving money that is later spent in the local economy **(multiplier effect)***

Select **second* most important*

☐	*Core Program Coordination: Commercial*	*Performing outreach to small businesses and **bundling projects** to make travel to complete work more appealing to contractors*
☐	*Core Program Coordination: Outreach and Education*	*Using LGP staff time to **leverage the use of Americorps members** who then expand the overall time dedicated to LGP activities*
☐	*Core Program Coordination: Commercial*	*Small businesses who end up making energy efficiency upgrades end up saving money that is later spent in the local economy **(multiplier effect)***

Tracking of Benefits

Q18. We were wondering if you currently track data for the benefit(s) that you mentioned. Please let us know by selecting yes or no below. Examples of tracked data include event attendees, leads sent to IOU programs, and buildings benchmarked.

	Yes	No
[Each row is a unique benefit]		

Q19. [If Q18=YES ask:] Please describe how you track data related to that benefit. Please give detail on what is tracked and how often tracking is updated.

	What is tracked?	How often is the tracking updated?
[Each row is a unique benefit]		

Q20. [If Q18=NO ask:] For the benefits that you don't currently collect data on, do you think it is feasible to collect data in the future?

- Yes
- No

Q21. [If Q20=Yes ask:] What would enable you to track the following benefits in the future?

	Future Benefit Tracking
[Each row is a unique benefit]	[text entered by respondent]

Q22. [If Q20=No ask:] What are the barriers to tracking the following benefits?

	Future Benefit Tracking
[Each row is a unique benefit]	[text entered by respondent]

Economic Benefits

Q23. Do any of the benefits you've mentioned specifically benefit the local economy? If so, which of the following benefit the local economy?

Select all benefits that you think benefit the local economy

☐	*Core Program Coordination: Commercial*	*Performing outreach to small businesses and **bundling projects** to make travel to complete work more appealing to contractors*
☐	*Core Program Coordination: Outreach and Education*	*Using LGP staff time to **leverage the use of Americorps members** who then expand the overall time dedicated to LGP activities*
☐	*Core Program Coordination: Commercial*	*Small businesses who end up making energy efficiency upgrades end up saving money that is later spent in the local economy **(multiplier effect)***
☐	*None of the above*	

Q24. [if HTR=1] Do any of the benefits you've mentioned specifically benefit the hard to reach constituents you serve? If so, which of the following benefit the hard to reach?

Select all benefits that you think benefit the hard to reach

☐	*Core Program Coordination: Commercial*	*Performing outreach to small businesses and **bundling projects** to make travel to complete work more appealing to contractors*
☐	*Core Program Coordination: Outreach and Education*	*Using LGP staff time to **leverage the use of Americorps members** who then expand the overall time dedicated to LGP activities*
☐	*Core Program Coordination: Commercial*	*Small businesses who end up making energy efficiency upgrades end up saving money that is later spent in the local economy **(multiplier effect)***
☐	*None of the above*	

Q25. [if DAC=1 & HTR = 0] Do any of the benefits you've mentioned specifically benefit the disadvantaged communities you serve? If so, which of the following benefit the disadvantaged communities? [if DAC=1 and HTR=1 add:] If the answer is the same as your response to the question about hard to reach constituents, select **"same as above"]**

Select all benefits that you think benefit disadvantaged communities

☐	*Core Program Coordination: Commercial*	*Performing outreach to small businesses and **bundling projects** to make travel to complete work more appealing to contractors*
☐	*Core Program Coordination: Outreach and Education*	*Using LGP staff time to **leverage the use of Americorps members** who then expand the overall time dedicated to LGP activities*
☐	*Core Program Coordination: Commercial*	*Small businesses who end up making energy efficiency upgrades end up saving money that is later spent in the local economy **(multiplier effect)***
☐	*None of the above*	

Q26. [if DAC=1 & HTR = 1] Do any of the benefits you've mentioned specifically benefit the disadvantaged communities you serve? If so, which of the following benefit the disadvantaged communities?

Select all benefits that you think benefit disadvantaged communities

☐	*Core Program Coordination: Commercial*	*Performing outreach to small businesses and **bundling projects** to make travel to complete work more appealing to contractors*
☐	*Core Program Coordination: Outreach and Education*	*Using LGP staff time to **leverage the use of Americorps members** who then expand the overall time dedicated to LGP activities*
☐	*Core Program Coordination: Commercial*	*Small businesses who end up making energy efficiency upgrades end up saving money that is later spent in the local economy **(multiplier effect)***
☐	*None of the above*	

Local Government Web Survey Guide

MEMORANDUM

Date: October 22, 2020

To: LGP Study Teams (both IOU and Energy Division)

From: Evergreen Economics

Re: Local Government Partnerships (LGP) Program Co-Benefits Study Web Survey Methodology and Final Programmed Guide – Local Government Edition

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This memo presents the web survey with modifications made to make the survey appropriate for local governments that are not also implementing partners.

Web Survey

Codebook

Variables populated before survey started: **LGP, DAC, HTR**
Variables populated based on survey response:

ACTIVITY VARIABLES (1,0)

Strategic Plan Support: Reach codes
Strategic Plan Support: Code compliance
Strategic Plan Support: Lead by example (for example benchmarking of buildings)
Strategic Plan Support: Community programs
Strategic Plan Support: Funding Climate Action Plans
Strategic Plan Support: Other (specify:
Municipal Building Retrofits:
Core Program Coordination: Residential
Core Program Coordination: Commercial
Core Program Coordination: Low-Income Programs
Core Program Coordination: Third Party Programs
Core Program Coordination: Outreach and Education
Core Program Coordination: Other (specify)

The following variables will exist for each activity selected by a participant in the above list.

ACTIVITY_BENEFIT_1 (text)
ACTIVITY_BENEFIT_2 (text)
ACTIVITY_BENEFIT_3 (text)

Web Survey Questions

Introduction

Thank you for taking the time to complete this survey. Your feedback will be very important in identifying benefits of local government partnerships work in hard to reach and disadvantaged communities.

Q27. Which Local Government Partnership are you affiliated with? Select from drop down menu.

- County of San Diego
- Desert Cities
- Eastern Sierra Partnership
- Gateway Cities ELP
- High Desert Regional ELP
- High Sierra Energy Foundation
- Kern County Energy Watch
- Long Beach Partnership
- Los Angeles County
- North Orange County Cities ELP
- Orange County Cities Partnership
- Port of San Diego
- Riverside County Partnership
- San Bernardino County
- San Bernardino Regional ELP (SANBAG)
- San Gabriel Valley Partnership
- San Luis Obispo Energy Watch
- SANDAG
- Santa Barbara County Partnership - (SCEEP with SCE)
- Santa Maria Energy Watch with PG&E)
- Sierra Business Council
- Sierra Nevada Energy Watch
- Silicon Valley Energy Watch
- Solano Energy Watch
- Sonoma County Energy Watch
- South Bay Council of Governments
- Sutter Buttes Energy Partnership
- Valley Innovative Energy Watch (VIEW) (Also known as San Joaquin Valley Partnership)
- Ventura County Partnership
- Western Riverside COG
- Yolo County Energy Watch

Q28. What is the name of the city or county you work for?

a. What is your job title?

_____
_____
_____

b. How long have you been in this role?

_____
_____
_____

c. How do you interact with the [Q27] partnership?

_____
_____
_____

Q29. [if DAC=1] What activities and/or special considerations does the [Q1] partnership conduct that focus on the needs of disadvantaged communities?

_____
_____
_____

Q30. [if HTR=1] What activities and/or special considerations does the [Q1] partnership conduct that focus on the needs of hard to reach community members? If possible, please identify if this activity targets businesses. residents or both.

	Applies to businesses (check if yes)	Applies to residents (check if yes)
Activity/special consideration #1: _____		

Activity/special consideration #2: _____
Activity/special consideration #3: _____

Q31. We are interested in hearing from you about what key benefits you see as coming from the [Q1] partnership. Before diving in to the benefits, please check activities you are aware of in the following categories:

Strategic Plan Support:

Strategic Plan Support	Reach codes (for example adopting codes beyond Title 24)	☐
	Code compliance	☐
	Lead by example (for example benchmarking of buildings)	☐
	Community Programs	☐
	Funding climate action plans	☐
	I am not aware of any	☐

Q32. Municipal building retrofits:

Municipal Building Retrofits	☐
My partnership does not work on municipal building retrofits	☐

Q33. Coordination with utility core energy efficiency programs:

Core Program Coordination	Residential	☐
	Commercial	☐
	Low-Income Programs	☐
	Third Party Programs	☐
	Outreach and Education	☐
	I am not aware of any	☐

Q34. Please indicate any other activities the [Q1] partnership works on:

Other 1 (specify):	☐ _____
Other 2 (specify):	☐ _____
I am not aware of any	☐

ACTIVITY	Code into: ACTIVITY2
Strategic Plan Support: Reach codes (i.e. adopting codes beyond Title 24)	Reach codes
Strategic Plan Support: Code compliance	Code compliance
Strategic Plan Support: Lead by example (i.e. benchmarking of buildings)	Leading by example
Strategic Plan Support: Community Programs	Community programs
Strategic Plan Support: Funding climate action plans	Climate action plans
Strategic Plan Support: Other (specify):	[text entered by respondent]
Municipal building retrofits	Municipal building retrofits
Core Program Coordination: Residential	Coordination with IOU residential offerings
Core Program Coordination: Commercial	Coordination with IOU commercial offerings
Core Program Coordination: Low-Income Programs	Coordination with IOU low income offerings
Core Program Coordination: Third Party Programs	Coordination with other third party programs
Core Program Coordination: Outreach and Education	Outreach and education about IOU core programs
Core Program Coordination: Other (specify)	[text entered by respondent]
Other 1 (specify)	[text entered by respondent]
Other 2 (specify)	[text entered by respondent]

Q35. [If Q7-10 = "No, the partnership does not work on ___"] Thank you for your time. Please click the "next" arrow to submit your responses. [Skip to end of survey]

Q36. Please tell us a little bit about the activities done by the partnership in the following areas; specifically, we are interested in who in your jurisdiction is served by that work and how that work is accomplished [repeat for each activity selected]

	Who benefits from these activities?	What does the activity entail?
[Selected activities displayed as unique rows]	[text entered by respondent]	[text entered by respondent]

Identifying Benefits

For this next part of the survey, we are going to ask you about **benefits that come from actions of the [Q1] partnership**. Some examples we have heard from other partnerships include:

Performing outreach to small businesses and **bundling projects** to make travel to complete work more appealing to contractors

Using LGP staff time to **leverage the use of Americorps members** who then expand the overall resources available for LGP activities

Small businesses who end up making energy efficiency upgrades end up saving money that is later spent in the local economy **(multiplier effect)**

Now we'll ask you to give some of ***your own*** examples from actions of from the [Q1] partnership. We will ask you about each activity that you mentioned earlier, but it is OK if you can only think of benefits for some of the activities.

Q37. If there are no benefits you can think of, please indicate so below.

a. There are benefits I can think of
b. No benefits I can think of [Skip to end of survey -> Terminate]

Q38. [If Q13 = "There are benefits I can think of"] What benefits can you think of that come from the activities you mentioned on the last page? As a reminder, you listed the following activities: (list of selected activities displayed here): [respondents will fill in text]

Please list as many or as few as you'd like.

☐ Benefit 1	☐ Benefit 11
☐ Benefit 2	☐ Benefit 12
☐ Benefit 3	☐ Benefit 13
☐ Benefit 4	☐ Benefit 14
☐ Benefit 5	☐ Benefit 15

☐ Benefit 6	☐ Benefit 16
☐ Benefit 7	☐ Benefit 17
☐ Benefit 8	☐ Benefit 18
☐ Benefit 9	☐ Benefit 19
☐ Benefit 10	☐ Benefit 20

Q39. Which activities do each of these benefits apply to, if any??

	Different selected activities displayed in unique columns
List of benefits displayed as unique rows	Checkboxes

Q40. Thinking about the benefits you identified, how important would you say they are to the overall goals of the [Q1] partnership?

	Extremely Important	Very Important	Somewhat Important	A little Important	Not at all Important
List of benefits displayed as unique rows					

Q41. [If # of Benefits > 1] Now I want to ask you about how important you think these benefits are in terms of the overall goals of the [Q1] partnership. Select the two most important benefit you reported.

Select one *most important* (read in from Q12)

☐	*Core Program Coordination: Commercial*	*Performing outreach to small businesses and **bundling projects** to make travel to complete work more appealing to contractors*
☐	*Core Program Coordination: Outreach and Education*	*Using LGP staff time to **leverage the use of Americorps members** who then expand the overall time dedicated to LGP activities*
☐	*Core Program Coordination: Commercial*	*Small businesses who end up making energy efficiency upgrades end up saving money that is later spent in the local economy **(multiplier effect)***

Select one **second* most important*

☐	*Core Program Coordination: Commercial*	*Performing outreach to small businesses and **bundling projects** to make travel to complete work more appealing to contractors*
☐	*Core Program Coordination: Outreach and Education*	*Using LGP staff time to **leverage the use of Americorps members** who then expand the overall time dedicated to LGP activities*
☐	*Core Program Coordination: Commercial*	*Small businesses who end up making energy efficiency upgrades end up saving money that is later spent in the local economy **(multiplier effect)***

Tracking of Benefits

Q42. We were wondering if your jurisdiction currently tracks data for any of the benefit(s) that you mentioned. Please let us know by selecting yes or no below. Examples of tracked data include event attendees, leads sent to IOU programs, and buildings benchmarked.

	Yes	No
[Each row is a unique benefit]		

Q43. [If Q18=YES ask:] Please describe how you track data related to that benefit. Please give detail on what is tracked and how often tracking is updated.

	What is tracked?	How often is the tracking updated?
[Each row is a unique benefit]		

Q44. [If Q18=NO ask:] For the benefits that you don't currently collect data on, do you think it is feasible to collect data in the future?

- Yes
- No

Q45. [If Q20=Yes ask:] What would enable you to track the following benefits in the future?

	Future Benefit Tracking
[Each row is a unique benefit]	[text entered by respondent]

Q46. [If Q20=No ask:] What are the barriers to tracking the following benefits?

	Future Benefit Tracking
[Each row is a unique benefit]	[text entered by respondent]

Economic Benefits

Q47. Do any of the benefits you've mentioned specifically benefit the local economy? If so, which of the following benefit the local economy?

Select all benefits that you think benefit the local economy

☐	*Core Program Coordination: Commercial*	*Performing outreach to small businesses and **bundling projects** to make travel to complete work more appealing to contractors*
☐	*Core Program Coordination: Outreach and Education*	*Using LGP staff time to **leverage the use of Americorps members** who then expand the overall time dedicated to LGP activities*
☐	*Core Program Coordination: Commercial*	*Small businesses who end up making energy efficiency upgrades end up saving money that is later spent in the local economy **(multiplier effect)***
☐	*None of the above*	

Q48. [if HTR=1] Do any of the benefits you've mentioned specifically benefit the hard to reach constituents you serve? If so, which of the following benefit the hard to reach?

Select all benefits that you think benefit the hard to reach

☐	*Core Program Coordination: Commercial*	*Performing outreach to small businesses and **bundling projects** to make travel to complete work more appealing to contractors*
☐	*Core Program Coordination: Outreach and Education*	*Using LGP staff time to **leverage the use of Americorps members** who then expand the overall time dedicated to LGP activities*
☐	*Core Program Coordination: Commercial*	*Small businesses who end up making energy efficiency upgrades end up saving money that is later spent in the local economy **(multiplier effect)***
☐	*None of the above*	

Q49. [if DAC=1 & HTR = 0] Do any of the benefits you've mentioned specifically benefit the disadvantaged communities you serve? If so, which of the following benefit the

disadvantaged communities? [if DAC=1 and HTR=1 add:] If the answer is the same as your response to the question about hard to reach constituents, select **"same as above"]**

Select all benefits that you think benefit disadvantaged communities

☐	*Core Program Coordination: Commercial*	*Performing outreach to small businesses and **bundling projects** to make travel to complete work more appealing to contractors*
☐	*Core Program Coordination: Outreach and Education*	*Using LGP staff time to **leverage the use of Americorps members** who then expand the overall time dedicated to LGP activities*
☐	*Core Program Coordination: Commercial*	*Small businesses who end up making energy efficiency upgrades end up saving money that is later spent in the local economy **(multiplier effect)***
☐	*None of the above*	

Q50. [if DAC=1 & HTR = 1] Do any of the benefits you've mentioned specifically benefit the disadvantaged communities you serve? If so, which of the following benefit the disadvantaged communities?

Select all benefits that you think benefit disadvantaged communities

☐	*Core Program Coordination: Commercial*	*Performing outreach to small businesses and **bundling projects** to make travel to complete work more appealing to contractors*
☐	*Core Program Coordination: Outreach and Education*	*Using LGP staff time to **leverage the use of Americorps members** who then expand the overall time dedicated to LGP activities*
☐	*Core Program Coordination: Commercial*	*Small businesses who end up making energy efficiency upgrades end up saving money that is later spent in the local economy **(multiplier effect)***
☐	*None of the above*	

Appendix E: Web Survey Completions

Table 21: Web Survey Completions

LGP	IOUs	DAC	HTR	Implementing Partner Web Survey	Local Government Staff Web Survey	Total
County of San Diego	SDG&E	Yes	Yes	2	0	2
Desert Cities	SoCalGas, SCE	Yes	Yes	1	1	2
Eastern Sierra Partnership	SCE	No	Yes	0	0	0
Gateway Cities ELP	SCE, SoCalGas	Yes	Yes	2	0	2
High Desert Regional ELP	SCE	Yes	Yes	1	0	1
High Sierra Energy Foundation	SCE	No	Yes	0	0	0
Kern County Energy Watch	PG&E, SCE, SoCalGas	Yes	Yes	0	0	0
Long Beach Partnership	SCE	Yes	Yes	0	0	0
Los Angeles County	SoCalGas, SCE	Yes	Yes	0	2	2
North Orange County Cities ELP	SCE	Yes	Yes	1	0	1
Orange County Cities Partnership	SCE, SoCalGas	Yes	No	1	0	1
Port of San Diego	SDG&E	No	Yes	1	0	1
Riverside County Partnership	SoCalGas, SCE	Yes	No	1	0	1
San Bernardino County	SoCalGas, SCE	Yes	Yes	2	1	3
San Bernardino Regional ELP (SANBAG)	SoCalGas, SCE	Yes	Yes	0	0	0
San Gabriel Valley Partnership	SCE	Yes	Yes	1	0	1
San Luis Obispo Energy Watch	PG&E, SoCalGas	No	Yes	1	1	2
San Diego Association of Governments	SDG&E	Yes	Yes	0	0	0

LGP	IOUs	DAC	HTR	Implementing Partner Web Survey	Local Government Staff Web Survey	Total
Santa Barbara County Partnership - (SCEEP with SCE) (Santa Maria Energy Watch with PG&E)	PG&E, SCE, SoCalGas	No	Yes	0	0	0
Sierra Business Council / Sierra Nevada Energy Watch	PG&E	No	Yes	1	5	6
Silicon Valley Energy Watch	PG&E	Yes	No	0	0	0
Solano Energy Watch	PG&E	Yes	No	1	0	1
Sonoma County Energy Watch	PG&E	Yes	No	1	0	1
South Bay Council of Governments	SCE, SoCalGas	Yes	Yes	1	0	1
Sutter Buttes Energy Partnership	PG&E	Yes	Yes	1	0	1
Valley Innovative Energy Watch (VIEW) (Also known as San Joaquin Valley Partnership)	PG&E, SCE, SoCalGas	Yes	Yes	1	0	1
Ventura County Partnership	SCE, SoCalGas	Yes	Yes	0	0	0
Western Riverside COG	SCE, SoCalGas	Yes	Yes	1	0	1
Yolo County Energy Watch	PG&E	Yes	No	0	0	0
Total				**21**	**10**	**31**

Appendix F: Recommendations

Item #	Page	Findings	Best Practice / Recommendations	Recommendation Recipient
1	5	There are activities, outputs and outcomes identified through the co-benefits research that are not currently included in the logic models.	Update the LGP program logic models to include the new activities, outputs, and outcomes that were identified as co-benefits through this research	All IOUs
2	5	Data is varied and not consistently collected across LGPs for identified co-benefits. Before moving to wide scale collection, it would be useful to collect data from a select few LGPs before requiring it across the board.	To test this methodology, the IOUs should require a small number of LGPs to report on the co-benefits tracking data associated with the activities conducted by their specific partnerships. We suggest using the partnerships that were identified by the IOU Study Team as high priority for our in-depth interviews that are not slated for closure in the near future including: o Sierra Nevada Energy Watch (PG&E) o Ventura County Partnership (SoCalGas and SCE)	PG&E, SCE, SoCalGas
3	5	An evaluability assessment would help to understand how collection of these metrics could scale to all partnerships in the future to support evaluation of co-benefits.	Use this initial set of data to perform an evaluability assessment to understand how collection of these metrics could scale to all partnerships in the future to support evaluation of co-benefits, where partnership efforts are continuing.	PG&E, SCE, SoCalGas