BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA

Order Instituting Rulemaking Concerning Energy Efficiency Rolling Portfolios, Policies, Programs, Evaluation, and Related Issues.	**Rulemaking 13-11-005 (Filed November 14, 2013)**

PACIFIC GAS AND ELECTRIC COMPANY (U 39 E) SAN DIEGO GAS & ELECTRIC COMPANY (U 902 M) SOUTHERN CALIFORNIA EDISON COMPANY (U 338 E) AND SOUTHERN CALIFORNIA GAS COMPANY (U 904 G) JOINT REPORT ASSESSMENT OF STRUCTURE AND COMPOSITION OF STATEWIDE PROGRAM AREAS

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DATED: June 4, 2019

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ASSESSMENT OF STRUCTURE AND COMPOSITION OF STATEWIDE PROGRAM AREAS

Pacific Gas and Electric Company (PG&E), San Diego Gas & Electric Company (SDG&E), Southern California Edison Company (SCE), and Southern California Gas Company (SoCalGas) submit the attached Bottom-Up Statewide Energy Efficiency Program Composition Review Final Report (Final Report) by Evergreen Economics.

The attached Final Report is in accordance with Decision 18-05-041 Ordering Paragraph 27 which requires the utilities to:

> …jointly conduct a bottom-up assessment of the structure and composition of the statewide program areas and offerings and file and serve the results of this assessment and its associated recommendations in the open energy efficiency rulemaking no later than one year from the issuance of this decision.

The Final Report is being filed and served on parties in this docket because R.13-11-005 is the open energy efficiency rulemaking.

On June 3, 2019, the Final Report was posted on the website for California Energy Efficiency Energy Contracts. The Final Report is available at: https://pda.energydataweb.com/api/view/2190/Portfolio%20Review%20Report%20-%20Final%20060319.pdf

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Respectfully Submitted,

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DATED: June 4, 2019

ATTACHMENT

Bottom-Up Statewide Energy Efficiency Program Composition Review

Prepared for the California Investor-Owned Utilities

Final Report

Submitted by Evergreen Economics

June 3, 2019

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1 Executive Summary

Evergreen Economics conducted a Bottom-Up Statewide Energy Efficiency Program Composition Review for the California investor-owned utilities (IOUs) that assessed which programs might be more effective when administered statewide as opposed to administered regionally (that is, different programs across the IOU service territories). The IOUs commissioned this study in response to a California Public Utilities Commission (CPUC) requirement.

1.1 Study Objectives and Approach

The statewide program administration issue was initially raised by the CPUC to make programs more consistent and equitable across customer classes, and hoped to achieve increased cost efficiencies and energy savings. In the last several years, the topic of statewide administration became more active as it was combined with third-party administration as issues being jointly addressed by the CPUC in the current "rolling portfolio" energy efficiency program rulemaking.

The CPUC defined "statewide" in Decision 16-08-019:

> *"For energy efficiency program purposes, "statewide" shall be defined as: A program or subprogram that is designed to be delivered uniformly throughout the four large investor-owned utility service territories. Each statewide program and/or subprogram shall be consistent across territories and overseen by a single lead program administrator. One or more statewide implementers, under contract to the lead administrator, should design and deliver the program or subprogram. Local or regional variations in incentive levels, measure eligibility, or program interface are not generally permissible (except for measures that are weather dependent or when the program administrator has provided evidence that the default statewide customer interface is not successful in a particular location. Upstream (at the manufacturer level) and midstream (at the distributor or retailer level, but not the contractor or installer level) interventions are required to be delivered statewide. Some, but not all, downstream (at the customer level) approaches are also appropriate for statewide administration. Statewide programs are also designed to achieve market transformation."*[1,2]

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1 California Public Utilities Commission (CPUC). Decision 16-08-019. *Decision Providing Guidance for Initial Energy Efficiency Rolling Portfolio Business Plan Filings* (August 25, 2016), p. 111. https://docs.wixstatic.com/ugd/0c9650_9afbd868952646bba5ea5b687499fd4b.pdf

2 Note that the definition above was established prior to the recent CPUC-directed efforts related to market transformation (workshops and the draft Market Transformation Framework Proposal). Since the market

Decision 16-08-019 also introduced this portfolio review study:

> *"Program administrators are encouraged to conduct a bottom-up review of the program and subprogram structures in order to rationalize and optimize program activities into the most effective and cost-effective possible configurations."*[3] Subsequently, *"additional programs and subprograms should be designated as statewide after a thorough bottom-up review of the portfolios by program administrators prior to the business plan filings."*[4]

In Decision 18-05-041, the CPUC identified the following IOU program categories and subprograms[5] required to be statewide:[6]

- Midstream Plug Load and Appliance
- HVAC
- New Construction (Residential and Commercial)
- New Finance Offerings[7]
- Codes and Standards - Advocacy
- Lighting
- Emerging Technologies
- Workforce Education and Training – Career Connections (K-12)
- Institutional Partnerships
- Foodservice Point of Sale Program
- Midstream Commercial Water Heating

And three statewide downstream pilot programs:

- HVAC Quality Installation/Quality Maintenance
- Water/Wastewater Pumping Program
- Career and Workforce Readiness

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transformation policy framework is still under development, the study did not explicitly focus on the market transformation component of the definition of "statewide."

[3] CPUC. Decision 16-08-019, p. 68.

[4] ibid, p. 105.

[5] Subprograms are included in the list where the requirement for statewide administration is different across subprograms within a program category. Section 5.1.1 provides a complete list of program categories and subprograms.

[6] CPUC. Decision 18-05-041. *Decision Addressing Energy Efficiency Business Plans* (June 5, 2018), pp. 91-92. https://docs.wixstatic.com/ugd/849f65_25c301572da7419e96482e5dae5c347e.pdf

[7] The CPUC distinguished new Finance program offerings added in 2016 that are required to be statewide.

In the same Decision 18-05-041 (Ordering Paragraph 24), the CPUC ordered the IOUs to conduct this study:

> "A bottom-up, comprehensive review of the statewide program structure and composition should be completed and the results filed in the energy efficiency rulemaking (R.13-11-005 or its successor) within one year of the issuance of this decision."[8]

Research questions that this study addressed include:

- What are the key characteristics of the IOU and non-IOU Program Administrators' regional and statewide programs and subprograms?
- What are advantages and disadvantages of regional versus statewide program implementation, beyond cost effectiveness (for example, customer experience, code variation by climate zone, interaction between regional and statewide programs)?
- What criteria should be considered in identifying programs best suited to regional versus statewide implementation?
- What evidence exists to support the criteria of regional versus statewide program effectiveness and cost effectiveness?
- What programs, or characteristics of programs and subprograms, can be recommended for statewide implementation, and based on what criteria? What programs, or characteristics of programs and subprograms, may not be well suited for statewide implementation?

The study research methods included a review of past relevant CPUC Decisions, a literature review, characterization of the energy efficiency program portfolio,[9] and 67 in-depth interviews with IOU program managers, regional energy network (REN) program managers, out-of-state program managers, trade allies, and third-party implementers to systematically identify the potential benefits and drawbacks associated with statewide program administration.

1.2 Recommendations for Statewide Program Administration

Based on the program characterization and interviews that identified potential benefits and drawbacks of statewide administration, Evergreen developed recommendations for program categories and subprograms that should be administered statewide. The recommendations are consistent with the CPUC's required list of statewide programs (Table 1). That is, **Evergreen's independent assessment of the IOU portfolio of programs**

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[8] CPUC. Decision 18-05-041, pp. 174-175.

[9] Including regional energy network programs, in response to comments on the draft research plan.

resulted in recommending the same list of programs that the CPUC required in Decision 18-05-041. Thus, Evergreen does not recommend at this time that any programs not currently on the CPUC's required list of statewide programs be administered statewide.

- **Recommendation #1:** Evergreen recommends that the IOUs administer the following categories of programs statewide, consistent with the current CPUC definition. This list is consistent with the current list of programs required to be statewide by the CPUC.
    - Midstream Plug Load and Appliance
    - HVAC
    - New Construction (Residential and Commercial)
    - New Finance Offerings
    - Codes and Standards - Advocacy
    - Lighting
    - Emerging Technologies
    - Workforce Education and Training – Career Connections (K-12)
    - Institutional Partnerships
    - Foodservice Point of Sale Program
    - Midstream Commercial Water Heating
    - HVAC Quality Installation/Quality Maintenance
    - Career and Workforce Readiness

Table 1 summarizes the current IOU program portfolio by program category and subprogram, showing the consistency between the CPUC and this study's recommendations for statewide administration.

Table 1: Recommendations for Statewide Administration

Program Category[1]	Subprogram[1]	Recommended for SW Admin: Required by CPUC	Recommended for SW Admin: by Evergreen Study
Audits and Training	Energy Advisor (Audits)	No	Provisional
	Strategic Energy Management	No	NA[2]
	Career Connections (K-12)	Yes	Yes
	Integrated Energy Education and Training (formerly Centergies)	No	No
	Career and Workforce Readiness	Yes[3]	Yes
Codes and Standards	Advocacy	Yes	Yes
	Code Compliance	No	No
	Reach Codes	No	No
Downstream	Direct Install	No	Provisional
	Downstream Rebates	No	Provisional
	Water/Wastewater Pumping Program	Yes[3]	NA[2]
Emerging Technologies	Emerging Technologies	Yes	Yes
Finance	Finance – New	Yes	Yes
	Finance – Existing	No	No
Government Partnerships	Institutional Partnerships	Yes	Yes
	Local Government Partnerships	No	No
Midstream	Plug Load and Appliance	Yes	Yes
	HVAC	Yes	Yes
	Foodservice	Yes	Yes
	Commercial Water Heating	Yes	Yes
	Residential HVAC QI/QM	Yes[3]	Yes
New Construction	Residential New Construction	Yes	Yes
	Commercial New Construction (Savings by Design)	Yes	Yes
Upstream Lighting	Upstream Lighting	Yes	Yes

[1] Evergreen categorized IOU energy efficiency programs listed in the California Energy Data and Reporting System (CEDARS) data downloaded on December 17, 2018, with some refinements based on IOU response to a data request and IOU program manager interview responses.
[2] This subprogram was not included in the sample frame.
[3] Directed by the CPUC to be a downstream pilot program.

The timing of the study was such that the portfolio was undergoing major transition as the IOUs were awarding programs to third parties and streamlining their offerings. For certain programs, it was difficult for interviewees to determine whether statewide program administration would be an overall benefit or not because they anticipated that many changes would occur during this transition period. The research identified several issues that the IOUs will need to work through as they transition to greater third-party implementation and fully compliant statewide programs. These issues include developing data sharing protocols across IOUs, determining the priority of serving hard-to-reach customers, and ensuring local needs are addressed and local resources are effectively tapped across the state. **If these transition issues are resolved, three more categories of programs could potentially be recommended for statewide administration**. These program areas are categorized as "provisional" at this time regarding statewide administration:

- Energy Advisor – audits programs
- Direct Install – current IOU programs targeted to small and medium business and residential customers
- Downstream Rebates – current IOU Deemed and Custom programs[10]

Programs that fall under these categories should be reexamined with respect to statewide administration after the IOUs transition to fully compliant statewide program administration and the third-party programs are awarded.

- **Recommendation #2:** The IOUs should reexamine programs that fall under the categories of Energy Advisor, Direct Install, and Downstream Rebates approximately one year after the transition to fully compliant statewide program administration and the third-party programs have been awarded (such as in 2021). Keeping the identified transition issues in mind, the programs should be examined to determine if they would be most effective if they were administered statewide or regionally.

The categories of programs that were not recommended for statewide administration based on the research findings are all tailored to meet unique, localized needs—either of code compliance or code development officials, training center attendees, IOU-specific financing, or local governments. The programs that were not recommended for statewide administration are:

- Finance – Existing Offerings

[10] There may be additional Direct Install and/or downstream rebate programs that are currently being awarded to third parties that were excluded from this research.

- Integrated Energy Education & Training (IEET), formerly (Centergies)
- Code Compliance
- Reach Codes
- LGPs

The current set of IOU programs, including the CPUC-recommended program categories and subprograms, contain a mix of delivery channel, measure category, and customer segment. The IOUs are in the process of revising their portfolios as they award third-party programs. As part of the program assessment, Evergreen identified key characteristics of programs for statewide administration (see Table 2). **Presenting the results this way ensures that this study's results will still be useful even after the current portfolio is modified.**

Table 2 summarizes the recommendations for statewide administration by program characteristic. For example, a new third-party midstream program that is focused on large commercial customers, based on the table, would be well suited for statewide administration.

Table 2: Recommendations for Statewide Administration by Program Characteristic

Program Characteristics Study Recommends for Statewide (SW) Admin
Upstream delivery channel
Midstream delivery channel
Programs that heavily rely on distributors/ manufacturers/retailers
Programs that partner with research labs and organizations/universities and colleges
Programs that extensively coordinate with other energy organizations (CEC, NEEA, Energy Trust of Oregon)
Programs with significant administration functions that could benefit from streamlining across IOUs
Programs that have extensive mass marketing
Programs that heavily rely on Installation Contractors
Programs that heavily rely on Builders/Architects/Raters
Programs that focus on Large Customers (C, I, Ag)
Programs with extensive Customer Data Sharing requirements

Just like there are programs that the study was not able to definitively recommend for statewide administration pending the resolution of transition issues, there are also key program characteristics that fall into the same provisional category (listed below). Programs where these features are very prominent may not be appropriate for statewide administration unless the transition issues mentioned above are resolved.

- Programs that rely on direct engagement with residential and small business customers or public sector customers
- Programs that use a downstream delivery channel

1.3 Additional Findings, Observations, and Recommendations

As a result of conducting this research, Evergreen identified some additional findings and recommendations that are intended to support IOU improvements to their portfolios and the roll out of statewide programs.

Based on the literature review that examined energy efficiency program administrative costs associated with statewide and regional programs across the country, Evergreen found that states that have statewide programs have higher average program administrative costs for their portfolios than states that offer only utility-specific offerings, which is the opposite of the CPUC's expectation that statewide programs should be "realizing administrative efficiencies through the statewide administration framework."[11] The key takeaway is that administration type (i.e., statewide or utility-only) is not the most important driver of cost effectiveness and overall impact. Program size, maturity, and comprehensiveness drive administrative costs. However, the review did show that states with statewide offerings are also more highly ranked by the American Council for an Energy-Efficient Economy (ACEEE), indicating a correlation with superior energy efficiency policies and programs.

Based on our review of the IOUs' energy efficiency program portfolios, we identified that the current energy efficiency program portfolios are overly complex, and the IOUs and stakeholders we interviewed agree there are benefits to be realized from simplification and reduction of the number of programs. The current arrangement has the potential for overlap and redundancy. The IOUs indicated that they are in the process of revising and simplifying their portfolios. We offer a suggestion for the IOUs to consider as they revise their portfolios based on our review of their current portfolios and feedback from stakeholders. The suggestion is intended to address the issues of complexity and overlap. This is not a formal recommendation that is supported by robust research findings to address an explicit study objective, but rather some ideas that came from the research that will need further analysis.

[11] CPUC. Decision 18-05-041, p. 130.

- We suggest that the IOUs reduce the number of programs and address the potential for redundancy in their programs as they revise the structure of their portfolios. Such an arrangement might consist of the following upstream, midstream, and cross-cutting programs that serve all customers:
    - Upstream Lighting Program
    - Midstream HVAC, Plug Load and Appliance, and Food Service Programs
    - Codes and Standards, Emerging Technologies, and Workforce Education and Training Programs (WE&T)

  This approach might have downstream offerings (including rebates, finance, and audits) condensed into five customer segments:
    - Residential
    - Commercial
    - Industrial
    - Agricultural
    - Public

As mentioned above, the IOUs are revising their portfolios as they award third-party programs and seek to simplify and reduce the number of programs. There are opportunities for the IOUs to more explicitly coordinate these efforts so their portfolios are consistent.

- **Recommendation #3:** The IOUs should take advantage of ongoing changes to their portfolios to coordinate their efforts statewide to reorganize and simplify their portfolios. Consistent IOU portfolios would make it easier for trade allies and customers that span IOU service territories, and also would allow for easier oversight and evaluation.

Based on the interviews conducted for this study, Evergreen identified that there is an inherent conflict between addressing hard-to-reach and customer equity concerns versus maximizing program cost effectiveness. As the IOUs move toward fully compliant statewide program administration with a single IOU lead, IOUs, implementers, and trade allies noted that there is uncertainty around whether the lead IOUs and their implementers will continue to focus on local customer needs and leverage local and regional IOU strategies to address those needs. We also note that portfolio cost effectiveness has declined over time to much lower levels than when hard-to-reach goals were first introduced. It may be time to update the intent and goals related to achieving customer equity and serving hard-to-reach segments.

- If the CPUC were to more clearly establish the priority of customer equity and serving hard-to-reach customer segments versus program cost effectiveness, program administrators would have more clarity about how much effort to place on localized outreach, and those efforts would be more likely to be evenly applied across service territories.
- There may be a justification for a complementary set of local or regional programs that are intended to address hard-to-reach customer segments, operated by third-party implementers, LGPs, and/or RENs. Many such programs are already in place and may be added as third-party programs are awarded. More policy clarity would help guide the design of these complementary programs so that it is more deliberately in line with CPUC goals rather than a patchwork. Recommendation #2 (to revisit Energy Advisor, Downstream Rebates, and Direct Install program areas after the IOUs have transitioned and streamlined their portfolios) could also encompass this issue of complementary and overlapping programs, assessing whether the revised portfolios are optimally designed.

A final issue concerns the implementation of statewide program administration in the context of the portfolio refresh that is underway. Our research identified that some flexibility needs to be built into the process for requiring statewide programs at least in the near term as the IOUs award third-party programs and revamp their portfolios. IOU staff indicated that since the CPUC identified a specific list of programs that are required to be statewide, it might limit the flexibility to revamp the portfolio (such as by eliminating a program that is no longer needed, or consolidating across programs). At the very least, it introduced uncertainty around the IOUs' flexibility to make substantive changes that would impact programs on the required list.

2 Introduction

This document is the draft report for the Bottom-Up Statewide Energy Efficiency Program Composition Review that Evergreen Economics conducted for the California investor-owned utilities (IOUs). In 2018, the IOUs were ordered by the California Public Utilities Commission (CPUC) in Decision 18-05-041 to conduct a comprehensive bottom-up analysis to provide guidelines for determining which of the programs should be implemented statewide. The goal of the study was to create a framework by which the IOUs can determine which programs might be more effective when administered statewide as opposed to administered regionally (that is, different programs across the IOU service territories). Below, some of the guidance for this project contained in various CPUC Decisions is summarized, followed by the research objectives and approach.

2.1 Study Objectives

The CPUC introduced this study in a 2016 Decision that provided guidance for initial energy efficiency rolling portfolio business plan filings. Decision 16-08-019 discussed the portfolio review:

> *"Program administrators are encouraged to conduct a bottom-up review of the program and subprogram structures in order to rationalize and optimize program activities into the most effective and cost-effective possible configurations." (page 68) Subsequently, "additional programs and subprograms should be designated as statewide after a thorough bottom-up review of the portfolios by program administrators prior to the business plan filings."*[12]

Decision 16-08-019 also provided a definition of "statewide":

> *"For energy efficiency program purposes, "statewide" shall be defined as: A program or subprogram that is designed to be delivered uniformly throughout the four large investor-owned utility service territories. Each statewide program and/or subprogram shall be consistent across territories and overseen by a single lead program administrator. One or more statewide implementers, under contract to the lead administrator, should design and deliver the program or subprogram. Local or regional variations in incentive levels, measure eligibility, or program interface are not generally permissible (except for measures that are weather dependent or when the program administrator has provided evidence that the default statewide customer interface is not successful in a particular location. Upstream (at the manufacturer level) and midstream (at the distributor or retailer level, but not the contractor or installer level) interventions are required to be delivered statewide. Some, but not all,*

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[12] California Public Utilities Commission (CPUC). Decision 16-08-019. *Decision Providing Guidance for Initial Energy Efficiency Rolling Portfolio Business Plan Filings* (August 25, 2016), p. 105. https://docs.wixstatic.com/ugd/0c9650_9afbd868952646bba5ea5b687499fd4b.pdf

> *downstream (at the customer level) approaches are also appropriate for statewide administration. Statewide programs are also designed to achieve market transformation."*[13]

The CPUC ordered the IOUs to conduct a comprehensive review of their energy efficiency program portfolios as part of a broader 2018 Decision that approved their business plans. In Decision 18-05-041 (Ordering Paragraph 24) issued on June 5, 2018, the CPUC requires that:

> *"A bottom-up, comprehensive review of the statewide program structure and composition should be completed and the results filed in the energy efficiency rulemaking (R.13-11-005 or its successor) within one year of the issuance of this decision,"*[14] and that
>
> *"a comprehensive review of this structure should be undertaken by the PAs* [program administrators] *as soon as possible, covering not only the configuration of statewide programs, but also consideration of whether measures currently only promoted through downstream interventions should be included in statewide upstream and midstream programs."*[15]

Note that the definition above was established prior to the recent CPUC-directed efforts related to market transformation (workshops and the draft Market Transformation Framework Proposal). Since the market transformation policy framework is still under development, the study did not explicitly focus on the market transformation component of the definition of "statewide".

Research questions that this study addressed include:

- What are the key characteristics of the IOU and non-IOU PAs' regional and statewide programs and subprograms?
- What are advantages and disadvantages of regional versus statewide program implementation, beyond cost effectiveness (for example, customer experience, code variation by climate zone, interaction between regional and statewide programs)?
- What criteria should be considered in identifying programs best suited to regional versus statewide implementation?
- What evidence exists to support the criteria of regional versus statewide program effectiveness and cost effectiveness?
- What programs, or characteristics of programs and subprograms, can be recommended for statewide implementation, and based on what criteria? What

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[13] CPUC. Decision 16-08-019, p. 111.

[14] CPUC. Decision 18-05-041. *Decision Addressing Energy Efficiency Business Plans* (June 5, 2018), p. 174. https://docs.wixstatic.com/ugd/849f65_25c301572da7419e96482e5dae5c347e.pdf

[15] ibid, p. 89.

programs, or characteristics of programs and subprograms, may not be well suited for statewide implementation?

2.2 Research Approach

The study included multiple research methods, including a review of past relevant CPUC Decisions, a literature review, characterization of the energy efficiency program portfolio, and more than 60 in-depth interviews with stakeholders and energy efficiency program managers in and outside of California.

Evergreen developed a draft research plan that was posted for public review on December 21, 2018, documenting the study methods. Two sets of comments were provided, representing the state's regional energy networks (collaborations of local governments that are authorized by the CPUC as program administrators, also referred to as non-IOU PAs):

- The Association of Bay Area Governments (ABAG) on behalf of the Bay Area Regional Energy Network (BayREN), Marin Clean Energy and the Tri-County Regional Energy Network (Tri-County REN).
- Los Angeles County on behalf of the Southern California Regional Energy Network (SoCalREN).

Evergreen worked closely with the Study Team (including representatives from each of the four IOUs) to address the comments and revise the plan, submitting a final plan (along with a redline version) on January 18, 2019. Comments received on the study research plan and responses are provided in Appendix C. Comments received on the draft report are summarized in Appendix G.

2.2.1 Regulatory Background Review

Evergreen conducted a review of all relevant CPUC Decisions to provide context for the study. As mentioned earlier in this section, there were two main Decisions (16-08-019 and 18-05-041) that provided guidance for this study. In addition, two prior Administrative Law Judge Rulings from 2015 and 2016 laid the groundwork for the 2016 and 2018 Decisions related to the issue of Statewide IOU programs. There was also relevant guidance and discussion in additional CPUC Decisions spanning back to 2001. Stakeholders provided comments on this issue, particularly in the 2016 Decision (16-08-019).

2.2.2 Informational Interviews

Evergreen conducted 12 telephone interviews with various stakeholders including parties that submitted comments related to the statewide administration issue on relevant CPUC proceedings, as well as additional organizations suggested by the Study Team and/or stakeholders during the course of the interviews. Evergreen also conducted telephone interviews with senior program managers from each IOU. The objective of the interviews was to get a broad range of viewpoints from the IOUs and interested stakeholders in

California on what it means for a program to be administered statewide, and what are the benefits (both intended and realized) and any potential drawbacks.

Key staff from the following organizations[16] were interviewed by Evergreen in February 2019:

- Stakeholders (The Utility Reform Network, the Public Advocates Office, the National Resources Defense Council, the California Energy + Demand Management Council, and San Joaquin Valley Clean Energy Organization)
- A senior program manager from each of the four IOUs
- Regional energy networks/non-IOU PAs

2.2.3 Literature Review

Evergreen conducted a literature review to determine if there existed any data and/or information sources to inform the study, and identified three relevant data sources:

- *The Cost of Saving Electricity Through Energy Efficiency Programs Funded by Utility Customers: 2009–2015* (Lawrence Berkeley National Laboratory, June 2018)
- *The 2018 State Energy Efficiency Scorecard* (American Council for an Energy-Efficient Economy [ACEEE], October 2018)
- *ACEEE's State Policy Database* (ACEEE, 2018)

Evergreen also identified an older qualitative review of energy efficiency program administration:

- *Who Should Administer Energy-Efficiency Programs?* (University of California Energy Institute 2003)[17]

2.2.4 Portfolio Characterization and Program Manager Interviews

Evergreen conducted a characterization of energy efficiency programs offered in California in the IOU service territories in 2018 based on a review of Energy Efficiency Business Plans filed by the PAs in 2017, data from the California Energy Data and Reporting System (CEDARS),[18] and information provided by the IOUs in response to a data request. The focus was mainly on IOU programs, but Evergreen also included some

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[16] Evergreen also attempted to conduct interviews with the Los Angeles Department of Water and Power and the two additional non-IOU PAs—Marin Clean Energy and the Local Government Sustainable Energy Coalition—but did not receive a response after multiple attempts. Evergreen contacted the CPUC Energy Division to be included in this round of interviews, but they respectfully declined; such an interview might result in them providing an interpretation of CPUC Decisions, which is not allowed.

[17] Blumstein, C. et al. 2003. *Who Should Administer Energy-Efficiency Programs?* University of California Energy Institute, Berkeley, CA.

[18] Program data downloaded from the CEDARS website on December 17, 2018.

non-IOU administered programs that the non-IOU PAs selected during informational interviews. Programs were categorized by delivery strategy (for example, upstream) and type (for example, new construction, audits, and local government partnerships).

A sample of 192 programs was selected (of 450 total) from each category to be more closely examined and to form the sample recruitment pool for program manager interviews. The sample included a range of programs to cover the key characteristics that are important to this research and to include the major programs in terms of budget and energy savings. During the course of the program manager interviews, interviewees were asked if any trade ally or program implementers are engaged in the program in a significant way that we could include in our interview sample pool. Stakeholders were also asked a similar question, which provided additional non-IOU perspectives on the study issues.

A total of 67 interviews were conducted by Evergreen staff in February and March 2018 (including 11 interviews from a pre-test):

- 59 IOU program managers
- 8 trade allies and program implementers

Appendix A provides more detail on the IOU program sample. The interview guide is provided in Appendix E.

2.2.5 Out-of-State Program Interviews

In addition to interviewing the California energy efficiency program managers, Evergreen also conducted similar interviews with a sample of program managers from outside California, including program managers that administer a variety of programs statewide, regionally, or both. A total of nine interviews were conducted with program staff from Vermont, New York, Massachusetts, Oregon, and Minnesota. This task provided a broader perspective on program administration issues from staff who do not have a stake in the outcome of the results.

2.3 Study Limitations and Challenges

As with any evaluation study, there are limitations and potential threats to validity. Such limitations may be data availability and comparability across programs, and subjectivity of some of the criteria used to assess the programs.

Table 3 on the next page presents expected study limitations and challenges and how they were addressed.

Table 3: Study Limitations and Challenges

Limitation/ Challenge	Significance	How They Were Addressed
Very tight timeline	High	Conduct tasks in parallel; share schedule ahead of time so reviewers know when to expect important deliverables
Potential for bias/subjectivity from program manager interview responses	High	Ask program managers to support their assessments such as providing examples, include out-of-state program administrators/managers who are running similar programs; seek feedback from trade allies and program implementers; rely on CPUC/stakeholder and program data in addition to IOU and non-IOU PA survey responses; assess program manager claims based on all the available data
Current set of programs are likely to change in the future	High	Conduct the assessment on program characteristics in addition to programs and program categories so the results are applicable going forward even as the portfolio changes
Data availability / comparability	Medium	Seek a range of sources – Business Plans, Annual Reports, CEDARs; use Annual Budget Advice Letter filings for most current list of programs
Program comparability, huge number of programs	Medium	Create program groupings/categories based on their characteristics

3 Background

This section provides context for the study findings, based on the regulatory review and informational interviews. The regulatory review was based on five sources:

- Administrative Law Judge's Ruling re comments on Phase II Workshop 3 (Statewide and Third Party Energy Efficiency Programs) (April 1, 2015)[19]
- CPUC Decision excerpts from 2001 to 2012 (which were identified in a hand-out from workshops held by the CPUC on March 23-24, 2015, and were appended to the April 1, 2015 ALJ Ruling)[20]
- Ruling of Assigned Commissioner and Administrative Law Judge seeking input on approaches for Statewide and Third Party Energy Efficiency Programs (May 24, 2016)[21]
- Decision 16-08-019 Providing Guidance for Initial Energy Efficiency Rolling Portfolio Business Plan Filings (August 25, 2016)[22]
- Decision 18-05-041 Addressing Energy Efficiency Business Plans (June 5, 2018)[23]

The interviews were conducted by Evergreen in January and February 2019 with the following organizations/individuals:

- **Pacific Gas & Electric** – Meghan Dewey, Senior Manager, Energy Efficiency Program and Product Manager
- **Southern California Edison** – Tory Weber, Principal Manager, Energy Efficiency Products, and Aimee Wong, Senior Energy Efficiency Advisor
- **Southern California Gas Company** – Darren Hanway, Energy Efficiency Program Operations Manager, and Carlo Gavina, Program Manager
- **San Diego Gas & Electric** – George Katsufrakis, Energy Efficiency Program Operations Manager
- **Public Advocates Office** – Dan Buch, Program and Project Supervisor
- **The Utility Reform Network (TURN)**– Hayley Goodson, Staff Attorney
- **National Resource Defense Council (NRDC)** – Lara Ettenson, Director, CA Energy Efficiency Policy
- **California Energy + Demand Management Council (CEDMC)** – Melanie Gillette, Sr. Policy Director

[19] http://docs.cpuc.ca.gov/PublishedDocs/Efile/G000/M149/K822/149822040.PDF, p. 1.
[20] http://docs.cpuc.ca.gov/PublishedDocs/Efile/G000/M149/K822/149822040.PDF, p. 9.
[21] http://docs.cpuc.ca.gov/PublishedDocs/Efile/G000/M162/K005/162005234.PDF
[22] https://docs.wixstatic.com/ugd/0c9650_9afbd868952646bba5ea5b687499fd4b.pdf
[23] https://docs.wixstatic.com/ugd/849f65_25c301572da7419e96482e5dae5c347e.pdf

- **San Joaquin Valley Clean Energy Organization (SJVCEO)** – Courtney Kalashian, Executive Director
- **Association of Bay Area Governments (ABAG) on behalf of the Bay Area Regional Energy Network (BayREN)** – Jenny Berg, Program Manager
- **Los Angeles County on behalf of SoCalREN** - Lujuana Medina, Manager of Environmental Initiatives, Los Angeles County, Internal Services Dept.
- **Ventura County on behalf of Tri-County REN** – Alejandra Tellez, County of Ventura

Appendix B provides a complete set of relevant CPUC excerpts from 2002 to the present.

3.1 Historical CPUC Decision Excerpts (2002 – 2012)

Evergreen reviewed CPUC Decisions and Rulings on the issue of statewide administration of IOU programs back to 2002.[24] The issue was initially raised to make programs more consistent and equitable across customer classes, and hoped to achieve increased cost efficiencies and energy savings. This section provides a summary of the relevant portions of those CPUC documents from 2002 to 2012, including stakeholder and IOU comments.

The IOUs began administering some statewide programs back in the early 2000s. The IOUs coordinated more closely on these programs, making their measure offerings and incentive levels more consistent over time. In a 2001 Decision, the CPUC described the benefits of the statewide approach and how it would continue to be the backbone of the portfolio for 2002:

> *"Statewide programs will continue to be the backbone of the energy efficiency approach for 2002. These programs serve the Commission's policy goals and objectives by allocating funding equitably across customer classes and geography, providing consistent and recognizable program reach and securing both short- and long-term energy savings and peak demand reduction."*
>
> *"Statewide programs must be uniform, with consistent terms and requirements throughout all the utilities' service territories. These consistent terms should include identical application procedures, financial incentives (if applicable), and other program implementation details. If the utilities cannot align their statewide program proposals, the Commission will choose the elements it prefers from those proposed."*[25]

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[24] The historical Decision excerpts were largely pulled from a handout entitled "Past Decision excerpts on "statewide"" prepared by CPUC Energy Division staff that was provided at a workshop held on March 23-24, 2015, concerning statewide and third-party energy efficiency programs. http://docs.cpuc.ca.gov/PublishedDocs/Efile/G000/M149/K822/149822040.PDF

[25] CPUC. Decision 01-11-066. *Interim Opinion Adopting Energy Efficiency Policy Rules* (November 29, 2001), p. 8. http://docs.cpuc.ca.gov/word_pdf/FINAL_DECISION/11469.pdf

In 2003, the CPUC expanded the number of programs to 15 that should be consistent statewide:

- Appliance Recycling
- Single-Family Rebates
- Multi-Family Rebates
- Home Energy Efficiency Surveys
- Energy Star New Homes
- Standard Performance Contracting
- Express Efficiency
- Nonresidential Audits
- Building Operator Certification and Training
- Savings by Design
- Education and Training
- Codes and Standards
- Upstream Residential Lighting
- Emerging Technologies
- Marketing and Outreach

Also in 2003, the CPUC further described the benefits of the statewide approach:

> *"Some energy efficiency programs should be uniform around the state to promote customer understanding and equitable funding across customer classes and geography."* (Decision 03-04-055[26]
>
> *"Statewide energy efficiency programs are those that are offered uniformly by the utilities and are designed to promote customer participation on a broader basis. In addition, statewide marketing and outreach programs are designed to coordinate government-sponsored activities with private sector stakeholders including manufacturers and retail sellers of energy efficiency products and services, business and residential building managers, commercial and industrial program managers, and non-governmental organizations… Local programs are those that are narrower in scope, tailored to specific geographic areas or hard to reach customer groups."* (Decision 03-12-060, December 3, 2003)[27]

In 2009, the CPUC identified that the IOUs' portfolio had too many programs (200 at the time) and were not well coordinated, and directed them to reduce the number to:

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[26] CPUC. Decision 03-04-055. *Interim Opinion on 2003 Statewide/Utility Local Energy Efficiency Programs and Other Studies* (April 18, 2003), p. 9. http://docs.cpuc.ca.gov/word_pdf/FINAL_DECISION/25469.pdf
[27] http://docs.cpuc.ca.gov/published/Final_decision/39643-02.htm

> "…no more than 10 core statewide programs and perhaps another 20-30 for the entire suite of utility portfolios (not including third party programs)."[28]

The IOUs subsequently sought modifications, and the CPUC allowed some small variations in statewide programs:

> "…as long as these variations are generally consistent with the intent and design of the statewide programs."[29]

In 2012, the CPUC provided some further refinement of the statewide and local definitions.

3.2 Recent CPUC Decisions and Stakeholder Comments (2013 – 2018)

In the last several years, the topic of statewide administration became more active as it was combined with third-party program administration as issues being jointly addressed by the CPUC in the current energy efficiency program portfolio proceeding. The CPUC solicited stakeholder feedback on both issues, developed a formal definition of statewide administration and ordered this study to better optimize the portfolio. The Decision also indicated the CPUC expected cost savings associated with statewide program administration:

> *"downward adjustments based on the PAs improving their forecasts of in-house staffing needs with each solicitation, and realizing administrative efficiencies through the statewide administration framework."*[30]

This section provides an update on these more recent proceedings, along with responses from the IOUs and stakeholders based on the informational interviews Evergreen conducted in February 2019 for this study.

A 2013 CPUC Rulemaking (Rulemaking 13-11-005) set in place the current IOU program structure, with a "rolling portfolio" based on a 10-year time horizon and a set percentage of the budget set aside for third-party implementation. Throughout this rulemaking

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[28] CPUC. Decision 09-09-047. *Decision Approving 2010 to 2012 Energy Efficiency Portfolios and Budgets.* (October 1, 2009), p. 105. http://docs.cpuc.ca.gov/PUBLISHED/GRAPHICS/107829.PDF
Per Decision 16-08-019 (page 111), "For energy efficiency program purposes, the definition of a third-party program shall be as follows: To be designated as "third party," the program must be proposed, designed, implemented, and delivered by non-utility personnel under contract to a utility program administrator. Statewide programs may also be considered to be "third party" to the extent they meet this definition. Under this definition, program administrators are not prohibited from advising third parties on program design elements once third party bids have been solicited."

[29] CPUC. Decision 11-04-005. *Second Decision Addressing Petition for Modification of Decision 09-09-047.* (April 20, 2011), p. 19. http://docs.cpuc.ca.gov/word_pdf/FINAL_DECISION/133880.pdf

[30] CPUC. Decision 18-05-041. *Decision Addressing Energy Efficiency Business Plans.* (June 5, 2018), p. 130.

process, the statewide program administration issue was evolving, with substantial input from the IOUs and stakeholders such as TURN, the Office of Ratepayer Advocates (ORA, now known as the Public Advocates Office), and regional energy networks (RENs). The CPUC also sought input from out-of-state administrators that were using a statewide approach.

The CPUC conducted a workshop in 2015[31] to discuss a series of questions it posed regarding statewide and third-party energy efficiency programs. Presenters included CPUC Energy Division staff, the IOUs (jointly), a BayREN implementer (StopWaste.org), the Public Advocates Office (PAO, known as the Office of Ratepayer Advocates or ORA at that time), TURN, and the Lawrence Berkeley National Laboratory (LBNL). Parties also submitted formal comments and reply comments regarding the issue, which were included in the Ruling of Assigned Commissioner and Administrative Law Judge Seeking Input on Approaches for Statewide and Third-Party Programs (May 24, 2016).

The CPUC summarized stakeholder comments on the issues in Decision 16-08-019, which also provided a formal definition of statewide administration and required the IOUs to outsource at least 60 percent of their portfolios to third parties by the end of 2020. The same Decision also encouraged the IOUs to conduct a bottom-up review of the program portfolio. Decision 16-08-019 also addressed the issue of allocation of savings credits for statewide programs, clarifying that credit for energy savings generated will be based on contributed funding only, and not in relation to the geographic region in which the energy efficiency measure was sold or installed.

CPUC Decision 18-05-041 approved the IOUs' business plans and required the IOUs to conduct the portfolio review, and set a more detailed timeline for third-party implementation.[32] The Decision also specified that the period 2018-2022 would be a transition period for the IOUs to set up the statewide administration framework.

In the following sub-sections, we describe comments from the IOUs and key stakeholders on the statewide administration issue based on the following sources:

- Administrative Law Judge's Ruling re comments on Phase II Workshop 3 (Statewide and Third Party Energy Efficiency Programs) (April 1, 2015)
- Ruling of Assigned Commissioner and Administrative Law Judge Seeking Input on Approaches for Statewide and Third-Party Energy Efficiency Programs (May 24, 2016)

[31] Workshop slides found at the end of Administrative Law Judge's Ruling re comments on Phase II Workshop 3 (Statewide and Third Party Energy Efficiency Programs): http://docs.cpuc.ca.gov/PublishedDocs/Efile/G000/M149/K822/149822040.PDF

[32] At least 25 percent by December 31, 2018, at least 40 percent by December 31, 2020, and at least 60 percent by December 31, 2022.

- Decision 16-08-019 Providing Guidance for Initial Energy Efficiency Rolling Portfolio Business Plan Filings (August 25, 2016)
- Decision 18-05-041 Addressing Energy Efficiency Business Plans (June 5, 2018)
- Informational interviews Evergreen conducted with IOU senior managers and stakeholders in February 2017.

Comments are organized by the type of organization.

3.2.1 IOUs

The IOUs jointly presented at the 2015 Phase II Workshop, and highlighted the benefits of a hybrid approach with a statewide program structure with localized approaches to engage customers and meet energy savings goals. They coined such a hybrid approach as "Localized Approaches within a Statewide Framework." They also offered examples of how other industries have a similar model (such as the auto, retail, and food industries). They identified some local targeted efforts that they deemed successful (including a direct install program in San Diego, a distribution reliability initiative in four locations in PG&E's service territory, and a PG&E small business outreach and education campaign that tied together seasonal time-of-use rate changes and energy efficiency rebates).

A complementary 2015 Phase II Workshop presentation by Valerie Richardson of DNV-GL (formerly the EM&V manager at PG&E) echoed the themes from the IOU presentations, identifying benefits of statewide and localized approaches, depending on the context. The presentation slides identified that:

> "The more homogenous the target across the state, the higher need for standardization. And conversely, the less homogenous, the higher need for flexibility."[33]

A slide also highlighted the benefits of standardization across IOUs that would lead to consistent program tracking data, one set of workpapers, a streamlined data request, an integrated program implementation plan, a single website, and an umbrella marketing strategy.

IOU input based on interviews with senior program staff Evergreen conducted as part of this study in January 2019 was similar to the workshop presentations, where upstream and most midstream approaches were identified as offering benefits from a statewide approach, whereas some downstream programs would have drawbacks, where local customer needs may not be met by a lead IOU contracting with one or more implementers. IOU staff indicated they were uncertain about how extensive those drawbacks may be, since they were early in the planning stages for 2019 programs, coordinating across IOUs for the full statewide administration.

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[33] http://docs.cpuc.ca.gov/PublishedDocs/Efile/G000/M149/K822/149822040.PDF, p. 62.

They anticipated much of the specifics of statewide administration would be worked out by then. In the past, many of the programs have had statewide elements, but not as uniform as the CPUC's latest definition.

They also indicated they were in the process of revising their portfolios, as they acknowledged there are too many programs, and that they are focused on an overlapping combination of customer segments, technologies, and delivery channels. IOU staff were concerned that since the CPUC identified a specific list of programs that are required to be statewide, it might limit the flexibility to revamp the portfolio (such as by eliminating a program that is no longer needed, or consolidating across programs). At the very least it introduced uncertainty around their flexibility to make substantive changes that would impact programs on the required list.

3.2.2 Statewide Organizations

This section summarizes comments from organizations that have a statewide focus either on ratepayers and cost-effectiveness (TURN and PAO, formerly ORA), or on ensuring robust energy efficiency programs (NRDC).

TURN presented at the 2015 Phase II Workshop with a focus on improving the economics and effectiveness of the portfolio in order to meet the huge energy savings potential identified by the latest California Potential Study (conducted by Navigant in 2015). The presentation identified the complexity associated with the IOUs' portfolio:

> "Statewide programs are an amalgamation of customer sector, intervention strategies, end use programs, and implementers."[34]

TURN identified that many statewide programs at the time had regional and local elements and approaches, such as local code enforcement and compliance for the C&S program, site specific implementation for Custom Rebates, and different direct install approaches for Deemed Rebates. TURN supported optimizing the portfolio through consolidation of programs and the greater use of statewide approaches.

In Talking Points for the 2015 Phase II Workshop that were included as an attachment to the ALJ's Ruling.[35] ORA identified the benefits of a statewide approach in making it easier for customers and implementers, offering "fewer layers, a bit more clarity."

ORA also suggested that the IOUs bid out programs by sector or sub-sector, listing six sectors:

- Residential
- Commercial

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[34] http://docs.cpuc.ca.gov/PublishedDocs/Efile/G000/M149/K822/149822040.PDF, p. 48.
[35] ibid, p. 135.

- Public
- Agricultural
- Industrial
- Crosscutting

During interviews with stakeholders (conducted by Evergreen in February 2019), TURN, PAO, and NRDC all emphasized the potential streamlining and cost savings associated with statewide approaches. The TURN respondent indicated their organization's focus can be summed up by "the most green for the least green."

Though TURN did emphasize that there are benefits of localized approaches to certain customer groups from an equity perspective, PAO identified opportunities for downstream programs that target any type of customer whose buildings span utility service areas (for example, hotel, grocery store, and restaurant chains) to realize economics of scale and cost reductions through statewide administration. PAO encouraged Evergreen to conduct the review irrespective of current program designs—and to consider optimal ways to organize programs to realize these savings (for example, a statewide program that treats chain commercial customers and local offerings that address small businesses.)

3.2.3 Regional Organizations

This section summarizes comments from organizations that have a regional focus. These organizations include the five organizations (besides the IOUs) that are currently authorized by the CPUC to administer energy efficiency programs (the non-IOU PAs):

- The three regional energy networks: BayREN (San Francisco Bay Area), SoCalREN (Southern California), and Tri-County REN (Ventura County);
- A Community Choice Aggregator (CCA), Marin Clean Energy (MCE); and
- A local government organization, the Local Government Sustainable Energy Commission (LGSEC).

In addition, Evergreen interviewed a sixth organization, the San Joaquin Valley Clean Energy Organization (SJVCEO), that has been active in the rolling portfolio proceeding representing rural local governments.

An implementer for BayREN (StopWaste.org) presented at the 2015 Phase II Workshop, highlighting program accomplishments in PG&E's multi-family sector through December 2014. The presentation identified the diversity of the multi-family sector in the region and the low penetration of energy efficiency measures in this sector.

LGSEC submitted formal comments that were documented in CPUC Decision 16-08-019 (August 25, 2016).[36] The LGSEC asked that the CPUC designate a statewide implementer for all of the local government partnerships (LGPs) to ensure consistency in treatment across service territories. The CPUC was interested in LGSEC's proposal, and suggested that it be discussed among the program administrators to see if consensus could be reached. The CPUC asked that the proposal be presented in a business plan proposal for their consideration if there was consensus to do so.

During interviews that Evergreen conducted with Los Angeles County on behalf of SoCalREN, ABAG on behalf of BayREN, Ventura County on behalf of Tri-County REN and SJVCEO,[37] the organizations emphasized the size and diversity of the state of California, and how regional implementers such as RENs are better able to meet regional needs and serve local public agencies.

In particular, they identified hard-to-reach customer segments as particularly well suited for a regional or local approach, as those segments would not be served well under a statewide (or even utility-wide) approach. Examples included non-English speaking managers of multi-family properties that are not addressed by the statewide multi-family program that has more of a focus on the large management companies, the lack of IOU energy centers and training services in more remote regions of the state, and barriers to the distribution and stocking of energy efficient equipment in those remote regions.

Ventura County commented:

> "On the residential side, there are many climate zones and the regions are so different. Inland CA is so different from coastal. Messaging for most programs has to be different. Commercial programs too can be regional because they are so different throughout the state. We have lots of farming and agriculture here, which is much different than other areas of the state."
>
> "The whole Central Valley is huge; it takes a big time investment to get across the county. No easy travel in our state."

SoCalREN commented how they target hard-to-reach multi-family properties:

> "In our MF program, we've found that most MF programs target large corporate property owners and we're finding in LA, with lots of MF, it's a lot of small business owners, with properties less than 50 units. Properties with lots of non primary English speakers, so that's another outreach issue we're dealing with regionally. Our access point, for instance, while the utilities rely a lot on regional ads, like large marketing campaigns, we have to utilize smaller marketing touch points, possibly even using public agencies to get info out and educate constituents, that's our distinguishing factor."

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[36] https://docs.wixstatic.com/ugd/0c9650_9afbd868952646bba5ea5b687499fd4b.pdf
[37] LGSEC and Marin Clean Energy did not respond to multiple interview request attempts.

SJVCEO described issues with remote areas having access to equipment being discounted by IOU upstream and midstream programs:

> "If you get into Mono, Humboldt, or Trinity [counties] there is not even any access to the [discounted energy efficient] equipment. It doesn't matter if the incentive is paid at the upstream or midstream level, it's not going to make it [to these areas]. Redwood Coast Energy Authority is a good example. They are their own installers under EE programs [in that area], but even their contractors can't get the equipment on the trucks. They refer to it as a "redwood curtain". Manufacturers aren't delivering to these remote regions so then the customer won't receive it. "

The three RENs discussed their advantages at providing training and support to local governments to increase energy efficiency projects in the municipal sector. The RENs have existing relationships with local governments that can be leveraged, which the IOUs lack. The RENs also reported utilizing those relationships to piggyback on parallel local government efforts (such as marketing of recycling and waste disposal programs) and more efficiently promote energy efficiency services to local customers and businesses.

ABAG mentioned how they are able to more easily engage with the region's local governments:

> "We are filling gaps in a SW offering. We can meet with local officials. Local Governments can do things IOUs can't do."

SJVCEO mentioned the difficulty providing training outside the IOU energy center locations:

> "While IOUs have great training centers, they are often in bigger regions – minus one SCE location [AgTAC Energy Center in Tulare]. The programs that are delivered out of EEC Tulare are limited to what may be offered in Irwindale [the CTAC Energy Center] or what's offered in San Francisco [PG&E's Pacific Energy Center]. The actual delivery on the ground – in rural populations you can't reach them and be cost effective."

> "The Rural Working Group has focused on helping to implement the work we do not just as implementers but as a regional energy office to make sure that resources are delivered to rural Californians. These folks pay into programs and they should get these resources. Our goal is that those who are most removed are still participating in programs."

3.2.4 Third-Party Implementer Organization (CEDMC)

The California Energy + Demand Management Council, formerly known as the California Energy Efficiency Industrial Council or CEEIC, is a trade organization for energy efficiency and demand response program implementers (often referred to as third-party implementers) and evaluators. CEDMC (as CEEIC) submitted formal comments in response to the CPUC's request, which were summarized in Decision 16-08-019.[38] Evergreen also interviewed CEDMC's Senior Policy Director in February 2019.

Their formal comments included several concerns and recommendations:

- There should be allowed more than one implementer per statewide program (the CPUC subsequently authorized this in Decision 16-08-019).[39]
- Decisions related to the statewide approach should not be based on broad market sectors or measure classes, but instead on intervention strategy types and specific programs that address specific market subsectors:

  > "Moving an entire market sector (for example, commercial) or measure class (for example, lighting) to a single PA statewide approach is not consistent with this Ruling's statewide objectives. We recommend experimenting first with only the most obvious program candidates for a single PA statewide approach to test the hypothesis that there will be net benefits from doing so."

- A recommendation that the CPUC experiment with the most obvious candidates (such as those programs whose market actors have a statewide or national intervention strategy) and test the hypothesis that there are net benefits from the approach—including upstream/midstream programs; Code and Standards Advocacy; Compliance Improvement and Planning and Coordination subprograms; Marketing, Education, and Outreach (which is already being administered statewide); and portions of the Financing program (such as those that involve CAEFTA and PACE).
- Programs that focus on customer energy use data analytics should not be included since it would be a challenge to coordinate the management and access of customer data across the IOU service territories.
- Many of the current downstream programs would not benefit from a statewide approach, especially under their current design with deemed, calculated, or metered incentives under separate program umbrellas.

During the interview that Evergreen conducted with CEDMC in February 2017, CEDMC said its members have expressed concern about the timing and scale of the statewide administration shift because it might disrupt program delivery during the transition that is underway to greater third-party implementation. These echoed similar concerns mentioned by the Senior IOU program managers. They did agree that upstream and some midstream programs might be beneficial statewide, but beyond that, they encouraged keeping program design options open and not specifying approaches to encourage innovation. They also indicated concern around trying to use a statewide approach where targeted program offerings and marketing would be more effective.

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[38] https://docs.wixstatic.com/ugd/0c9650_9afbd868952646bba5ea5b687499fd4b.pdf
[39] Ibid.

3.2.5 Lawrence Berkeley National Laboratory (LBNL)

Charles Goldman from LBNL presented at the 2015 CPUC workshop on "Energy Efficiency Program Administration: Options and Issues." The presentation identified the many administrative options in place across the country, including utility, hybrid, and third-party administration based on analysis LBNL had conducted.[40] The presentation more broadly addressed both the statewide and third-party administration issues, and concluded that:

> "There is Not One Answer: Any administrative model can successfully deliver cost-effective energy efficiency programs, provided the appropriate policies, oversight mechanisms, personnel and administrative structures are in place."[41]

A 2003 paper co-authored by Charles Goldman that presents earlier results from the same study is included in the literature review that is discussed in the next section.

[40] Funded by the Department of Energy.

[41] http://docs.cpuc.ca.gov/PublishedDocs/Efile/G000/M149/K822/149822040.PDF, p. 129.

4 Literature Review

Evergreen conducted a literature review and identified four relevant sources:

1. *The Cost of Saving Electricity Through Energy Efficiency Programs Funded by Utility Customers: 2009–2015*[42] provides program administrator costs for most states, as well as total program savings as a fraction of total electric sales (for normalizing program efforts).
2. *The 2018 State Energy Efficiency Scorecard* (ACEEE October 2018) ranks states on their energy efficiency policy and program efforts, not only assessing performance but also documenting best practices and recognizing leadership.
3. *ACEEE's State Policy Database* (ACEEE 2018) includes comprehensive information on energy efficiency policies currently implemented at the state and local levels.
4. *Who Should Administer Energy-Efficiency Programs?*[43] is a review of energy efficiency program administration across the country, describing the administrative functions and various options for accomplishing them and outlining the criteria for choosing among the options.

Evergreen used information from the first three sources to examine whether statewide programs have lower administrative costs, which is one of the benefits commonly cited when discussing statewide program administration. The fourth source did not contain data that could be used for analyzing program costs and savings, but provided relevant context that is summarized at the end of this section.

4.1 Key Findings

The available data suggest that program administrator costs are slightly higher for states that offer statewide programs, but that those states have more aggressive and impactful programs. The data do not show that administrative costs are lower for states that have statewide programs. It is difficult to draw definitive conclusions about program administrative costs for statewide programs, however, due to the correlation between program comprehensiveness and longevity (both of which tend to increase program administration costs) and whether states offer statewide programs. While in theory there may be cost savings associated with administering programs statewide, the differences in the program portfolios across these states make it difficult to draw any firm conclusions.

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[42] Hoffman, I., C. A. Goldman, S. Murphy, N. Mims, G. Leventis, and L. Schwartz. 2018. (Berkeley, CA: Lawrence Berkeley National Laboratory).
[43] Blumstein, C., Goldman, C., Barbose, G. 2003. *Who Should Administer Energy-Efficiency Programs?* (Berkeley, CA: University of California Energy Institute)

4.2 Data Limitations

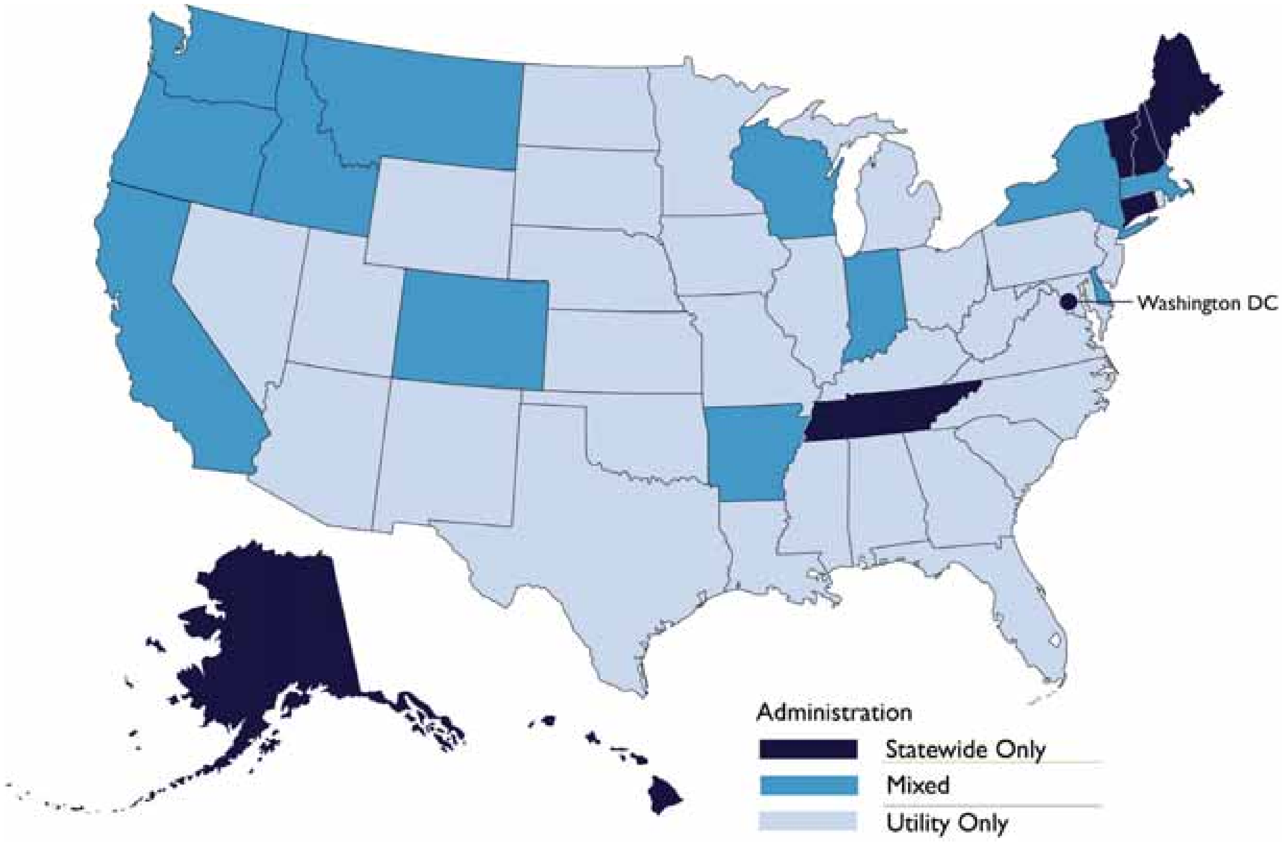
This analysis makes use of existing secondary data on program costs, effectiveness, relative investment size, and type of administration across states. There are not sufficient data points to control for other factors that would impact program administrative costs, such as price of electricity, climate and geography, or variations of statewide administration. Ideally, we would limit the analysis only to states that are very similar in those respects to California; however, that is not possible given the uniqueness of California and the variety of these factors across states. Instead, Evergreen (and LBNL and ACEEE in the primary data) opted to include all states (where data were available) to ensure the largest and most robust sample that reflects many different combinations of variables.

4.3 Program Administration Categorization

Evergreen developed program administration categories for each state and the District of Columbia based on ACEEE's 2018 state database that describes the structure of state energy efficiency program administration. A small number of states have exclusively statewide energy efficiency programs, while many others either have a mix of statewide and utility-specific offerings or just utility-administered programs. The three program administrative categories we created (shown in Figure 1) are as follows:

- **Statewide only** – All energy efficiency programs are consistent statewide.
- **Mixed** (statewide and utility-administered) – Some energy efficiency programs are consistent statewide, but utilities also offer their own programs to their customers. This category includes Oregon, where the Northwest Energy Efficiency Alliance (NEEA) and Energy Trust of Oregon operate programs, and New York, where NYSERDA administers a statewide program in conjunction with limited utility-specific and Power Authority offerings.
- **Utility only** – No energy efficiency programs are consistent across the state; utilities offer their own programs.

Figure 1: States by Energy Efficiency Program Administration Type



Source: Evergreen assignment based on information from the 2018 ACEEE state database.

4.4 Program Administrative Cost and Effectiveness Data

Evergreen obtained LBNL Cost of Savings data on program administrative costs by state from its 2018 report. The program administrator cost of saving electricity accounts for expenditures in planning, administering, designing, and implementing programs and providing incentives to market allies and end users to take actions that result in energy savings, as well as the costs of verifying those savings. The study calculates program administrator cost of saving (COS) electricity as:

(Capital recovery factor * Program Administrator Costs) /
Gross Annual Electricity Savings (kWh)

The study uses gross savings claims since net savings methods vary greatly by program administrator, as do policies concerning *ex post* savings.

Next, Evergreen obtained 2018 ACEEE energy efficiency Scorecard rankings by state in order to have a measure of program effectiveness to provide context for the examination of program administration costs. *The 2018 State Energy Efficiency Scorecard*, now in its 12th edition, ranks states on their policy and program efforts, not only assessing performance but also documenting best practices and recognizing leadership. The highest ranked state has a ranking of 1, and the lowest 51.[44] ACEEE ranks programs highly that have a broad energy efficiency focus:

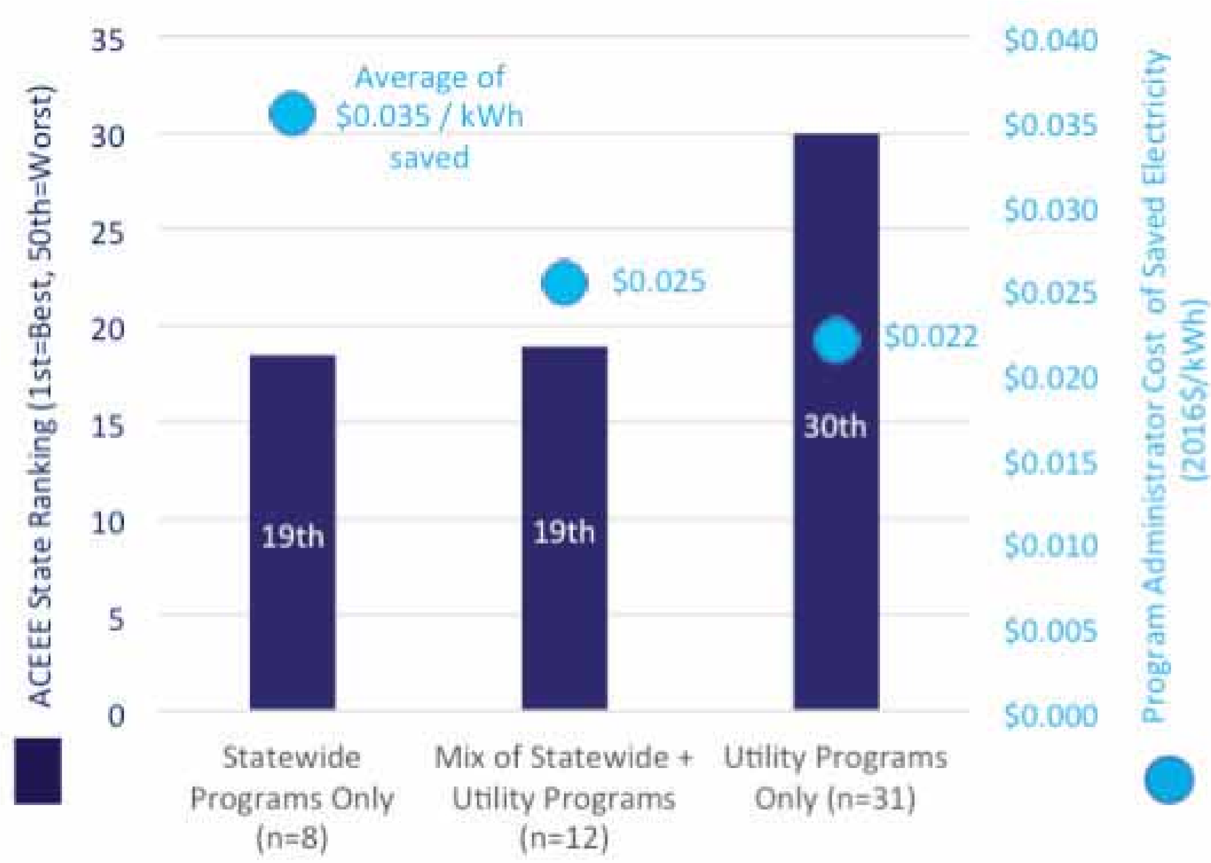
> "…we chose metrics flexible enough to capture the range of policy and program options that states use to encourage energy efficiency. The policies and programs evaluated in the *State Scorecard* aim to reduce end-use energy consumption, set long-term commitments for energy efficiency, and establish mandatory performance codes and standards. They also help to accelerate the adoption of the most energy-efficient technologies; reduce market, regulatory, and information barriers to energy efficiency; and provide funding for efficiency programs." (*The 2018 State Energy Efficiency Scorecard)*

4.5 Data Analysis Results

Figure 2 shows the average program administrative cost of savings (circles, right axis) and average ACEEE Scorecard ranking (bars, left axis) for each category of administration type. States with exclusively statewide programs have the highest average program administrator cost of savings, followed by states that have a mix; states with utility-only administered programs have the lowest. The ACEEE rankings show the opposite trend—states with statewide administration have better rankings (1 is the best ranking).

[44] The list includes the District of Columbia.

Figure 2: States with Statewide Programs Have Higher Program Administrator Cost of Saved Energy and Better ACEEE Rankings



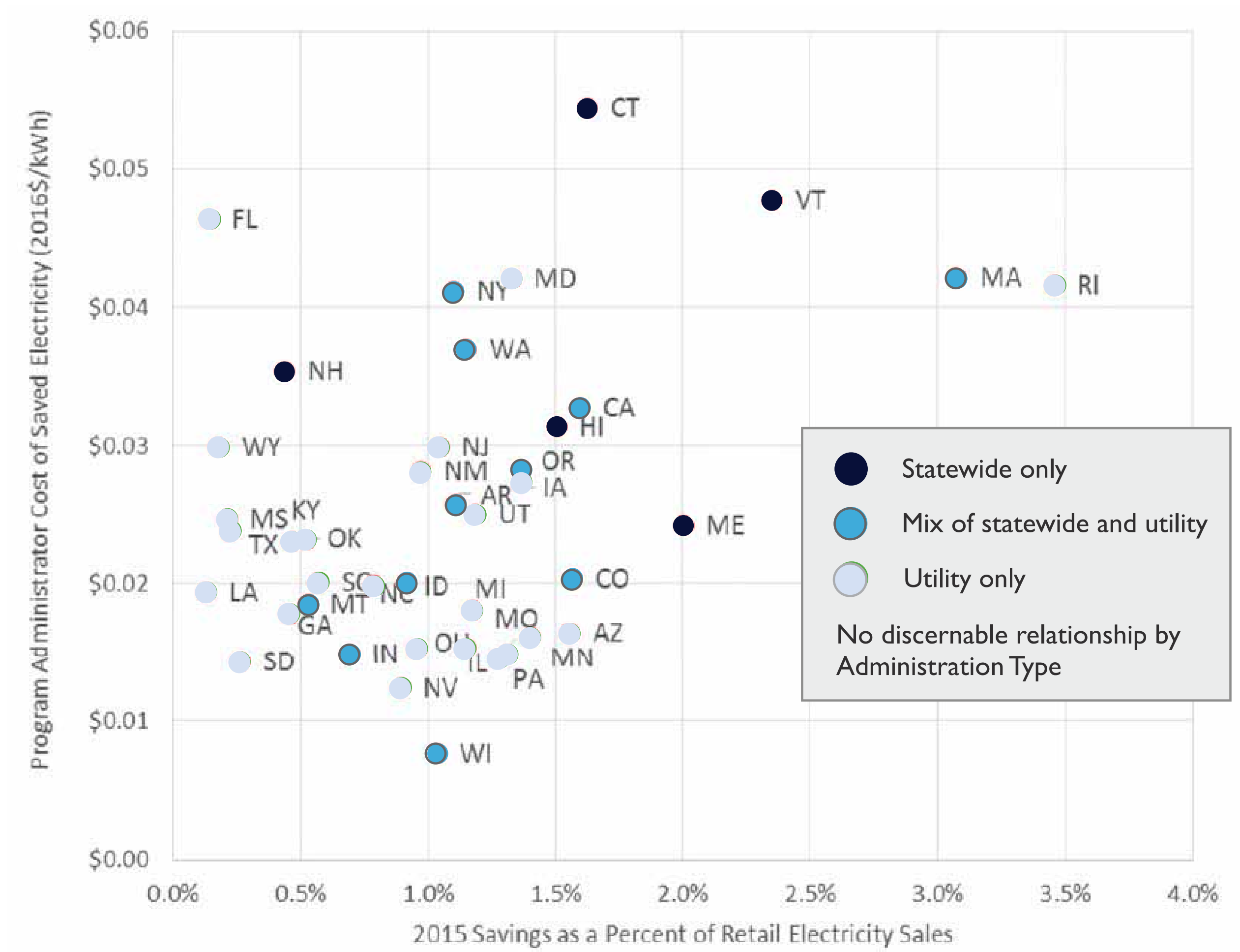
Sources: 2018 ACEEE State Energy Efficiency Scorecard; 2018 LBNL Cost of Savings Report (covering years 2009 – 2015).

The number of states included in the analysis of COS is smaller than the energy efficiency ranking because the COS data are not available for every state. The number of states included in the COS analysis are Statewide n=5, Mix n=11, Utility Only n=25.

The LBNL study recognized that states that have been administering energy efficiency programs for many years have already reached much of the low hanging fruit, and their cost effectiveness is typically lower compared to newer programs. Also, states that have larger portfolios of programs typically have more comprehensive offerings in terms of measures and customers (that often are addressing additional goals such as achieving all cost-effective savings or offering non-resource programs) that would be less cost effective than a smaller portfolio of programs that is only focused on cost effectiveness. These factors would make it difficult to make a fair direct comparison of program costs.

In an attempt to factor in the relative impact of program administrator efforts, the LBNL study examined the relationship between relative size of program investment (measured by electric savings as a percentage of retail electricity sales) and program administration costs (Figure 3). The figure shows the positive relationship that was theorized between relative program size and cost per kWh saved. Evergreen added shading to distinguish each state's administrative category, with dark blue for statewide only, light blue for a mix of statewide and utility, and green for utility only.

Figure 3: Positive Relationship Between Program Administrator Cost of Saved Energy and Relative Program Size



Source: LBNL Cost of Savings Study, Figure 4-5, page 21, with the addition of shading by administrative category.

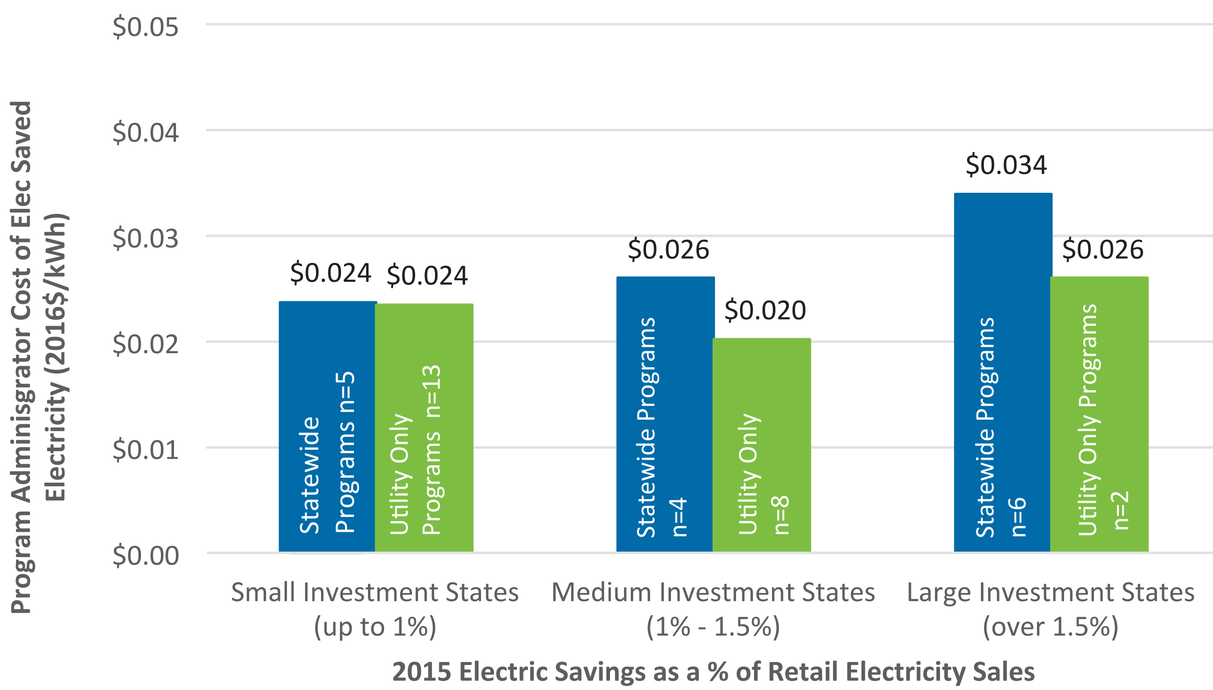
As shown in Figure 3, even with the shading, it is difficult to discern a clear trend by administrative category in the scatter plot, so Evergreen produced two additional charts using the combined data sources.

Evergreen placed states in three investment-size categories in an attempt to normalize the analysis of program administrator cost and state ranking by size of program investment: "small investment states" (electric savings of up to up to 1% of retail sales in the state), "medium investment states" (1% - 1.5%) and "large investment states" (over 1.5%). As expected, states with statewide programs are more likely than utility-only states to be "large investment" states (40% versus 9%), and vice versa: states with utility-only programs are more likely to be "small investment" states (57% versus 33%).

By conducting the comparison separately for similarly sized energy efficiency program investments, any differences in costs or effectiveness would not be attributable to relative size alone. (For example, it could be that program administrator costs appear to be higher for statewide programs because those states tend to invest more in energy efficiency programs, which Figure 3 shows is costlier.)

Figure 4 displays the average program administrative COS (y axis) by relative size of program investment (x axis). (Note that "statewide" and "mix" categories were combined to ensure enough data points in each category.) When comparing statewide versus utility-only states for each investment size category, there is no observable cost reductions associated with statewide administration. In fact, the same general trend of slightly higher costs is observed.

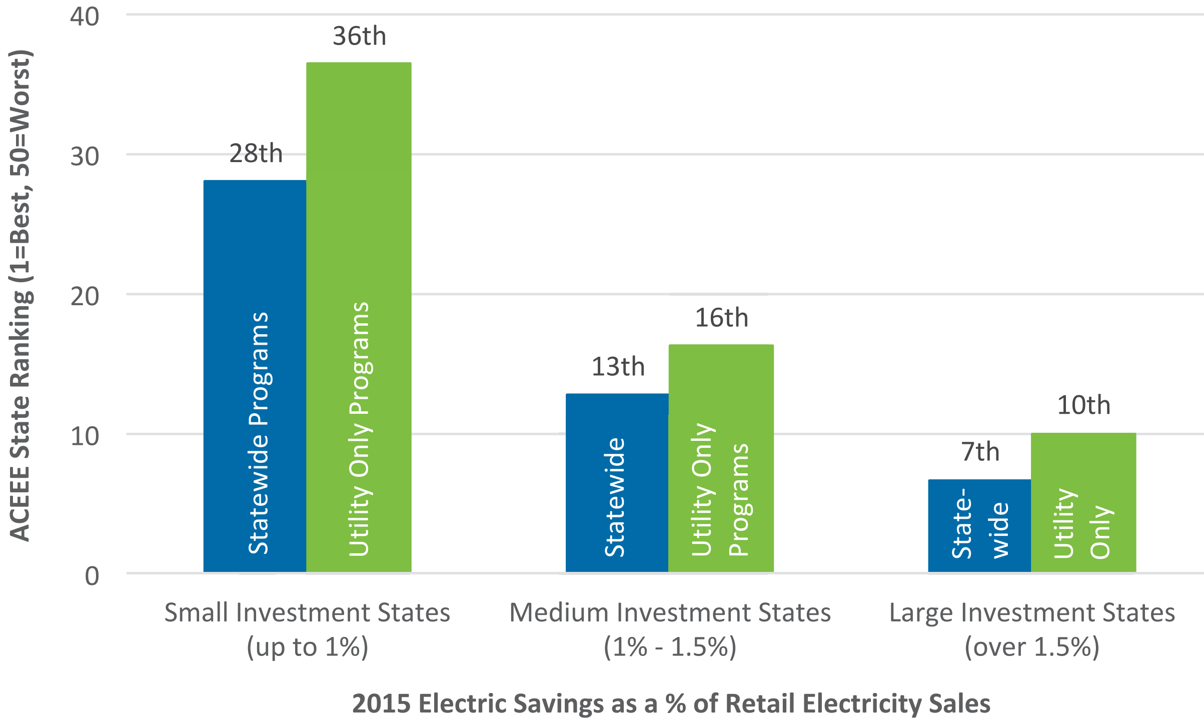
Figure 4: Statewide Programs Cost More Than Utility-Only Programs for Medium and Large Investment States



Source: 2018 LBNL Cost of Savings Report (covering years 2009 – 2015).

Figure 5 shows the average ACEEE ranking (y axis) by relative size of program investment (x axis), in an attempt to normalize the state rankings as was done for program administration costs. (For example, statewide programs may have higher rankings because they are more likely to be larger and more robust.) As observable in the figure, states that have statewide programs are more highly ranked for all sizes of program investment. These data may explain the slightly higher program administrative costs observed in the previous figure, that statewide programs have more robust offerings that would theoretically be costlier on a per kWh basis.

Figure 5: Statewide Programs Have Better ACEEE Rankings Than Utility-Only Programs, For All Sizes of Program Investments



Source: 2018 LBNL Cost of Savings Report (covering years 2009 – 2015) and ACEEE state rankings. Sample sizes equivalent to those shown in Figure 4.

4.6 Review of Administration Types

The fourth source that was examined, the 2003 Energy Institute paper, was completed during the aftermath of restructuring of the utility industry, when the arrangement of energy efficiency program administration was in question and states were adopting system benefits charges. As new mechanisms for funding programs and administration emerged, the paper focused on issues related to program administration—describing administrative functions, options for accomplishing them, and criteria for choosing among the options. The paper concluded that that no single administrative type has emerged that is superior to all others:

> "No single administrative structure for energy efficiency programs has yet emerged in the US that is clearly superior to all of the other alternatives."[45]

For regions that want to tackle both resource acquisition and market transformation, a combination of statewide and utility programs may be appropriate. These conclusions are

[45] Blumstein, C., Goldman, C., Barbose, G. 2003. *Who Should Administer Energy-Efficiency Programs?* (Berkeley, CA: University of California Energy Institute)

similar to one of the paper author's presentations at the 2015 CPUC Workshop, described in Section 3.2.5, which included more current results.

4.7 Summary

About half of states offer statewide programs, either exclusively or in conjunction with other utility offerings. The other half do not offer any statewide programs. Evergreen found that many states that have statewide offerings (either exclusively or in conjunction with utility-specific offerings) have higher administrative costs than states that offer only utility-specific offerings. This is likely because they have more comprehensive programs and have been in operation much longer. More comprehensive programs cost more because they do not just focus on the most cost-effective customer groups and measures. They may also have mandates to address hard-to-reach customer segments and/or provide comprehensive measure offerings. Likewise, mature programs typically have higher costs because they have exhausted the low hanging fruit in the early years of administration.

States with statewide offerings are also more highly ranked by ACEEE, indicating superior energy efficiency policies and programs.

The four sources examined in this review each provide evidence that administration type is not the most important driver of cost effectiveness and overall impact. Any potential cost savings associated with statewide administration are not observable in this analysis as the relative size, maturity, and comprehensiveness of programs drives administrative costs.

5 Program Assessment

5.1 California Program Assessment

5.1.1 IOU Program Characterization

The current portfolio is a blend of programs that are focused on a type of energy efficiency measure or service, a type of delivery channel, or a customer segment, including combinations of these characteristics. Table 4 provides a snapshot of the portfolio based on IOU data from December 2018.

Many of these programs have the potential for overlap. For example, a direct install or downstream rebate program may offer an incentive for a measure that is also covered by an upstream or midstream program and/or offered by a local government partnership. The IOUs are currently in the process of awarding third-party implementation contracts for 2020 programs, and once that process is complete, there will likely be even more potential for overlap.

The IOUs are early in a process of revamping their portfolios, of which the third-party solicitation process is a key component. This process is intended to streamline their offerings and also possibly purge programs that are redundant or no longer cost effective (such as due to new codes coming into effect). There have been some efforts to coordinate across the IOUs on the solicitation processes, such as work paper development and technical requirements associated with the solicitations. However, at this time, it is unclear if efforts to modify the programs in each IOU's portfolio are being coordinated since the IOUs are mostly focused on the third-party solicitation process at this time and then will turn to portfolio optimization.

Table 4: 2019 IOU Program Portfolio Snapshot

Program Category[1]	Number of Programs[2]	Total Budget[3]	Subprogram[1]	Delivery Mechanism	Measures / Services	Customer Segment	Potential for Overlap
Audits and Training	50	$98,998,313	Energy Advisor (Audits)	Downstream	Audit	Res, Com, Ag, Ind	No
			Strategic Energy Management	Downstream	SEM	Industrial	No
			Career Connections (K-12)	Downstream	Workforce education and training	K-12 students/teachers	No
			Integrated Energy Education and Training (formally Centergies)	Downstream and Midstream	Workforce education and training	End use customers and market actors	No, complementary
			Career and Workforce Readiness	Downstream and Midstream	Workforce education and training	Workforce development organizations, disadvantaged workers and market actors	No
Codes and Standards	24	$23,822,112	Advocacy	Upstream	Codes and Standards	State agencies, market actor, code development bodies	No
			Code Compliance	Midstream	Training and outreach	Building inspectors, trade allies	No
			Reach Codes	Midstream	Training and outreach	Local governments,	Yes

Program Category[1]	Number of Programs[2]	Total Budget[3]	Subprogram[1]	Delivery Mechanism	Measures / Services	Customer Segment	Potential for Overlap
						building departments	
Downstream	106	$338,723,226	Direct Install	Downstream	Lighting, refrigeration, HVAC, etc.	Res, Com, Ag, Ind, Public	Yes
			Downstream Rebates	Downstream	Lighting, refrigeration, HVAC, etc.	Com, Ag, Ind, Public	Yes
Emerging Technologies	12	$13,867,850	Emerging Technologies	N/A	Measure development support	Technology developers	No
Finance	17	$7,468,692	Finance – New	Downstream	Financing	Res, Com, Public sector	No, complementary
			Finance – Existing		Financing	Res, Com, Public sector	
Government Partnerships	91	$99,622,339	Institutional Partnerships	Downstream	Custom offerings	Institutions	Yes
			Local Government Partnerships	Downstream	Direct install / downstream rebates, education and training, reach codes, Strategic Plan Support	Local governments, small business, residential	Yes
Midstream	18	$73,887,814	Plug Load and Appliance	Midstream	PL&A rebates	Res	Yes

Program Category[1]	Number of Programs[2]	Total Budget[3]	Subprogram[1]	Delivery Mechanism	Measures / Services	Customer Segment	Potential for Overlap
			HVAC, Foodservice, Commercial Water Heating	Midstream	HVAC rebates	All	Yes
			Residential HVAC QI/QM	Midstream	Education, technical support and rebates for quality installation	Residential, HVAC contractors	No, complementary
New Construction	9	$35,765,515	Residential New Construction	Downstream	Technical support and rebates	Res customers and trade allies	No
			Commercial New Construction (Savings by Design)	Downstream	Technical support and rebates	Commercial customers and trade allies	No
Upstream Lighting	3	$52,764,896	Upstream Lighting	Upstream	Lighting rebates	All	Yes
Statewide ME&O	1	$6,840,978	Statewide ME&O	Downstream	Mass market education and outreach	Res, small commercial	No, complementary
Third Party Offerings	TBD	TBD		Downstream	Assume direct install / rebates	All	Yes
Total IOU	**331**	**$751,761,735**					

[1] Evergreen created the categorization variables based on review of the California Energy Data and Reporting System (CEDARS) data, the IOU response to our data request, and IOU program manager interview responses.
[2] Source: Data downloaded from CEDARS on December 17, 2018.
[3] Source: CEDARS data download.

Table 5 describes the IOUs' portfolio in terms of statewide administration, indicating for each subprogram:

- Whether the program is required by the CPUC to be statewide (per Decision 18-05-041[46])
- The current status of statewide administration, specifically:
  - IOU administration – whether there is a lead IOU or if there is a transition being planned to a single IOU, or if the program is and has always been administrated separately by each IOU
  - Implementers – whether the IOUs contract separately for implementers or if a lead IOU is currently issuing Request For Abstracts to contract one or more implementers on behalf of all IOUs
  - Incentive levels/offerings – the extent that the program's main services are consistent (or not) across the IOUs

As shown in the table, many of the programs, even those required by the CPUC to be statewide, are not consistent across the IOUs. Programs differ across IOUs for a variety of reasons. For some cross-cutting programs, there are differences in what local entities are interested in in terms of case studies or reach codes to adopt (for Codes and Standards), or efforts to reduce duplication, such as focusing on different end uses (for the Emerging Technologies Program). Some IOUs will add certain "kickers" or change the incentives slightly to encourage participation. Sometimes, there are IOU differences based on internal IOU priorities and resources, leading to varying levels of effort toward inspections, marketing, and trade ally engagement or the level of risk each IOU may be willing to take on in incentivizing measures for custom rebates.

Downstream and education and training programs typically have differences in measure offerings, incentive levels, and training offerings based on regional factors such as climate zone and customer needs. In some cases, the offerings may be more aligned across IOUs, but differences still exist in terms of the level of influence account reps and installation contractors have on potential participants. Some programs rely more heavily on these groups to drive participation because of their existing relationships with local customers.

The programs that already meet the CPUC's requirements for statewide programs are the Codes and Standards Advocacy program and the new Finance offerings. The IOUs are in the process of making required programs statewide by transitioning to a lead IOU that will contract with one or more implementers and making all program offerings consistent. Some of the programs that are not required to be statewide have made some efforts to be consistent, a fact that we note later in this section.

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[46] See Section 3 for more information about this CPUC Decision, including a link to the full Decision.

One area of uncertainty related to the IOUs' plans to revamp their portfolios is the degree to which they have flexibility regarding programs that are required by the CPUC to be statewide. For example, if one or more IOUs decided they no longer need a Residential New Construction program, but one or more IOUs still wanted to offer such a program, how does the statewide requirement for that program impact those decisions? Likewise, if the IOUs do not coordinate their efforts and a program required to be statewide is now aligned differently across the IOUs (for example, still a separate program for one IOU but combined into a sector-wide program for another), is that outcome in compliance with the CPUC requirements? Section 6 identifies these potential issues and offers recommendations (where supported by the data) as well as suggestions for resolution that attempt to balance the goals of portfolio optimization, flexibility, and compliance with CPUC directives.

Table 5: Status of Statewide Administration for 2019 IOU Program Portfolio

Program Category[1]	Number of Programs[2]	Total Budget[3]	Subprogram[1]	Required to be SW by CPUC	Current Status of Statewide Administration (1=Statewide, 2=Some SW Elements / Transitioning to SW, 3=No SW Elements)		
					IOU Administration	Implementers	Incentive Levels / Offerings
Audits and Training	50	$98,998,313	Energy Advisor (Audits)		3	3	1
			Career Connections (K-12)	X	2	1	2
			Integrated Energy Education and Training (IEET) (formerly Centergies)		3	3	1
			Career and Workforce Readiness (Pilot)	X	2	1	2
Codes and Standards	24	$23,822,112	Advocacy	X	1	1	1
			Code Compliance		3	2	1
			Reach Codes		3	3	2
Downstream	106	$338,723,226	Direct Install		3	3	3
			Downstream Rebates[4]		3	3	3
Emerging Technologies	12	$13,867,850	Emerging Technologies	X	2	2	2
Finance	17	$7,468,692	Finance – New	X	2	1	1
			Finance – Existing		3	3	3

Program Category[1]	Number of Programs[2]	Total Budget[3]	Subprogram[1]	Required to be SW by CPUC	Current Status of Statewide Administration (1=Statewide, 2=Some SW Elements / Transitioning to SW, 3=No SW Elements)		
					IOU Administration	Implementers	Incentive Levels / Offerings
Government Partnerships	91	$99,622,339	Institutional Partnerships	X	2	1	3
			Local Government Partnerships		3	3	2
Midstream	18	$73,887,814	Plug Load and Appliance	X	3	3	3
			HVAC, Foodservice, Commercial Water Heating	X	3	3	3
			Residential HVAC QI/QM	X	3	3	3
New Construction	9	$35,765,515	Residential New Construction	X	2	2	2
			Commercial New Construction (Savings by Design)	X	2	2	2
Upstream Lighting	3	$52,764,896	Upstream Lighting	X	2	2	2
Statewide ME&O	1	$6,840,978	Statewide ME&O	(Has always been SW)	1	1	1
Total IOU	**331**	**$751,761,735**					

[1] Evergreen created the categorization variables based on review of the CEDARS data, the IOU response to our data request, and IOU program manager interview responses.
[2] Source: Data downloaded from CEDARS on December 17, 2018.
[3] Source: CEDARS data download. The budget for each category is approximate and provided to give a sense of how big each category is, and budget is fairly close to energy savings proportion.
[4] The Water/Wastewater Pumping Program is required to be statewide on a pilot basis.

5.1.2 Non-IOU Programs

The non-IOU program administrators (PAs) have planned to administer 31 programs in 2019, as shown in Table 6 below. Their total budget is over $50 million, which is less than 10 percent of the IOU program portfolio. They plan to offer a range of programs, including direct install, rebates, and audits for residential, small commercial, and public sector customers, as well as programs focused on education and training and codes and standards programs. The programs are intended to fill gaps where the IOU programs do not already provide coverage. The non-IOU PA programs have evolved as they have tested strategies and coordinated with the IOUs and the local government partnerships (LGPs) in order to find gaps that are well suited for a regional program approach, utilizing the unique strengths that each PA brings. They typically are responsible for their own EM&V, and all but one has dedicated funding for those efforts. Evergreen conducted interviews with the non-IOU PAs (described in Section 3.2.3) and third-party implementers of their programs (covered in Section 5.1.3) to be sure the study included these programs that overlap with the IOUs' programs.

Table 6: Non-IOU 2019 Program Portfolio Snapshot

Non-IOU PA	Number of Programs	Total Budget[3]	Programs
BayREN	4	$23,336,847	Multi-family, Codes and Standards, Water/Energy Nexus, EM&V
Marin Clean Energy	12	$6,779,704	Multi-family Programs, Small Commercial, Single-family Programs, Industrial, Agricultural, WE&T, EM&V
SoCalREN	8	$20,742,000	Public Agency Revolving Loan Fund, Residential Loan Loss Reserve, Public EE Programs, Multi-family, Residential Community Coordinator, WE&T
Tri-County REN	4	$6,043,428	Codes & Standards, Residential Direct Install, WE&T, EM&V
Local Government Sustainable Energy Coalition	3	$408,006	Small Commercial Direct Install, Energy Advisor, EM&V
Total	**31**	**$57,309,985**	

Source: CEDARS database download on March 14, 2019.

5.1.3 California Interview Results

This section presents results from 67 interviews Evergreen conducted with California IOU program managers, trade allies, and third-party implementers. Evergreen selected a large sample of IOU energy efficiency programs (191) across the program categories that were created for this study, and formed a recruitment pool with the IOU program managers associated with those programs (more detail is provided in Appendix A). Next, Evergreen staff reached out to the program managers and completed 59 interviews covering the same number of programs. During the interviews, staff asked the program managers to identify any trade allies, third-party implementers, or other non-IOU program managers that have a history with the program; an additional eight interviews were completed with those organizations. Evergreen also completed nine interviews with energy efficiency portfolio and program managers from four states outside of California. These interviews helped contextualize the California interview results and gathered input from program managers familiar with different program administrative types (statewide only, mixed, utility only). Results from the out-of-state interviews are summarized in Section 5.2.

Table 7 summarizes the benefits and drawbacks associated with statewide administration for each program category and subprogram[47] based on the interview responses.[48] More detailed results from the interviews are provided in Appendix D. Information about the process used to develop the summary table follows:

- **Quality control, consistency, and substantiation of responses.** During interviews with IOU program managers and other respondents, Evergreen staff recorded their initial responses, and asked them to substantiate their responses and provide examples. Interviewers also considered the viewpoint and context with which the interviewee would answer the questions, such as if they were the lead IOU for a statewide program or were not the lead, or if they were a third party or trade ally with an obvious stake in the outcome of our research.

  In the few cases where a response did not seem valid or consistent (such as if the example did not substantiate their initial response), Evergreen staff would ask the respondent to clarify their answer, which typically led to either a revision in the initial response or a more clear substantiation. There were very few cases where the respondent was unable or unwilling to provide substantiation consistent with their initial response. For those few cases as well as cases where responses differed significantly across program managers for the same program category, Evergreen relied on other interviews for that program category and other programs with very similar characteristics to make the determination. In addition, Evergreen relied on follow ups with interviewees to resolve discrepancies. Before conducting the interviews, Evergreen staff reviewed the portfolio of programs and other relevant

[47] Subprograms are included in the list where the requirement for statewide administration is different across subprograms within a program category. Section 5.1.1 provides a complete list of program categories and subprograms.

[48] Note that the statewide ME&O program was initially part of the program sample, but during the IOU program manager interview we learned that the program has been substantially changed, with the Energy Upgrade brand being phased out. The program is going through a major transition, and our research was not sufficient to determine whether the program's new design and focus would lead to net benefits if it were to be continued as a statewide program.

information about the programs, providing a robust foundation on which to be able to independently validate responses.

- **Low sample sizes.** In some cases where the sample size for a given program category was low, categories were combined if the responses were very consistent across benefits and drawbacks and where the programs' key characteristics were very similar. For the Residential HVAC QI/QM program, we chose not to collapse the findings with the other two similar midstream programs, though we relied upon those other midstream program interview responses to corroborate the single interview findings. The Codes and Standards (C&S) program category is fairly unique, and we were unable to conduct more than one interview after multiple attempts. Evergreen has previously conducted research for this program and supplemented that initial knowledge with additional background review in order to corroborate the responses we did get for this category. One of the implementer interviews we conducted also included some C&S-related content that corroborated the C&S IOU program manager responses, as did some of the out-of-state interviews where C&S programs are active.
- **Third-party implementer, trade ally, and non-IOU PA interviews** were used to corroborate IOU program manager responses and to solicit feedback on program administrative topics that IOU program managers may not have focused on (leverage of third-party resources, existing service gaps in non-IOU territories, etc.) Out-of-state interview responses for similar programs and/or issues were also used to corroborate IOU program manager responses.

  Transition issues/provisional recommendations. There were several programs for which the respondents thought there eventually could be net benefits if certain transition issues (which are described below) were resolved across the IOUs. There are also programs for which respondents thought that the transition issues were great enough, and potential net benefits were minor enough, that the programs should not be recommended for statewide administration until or unless the transition issues are resolved. The transition issues are similar across the two sets of recommendations, but in the latter cases, they were deemed as being more significant with uncertain resolution; in these cases, the issues outweighed the benefits of statewide administration. The recommendations for statewide administration that are presented in Section 6 distinguish between these two different cases.

The transition issues that many of the interviewees identified are cross-cutting issues that the IOUs will need to work through in general as they transition to greater third-party implementation and fully compliant statewide programs:

- Developing data sharing protocols for vendors and third parties across the IOUs
    - As described by an IOU program manager:

> "When you are trying to implement an idea or even design something with multiple stakeholders – you have procurement, you have legal, you have EE staff and they all have to be on board."

- A local water district offered an opinion:

  > "Data sharing and management is a challenge, really a big barrier."

- Determining what priority should be placed on serving hard-to-reach customer segments and achieving equitable participation versus achieving cost effectiveness, including effectively coordinating with Regional Energy Networks (RENs) and LGPs on their localized efforts.
  - As described by an IOU program manager:

    > "If the IOUs don't say you must serve specific areas, someone might come up with a program that says it will be much more cost effective to target urban areas and then we might not even look at the Central Valley. The drawback is it's hard at a high level to figure out who will be served."

  - A REN describing how they focus most of their efforts on disadvantaged communities (DACs), which could help mitigate the impacts of a statewide program not having as much of a focus on those areas:

    > "In the disadvantaged community areas, they can receive up to 75% of project costs and we do a lot of our focus marketing in disadvantaged customer territory. That is something that the REN has chosen to focus on. We don't do much open marketing, we really just do target marketing for the DAC territory."

- Attempting to evenly focus on meeting local customer needs across the IOU service territories and leveraging existing strategies (for example, account representatives, coordination with water agencies) that have been used by each IOU to tap local and internal resources.
  - A local water district expressed concern about whether they would want to make the effort to coordinate on a joint IOU offering if they were not certain the lead IOU and their implementer would continue to prioritize water/energy-saving offerings:

    > "Getting consensus from water groups on types of devices is important if [the program is] going to SW… Why would we want to pay into a program with offerings we don't need? We're not going to get any savings from it."

  - A third-party implementer of a direct install program describes the challenges of identifying a suitable measure mix for the whole state with the backdrop of changing measure cost effectiveness, and how making such changes will take a lot more effort across all the IOU service territories:

    > "A SW program has to find a mix of measures that works for 16 climate zones. Certain measures work well in some regions, but don't work at all in others. HVAC is not cost effective in the SF Bay Area, but it's cost effective in the Central Valley and east LA. To be able to satisfy the whole state from a measure mix

standpoint would be challenging, but if each region [is allowed to have] a unique measure mix that makes sense…but the measure mix is always changing. Say you found 3 great measures for 2019, and then [the evaluation results] come out and now we're down to 1-2 measures because savings are dropping. And then the program is done. Trying to change at that scale can take a lot of time, not able to be as nimble and flexible [across the state]."

- A third-party implementer explained the value of regional relationships and the uncertainty of how those would be maintained in a statewide context:

  "Engaged stakeholders in a particular region are now motivated to focus on that region, which may not apply [in a] SW [model]."

  "Let's say PG&E was nominated to be public sector lead, they would naturally be listening and have the voice of local stakeholders in their ear and less influence from say San Diego groups. It would create a lot of challenges and lost value in what has been invested for so many years."

- A third-party implementer explained the value of being able to co-brand with the customer's IOU, which they were not certain would be maintained under the statewide model:

  "I feel like it's helpful that you're going in there under the flag of the utility. When you're trying to convince them to participate … I think that it is easier to sell."

Table 7: Summary of Results by Program Category / Subprogram

Program / Subprogram / Sample Size (n)	Benefits of Statewide Administration	Drawbacks of Statewide Administration	Study Recommendation for SW Administration
Energy Advisor / Audits (5)	**Somewhat significant.** Consistency for utilities and customers in overlapping service territories with the development of one set of customer-facing audit tool.	**Somewhat significant.** Risk of losing the regional components that address specific customer needs and added complexity for audit tool vendors and installation contractors to access customer data across the four IOUs, potentially requiring additional resources.	**Overall Drawback. (**until data sharing protocol issues are resolved). Overall could be seen as a benefit but will require significant effort to develop consistent data protocols across the IOUs. After protocols are developed, potential for benefits from consistency across all IOUs could be a minor benefit.
Career Connections (K-12) (3)	**Somewhat significant.** More consistency in offerings for K-12 schools that align with statewide educational standards	**Minor.** Main concern with SW administration is the potential for less focus on unique regional issues that may be addressed in a localized approach.	**Overall Benefit.** Consistency in Common Core standards across the state make the K-12 program a good candidate for SW. Provides the necessary resources across service territories and ensures a consistent customer-facing offering. Seen as a somewhat or very significant benefit in expanding the reach of the program and increasing participation in trainings.
Integrated Energy Education and Training (formally Centergies) (4)	**Somewhat significant.** More consistency in offerings across the state for groups (trade allies/end-use customers/contractors - those that attend trainings) that operate across service territories.	**Somewhat significant.** Main concern is lower participation in disadvantaged or rural areas due to implementer not having the ability (or knowledge) to reach them (or tailor training center offerings to them). Training groups are commonly specialized in localized efforts and would have difficulty scaling to a SW level amid lack of resources or focus areas.	**Overall Drawback.** Most benefits of consistency are already being realized, and the specific needs for each territory can be significantly different. For example, certain trainings are more applicable for specific markets (i.e. technology-based trainings in Bay Area).
Career and Workforce Readiness (1)	**Somewhat significant.** More consistency and scalability in training offerings across the state. Potential efficiencies created through having third-party implementer coordinate	**Somewhat significant.** There may be challenges in diversifying trainings to address the various regional market needs and coordinating with regional workforce organizations	**Overall Benefit.** While initial program design will need to account for regional-specific needs, overall, designed as a statewide pilot that will benefit from consistency of statewide administration to

	externally with a single lead IOU program administrator.	helping disadvantaged workers	help partner with organizations working on job-readiness and initial employment training opportunities disadvantaged workers.
Codes and Standards – Advocacy (2)	**Minor.** May create more transparency and documentation in order to document lead IOU activities. A third party could work with code development bodies rather than with each IOU. Easier to engage with state agencies and market partners with a single lead IOU.	**Minor.** Uncertain whether the lead IOU and its implementers will continue to leverage internal IOU expertise and brand recognition across non-lead IOUs.	**Overall Benefit. Recommended for SW admin.** Already effectively transitioned to SW admin. There are uncertainties around prioritizing case studies across the state with a lead IOU, but there are benefits in increased transparency and documentation and easier coordination with state agencies and market partners that should make the program more effective and lead to reduced admin costs.
Codes and Standards - Code Compliance (1)	**None**	**Somewhat significant.** Program benefits from a local approach since focus is on local building officials, which vary a great deal across the state.	**Overall Drawback. Not recommended for SW admin.** Program benefits from a local approach.
Codes and Standards - Reach Codes (1)	**None**	**Very significant.** Importance of existing relationships between internal IOU government affairs staff and local governments and building departments and other local organizations. Varied needs from city to city.	**Overall Drawback. Not recommended for SW admin.** Program benefits from a local approach. Already coordinate effectively across IOUs.
Direct Install (9)	**Minor** benefits to installation contractors with regards to program consistency when operating and marketing across service territories.	**Somewhat significant.** Inability to customize messaging and offerings based on regional needs and customer base potentially limits program interest and applicability in certain territories. Needing to track customer data and program changes and increase communication across IOUs could increase admin costs.	**Overall Drawback** (until or unless local concerns are addressed). Benefits of localized approaches outweigh minor benefits from a SW approach.
Downstream Rebates (3)	**Minor** consistency benefits for	**Somewhat significant.** Potentially	**Overall Drawback** (until or unless local

	customers and contractors (especially those operating across service territories) for deemed incentives. Possibly efficiencies from consolidating rebate processing and inspections.	losing established relationships customer have with IOUs and significant admin costs to align measures, marketing and outreach planning, data sharing, and program offerings, especially for calculated savings. Small and medium business needs may not be prioritized evenly, and the strategies that have been developed over time to reach them within each IOU.	concerns are addressed, and after significant efforts to make the program consistent).
Emerging Technologies (3)	**Somewhat significant.** Single point of contact for technology manufacturers and research organizations, streamlining communication and potentially expediting the product development cycle from testing to established measure. Statewide coordination reduces duplication of research efforts, and increased scale may allow the program to pursue emerging technology trials with greater upside that would be deemed too risky or costly for one IOU to test individually.	**Minor** short term drawbacks to administration as IOUs coordinate with third-party implementers, especially with any measures that overlap electric and gas categories.	**Overall Benefit.** Benefits of more streamlined coordination with external organizations, such as improving the program's ability to test, demonstrate savings potential, and move technologies into the market and/or into resource programs, outweigh minor drawback of initial IOU coordination to make program consistent SW. The Emerging Technologies Coordinating Council (ETCC), which serves as a single point of contact statewide, will continue to play a coordination role during the transition to SW administration.
Finance – Existing (2)	**Minor.** Efficiencies created through having third-party implementer coordinate externally with a single lead IOU program administrator. Consistent marketing and offerings across IOUs could be beneficial for customers, lenders, and contractors since there are currently differences in funding, loan terms, loan caps, etc.	**Somewhat significant.** Initial customer confusion with change of implementer. Could be an issue for commercial customers because the program is tied to energy efficiency programs and if those are not statewide, that could create complications. OBF offerings are specific to individual IOUs and are coordinated with other EE resource program offerings.	**Overall Drawback.** Link between existing Finance programs and individual IOU offerings add layer of complexity in a statewide program model when attempting to align offerings. Drawbacks from required coordination efforts and potential customer confusion outweigh minor potential benefits from consistency.
Finance – New (2)	**Minor.** Consistent process for accessing financing. Simplified	**None**	**Overall Benefit.** Allows option for financing without energy efficiency program

	participation process which may increase contractor involvement, and easier for customers in overlapping service territories. Implemented by SW organization.		participation. SW admin will expedite enrollment process and lead to more participation and reduced admin costs.
Institutional Partnerships (8)	**Somewhat significant.** Single point of contact. Streamlined offerings.	**Minor.** Current offerings are inconsistent and would require effort to make them consistent. Concern about representation in non-lead IOU territories. Unclear what role account executives will have in the future.	**Overall Benefit** (minor transition issues). More consistent offerings and single point of contact parallels structure of customers (state level institutions).
Local Government Partnerships (3)	**Somewhat significant.** Streamlined offerings (consistent across all IOUs) would allow all partnerships an equal opportunity to receive the same benefits. Standard job order contracting would be beneficial for installation contractors but could happen outside of the SW model, and is already starting to occur. Could be easier to share best practices, but that is also already being done outside of SW model.	**Very significant.** Local governments/orgs have different priorities, needs, and political motivations that lead them to take advantage of different parts of the partnership. Challenging to find the correct people to interface with at local governments. IOUs have each climbed the learning curve with their respective local governments over time.	**Overall Drawback.** Cities, counties, and local orgs are too diverse to approach with a statewide program. There are benefits associated with offerings being streamlined across utilities and in creating job order contracting standardization.
Midstream Plug Load and Appliance (4)	**Somewhat significant.** Easier participation process for customers that are in overlapping IOU service territories. Easier coordination with single IOU contact for manufacturers, retailers, and distributors. Predict increase in volume of sales and participation. Big box retailers will no longer need to localize marketing efforts. Save cost from administrator perspective on marketing.	**Minor.** May dissuade manufacturers who are not included in the statewide program (who may have been by a single IOU) from promoting program-eligible products. Could be confusing for contractors, which may drive down participation.	**Overall Benefit.** Greater participation in the program, lower admin costs.

Midstream HVAC, Foodservice, Commercial Water Heating (3)	**Minor.** Economies of scale from having streamlined reporting and payment processes. Consistency in offerings will reduce market confusion. Consistent marketing and using shared customer data to properly target market needs and capture more market potential.	**Minor.** Will need to re-establish relationships that are currently local (though Western HVAC Performance Alliance already approached in a SW manner) Business requirements for each IOU will still vary including database, cyber security, data privacy.	**Overall Benefit.** Program should be more effective and easier for market actors to participate.
Residential HVAC QI/QM (2)	**Minor.** May lead to more focus on regions with greater HVAC load, leading to an increase in overall program cost effectiveness. Program is already consistent with a single implementer across the state, so some benefits of SW admin already realized.	**Minor.** Less attention on more temperate regions.	**Overall Benefit** (minor transition issues) depending on what is the overarching priority and assuming cost-effectiveness is a higher priority than even coverage across climate zones.
Res New Construction (3) and Commercial New Construction (Savings by Design) (1)	**Somewhat significant.** Consistent offerings, participant requirements, and program rules make it easier for builders, contractors, and other market actors to engage and participate in the program, driving end-user participation.	**Minor.** Third parties may focus on "low-hanging fruit", paying less attention to some areas (ex. rural and hard-to-reach)	**Overall Benefit** (minor transition issues). Easier for customers and trade allies to participate, increased participation, and reduced admin costs. But may lead to uneven attention on rural/hard-to-reach trade allies and customers.
Upstream Lighting (2)	**Somewhat significant.** Big benefit for manufacturers looking to leverage economies of scale at statewide level, allowing them to explore new technologies and increase future savings. Also provides a single point of contact for market actors.	**Minor.** Minor drawback to some current relationships between IOUs and market actors, need to be reestablished with third-party implementer.	**Overall Benefit.** Most benefits already realized since program has been very consistent across IOUs from its inception. Minor benefits to be realized from reduced admin costs and manufacturers leveraging the larger scale to drive new lighting technologies and broaden product offerings (so more effective program).

Sample size refers to the number of program manager, third-party implementer, and trade ally interviews.

Table 8 presents the results by program characteristic. Program characteristics may span multiple program types such as installation contractors that are involved in both direct install and midstream programs. As mentioned previously, the current portfolio is in flux, and the results from this study need to be useful as the portfolio is modified. The table identifies key characteristics of the programs and the overall benefits and drawbacks associated with statewide administration for programs where that feature is prominent. These results may be applied to future programs by looking at their main characteristics. (Table 18 in Appendix D provides a list of the current program categories and their key characteristics.) It may also be used to inform improvements to the portfolio at least in terms of maximizing benefits associated with statewide administration.

As shown in the table, there are many program characteristics where statewide administration would lead to net benefits. Some of those recommendations are provisional, pending resolution of the transition and equity issues described above. Program characteristics where statewide administration would lead to the greatest benefits are:

- Upstream and midstream delivery channels that leverage trade allies that span the state;
- Crosscutting programs like Codes and Standards and the Emerging Technologies Program that rely heavily on market partners that span the state;
- Programs for which mass marketing strategy is a major driver of participation; and
- Programs that have a heavy administration component, such as involving rebate processing or inspections.

The key features of programs that were determined to lead to larger drawbacks if administered statewide are:

- Downstream programs that engage directly with residential and/or small business customers;
- Programs that rely heavily on IOU account representatives to drive participation; and
- Programs that rely on partnerships and coordination with other utilities (water, municipal electric) and/or air quality districts to drive participation.

All of these drawbacks could be overcome if customer equity/hard-to-reach and geographic coverage issues that were identified above are addressed.

Table 8: Summary of Results by Program Characteristic

Program Characteristics / Sample Size (n)	Benefits of Statewide Administration	Drawbacks of Statewide Administration	Overall Net Benefits and Drawbacks
Installation Contractors (24)	**Somewhat significant.** Consistency in program offerings drives contractor participation and program promotion, making the participation process easier for contractors operating across service territories. Standardizes contractor training for eligibility requirements.	**Minor.** Potential lack of control over customizing marketing messaging and equipment offerings for specific customer groups (language differences, rural customers, small businesses, climate differences, regional industry difference) Inability to leverage existing relationships with IOUs; need to establish lines of communication with third-party implementer Third-party implementers may decide to target certain market actors, making outreach less evenly distributed across the state.	**Overall Benefit.** (minor transition issues). Should lead to increased contractor engagement and program promotion. Need to ensure that customized approaches are maintained in a SW model, and that the lead IOU/implementer(s) engage with contractors across the state, to ensure equitable coverage.
Distributors/ Manufacturers/ Retailers (14)	**Very significant**. Leveraging economies of scale across the state expands market and leads to potential exploration of new efficient technologies. Single point of contact for SW programs makes communication more streamlined and efficient. Consistent offerings enables consistent marketing and messaging to customers.	**Minor.** Inability to vary offerings by market/regional needs.	**Overall Benefit.** The upstream and midstream programs that utilize these trade allies greatly benefit from economies of scale and statewide coordination, leading to more effective programs.
Builders/ Architects/ Raters (10)	**Somewhat significant.** Consistent offerings and one set of program rules makes it easier to participate in the program.	**Minor.** Potential lack of focus on disadvantaged and rural communities, may limit participation for some specific builders.	**Overall Benefit.** (minor transition issues). Likely more engagement from new construction trade allies, leading to greater program promotion and ultimately participation. Rural communities may receive less attention unless there are priorities or goals set to encourage even outreach.
Residential and small business customers	**Minor.** Benefits for customers in overlapping IOU service territories with	**Somewhat significant.** Lack of existing relationship and familiarity with new third-party	**Overall Drawback.** Unless local concerns are addressed.

Program Characteristics / Sample Size (n)	Benefits of Statewide Administration	Drawbacks of Statewide Administration	Overall Net Benefits and Drawbacks
(26)	program consistency and potentially expanded offerings from consistent SW programs (they may get the best offerings from across the IOUs).	implementer versus own utility during transition period. Not as specialized of a touch point if they do not have service with the lead IOU. Possibly lack of specialized offerings for specific markets unless priorities are set to address hard-to-reach needs. Broader offerings may not be as relevant to certain customers.	
Account representative relationships with large / assigned customers (6)	**None.**	**Somewhat significant.** Potential loss of established relationships with existing customers/participants (institutional partnerships and downstream programs), depending on how coordination with lead IOU and selected third-party implementers works.	**Overall Drawback.** Unless account reps are effectively utilized by third parties while minimizing extra coordination and tracking efforts.
Research labs and organizations / Universities and colleges (4)	**Very Significant.** Single point of contact for program helps streamline resources, more efficient to allocate resources to one party. SW scale allows for more opportunities to explore research opportunities (e.g., Emerging Technologies).	**Minor.** Some colleges leverage both the state-level relationship and the local relationship with the utility to push work forward.	**Overall Benefit.** More efficient (reduced cost) and effective engagement in programs.
Extensive coordination with other energy organizations (CEC, NEEA, ETO) (3)	**Somewhat significant.** Single touch point to streamline communication and more scale to leverage those relationships.	**Minor.** Could potentially have a reduced ability to leverage SW expertise that allows them to divide and conquer (C&S).	**Overall Benefit.** More efficient (reduced cost) and effective engagement in programs.
Large Customers (C, I, Ag) (8)	**Somewhat significant.** Easier for customers with sites spanning IOU service territories to participate.	**Minor.** During transition period, lack of familiarity with third parties could cause customer confusion and lack of trust in program, and increased resources to customer service (or drop-in participation). Also unclear how account reps will be leveraged; these existing relationships have been leveraged in programs in the past (such as for local state buildings and facilities)	**Overall Benefit.** (minor transition issues). More participation in programs, after initial transition issues are resolved.

Program Characteristics / Sample Size (n)	Benefits of Statewide Administration	Drawbacks of Statewide Administration	Overall Net Benefits and Drawbacks
Program Administration (67)	**Very significant.** One system of processing incentives and payments instead of three or four. Lead IOUs can gain expertise more easily, covering fewer program areas. More leverage with greater economies of scale to engage market partners. After transition period, lower labor costs for non-lead IOUs. Significantly easier for CPUC and stakeholders to monitor and oversee programs with a single set of workpapers, program implementation plans, and evaluation approaches.	**Minor.** During transition period, will require upfront cost and coordination to work through details. Still need to coordinate with internal legal and marketing teams for approvals. Need to work through data sharing protocols.	**Overall Benefit.** Reduction in program administrative costs, better ability to engage with market partners due to greater scale and consistency across state, and streamlined CPUC and stakeholder oversight and evaluation.
Mass Marketing (12)	**Somewhat significant.** Larger scale, more effective mass marketing campaign. Consistent messaging for statewide market actors (manufacturers and distributors).	**None**.	**Overall Benefit.** More effective (and less costly) statewide marketing campaigns.
Customer Data Sharing (16)	**Somewhat significant.** Better able to target markets with more data/consistent data across the state, capturing more market potential.	**Somewhat significant.** During the transition period to SW admin, more burden on implementers to work across all IOUs with their different systems and requirements. May lead to delays in implementation if they have to wait until they are approved to use all IOUs' data.	**Overall Benefit.** (minor transition issues). More effective use of IOU data for target marketing that leads to reductions in marketing expenditures and increased participation, once transition issues are worked through.
Other local utilities (e.g., water) or air districts	**None.**	**Minor.** Would take time to reestablish new relationships and ensure equal coverage across the state.	**Overall Drawback.** (until or unless local concerns are addressed). Lead IOU and implementer(s) will need to make sure to prioritize these relationships.

Sample size refers to the number of program manager interviews.

* Could be recommended for statewide administration if the provisional issues (identified as major for this program) are addressed during the 2020 program transition.

‡ Recommended for statewide administration even though there are some minor provisional issues to address during the 2020 program transition.

5.2 Out of State Program Assessment

The study included interviews with staff who oversee or manage energy efficiency programs outside of California in order to provide a broader perspective and supplement the California-focused interviews. Evergreen selected five states with input from the Study Team—with at least one state from each of the three administrative type categories identified in the literature review in Section 4—on which to focus the out-of-state assessment: Vermont, New York, Massachusetts, Oregon, and Minnesota. Preference was given to states that were more highly ranked by ACEEE's Annual Energy Efficiency Scorecard. Table 9 provides a summary of the nine completed out-of-state interviews and additional context on each state based on the literature review (including California for comparison).

Table 9: Out of State Sample[49]

Administration Category	State	Program Administrator Cost of Saved Electricity (2016$/kWh)	ACEEE 2018 State Ranking (1st=Best, 50th=Worst)	Administrator(s)	Role of Interviewee(s)
Statewide only	Vermont	$0.042	4	Efficiency Vermont / VEIC	Director of Efficiency Vermont
				Efficiency Vermont / VEIC	Director of Emerging Technologies & Services (EV)
Mix - Statewide and Utility	New York	$0.036	6	NYSERDA	Team Lead – Codes, Products & Standards
				NYSERDA	Director of Market Development
				ConEd	Regulatory Engagement Manager
				ConEd	Residential Portfolio Manager
	Oregon	$0.026	7	Energy Trust of Oregon	Commercial Sector Lead
				Energy Trust of Oregon	Residential Sector Lead
Utility only	Minnesota	$0.016	8	Xcel Energy	Product Portfolio Manager
(For comparison purposes)	California	$0.031	2	NA	

Sources: 2018 ACEEE State Energy Efficiency Scorecard; 2018 LBNL Cost of Savings Report.

Overall, key findings from the out-of-state interviews were generally consistent with findings from the California-focused interviews. For example, all nine of the interviewees noted that midstream and upstream programs tend to have the greatest amount of potential benefits from statewide administration because of the consistency and economies of scale statewide offerings provide to market actors and customers. Other similar benefits

[49] Evergreen attempted to contact program staff from Arizona Public Service, National Grid (MA), and Columbia Gas (MA) but did not receive email or phone responses.

of statewide administration that were discussed during the out-of-state interviews included:

- Ability for manufacturers, distributors, and retailers to scale their efficiency efforts with the expanded scope of statewide program;
- Consolidation of administrative burdens and costs possibly leading to streamlining tasks and increasing cost effectiveness;
- Easier coordination and participation processes with customers (especially commercial) that have locations in multiple service territories; and
- Ability to leverage resources across the state for cross-cutting programs such as Emerging Technologies and Codes and Standards.

Drawbacks of statewide administration that were addressed in the out-of-state interviews that were also mentioned by the California interviewees included:

- Uncertainty regarding the degree to which established relationships that individual IOU account representatives have with customers will be leveraged under a statewide program model;
- Lack of flexibility in statewide programs to address unique regional needs (that is, measure offerings, language barriers in marketing, contractor relationships, etc.);
- Potential for third-party implementers to prioritize certain customers or market segments at the expense of other groups (for example, hard-to-reach or rural); and
- Overall loss of autonomy and control from the individual IOUs, such as on ensuring they meet overall portfolio cost-effectiveness targets.

Given the different administrative structures and unique markets that interviewees in the sample represented, the out-of-state interviewees also provided some additional insights into the discussion of statewide administration versus utility administration of programs. These findings focus on key areas of success that program managers have observed under their current administrative structure, recommendations for the California IOUs based on existing knowledge of the market, and additional benefits and drawbacks that may result from statewide-administered programs.

- **The potential benefits of statewide-administered programs can be restricted by program designs that do not account for flexibility across service territories.** Multiple interviewees in states that have statewide programs and those that have a mix of statewide and utility-administered programs noted that the most successful statewide programs they have been a part of (especially at the downstream level) allowed for regional flexibility where appropriate. This includes measure eligibility, outreach efforts, or specific targeting of harder to reach customer segments. As one residential program manager noted,

> "You have to be open to that and say just because it's statewide doesn't mean you can't have unique solutions in areas where it makes sense. The less flexibility there is, the more problems there will be."

Another program manager who advocated strongly for statewide programs also acknowledged the benefit of flexibility:

> "Great to have the scale and supply chain of statewide, but we're not dealing with wind curtailment in this one region or not helping with solar challenges in another region as much as we could. I think the statewide approach is going to meet 90% of the need and will result in energy cost reduction, GHG [greenhouse gas] reduction, but won't meet every challenge so a little flexibility to address regional specific needs is necessary."

- **Outsourcing programs to third-party implementers should consist of a thorough vetting process that ensures that the implementer fully understands the program goals and administrative requirements.** Out-of-state program managers added that this type of vetting process would be especially helpful in an efficiency market as large as California where the lead third parties for certain programs will have significant responsibilities. Understanding the data collection and processing, market actor outreach, and efficient equipment capabilities will be vital to address during the bidding process because ongoing changes that occur after the selection process will be even more difficult to address. This additional oversight could add costs to program administration, especially in the short-term. Another issue to consider for the IOUs is the risk management component of dealing with a third party. As one of the commercial program managers said,

  > "Who holds the risk? If the utilities are being forced to bid [programs] but they are accountable for savings, they will make sure the vendors can deliver savings, or that there is some way they can get savings otherwise. If it was me, and I was bidding out a 3P [third-party] contract, I would as a utility make sure that those bidders are going to deliver."

- **The transition to third-party implementation and greater statewide administration in California may be especially complex compared to other states because of the historical influence the IOUs have had on the current energy efficiency offerings and because of the variance across the state, both in terms of geography and customer types.** Out-of-state interviewees across all states noted that California's vast size and geographical makeup may lead to challenges with statewide administration and third-party implementation that other states may not have to worry about**.** Specific challenges included the potential inability to reach hard-to-reach customers for programs that prioritize "low-hanging fruit" and finding third parties that are capable, have experience, and have the capacity to manage programs (market actor relationships, marketing, data tracking, etc.) across a state as large as California. *[Evergreen note: the CPUC has allowed the lead IOU for a statewide program to hire more than one third-party implementer, which should help address this concern.]* One program manager with experience in the California market also added that there may be some challenges with IOUs having to adjust to the lack of control over programs they are not the lead program administrator on but that:

> "Having lived it, running a statewide program means a lot of loss of autonomy and flexibility. Each utility doesn't get to set exact incentives and that's a problem. Each utility has a different benefit-cost threshold and it's hard to offer the same incentive to the entire market."

6 Key Findings and Recommendations

This section first describes the advantages and disadvantages of statewide versus regional program administration and characterizes the current program portfolio, followed by recommendations for statewide program administration and broader suggestions to support the overall optimization of the portfolio.

6.1 Advantages and Disadvantages of Statewide Program Administration

There is broad agreement across IOUs, stakeholders, and the CPUC that statewide administration of programs offers benefits. The benefits of statewide program administration were identified as early as 2002, when the CPUC indicated that that approach continues to be the backbone of the portfolio. The topic became more active as it was combined with third-party administration as issues being jointly addressed by the CPUC in the current energy efficiency program portfolio proceeding.

There is also broad agreement that there are advantages to administering some programs regionally or locally, either within a single IOU service territory or an area covered by a regional energy network (REN) and/or local government. In 2003, the CPUC discussed the rationale for local programs that are "narrower in scope, tailored to specific geographic areas or hard to reach customer groups." (Decision 03-12-060, December 3, 2003)[50] Since then, the IOUs, RENs, and local government partnerships (LGPs) have used various strategies to address hard-to-reach customer segments with localized needs, including coordinating with local governments, water and municipal utilities, and air quality districts. Some third-party programs have also targeted specific geographic areas that have a high concentration of unique needs, such as areas with wineries or lodging.

6.1.1 Advantages of Statewide Administration

The potential benefits associated with statewide administration that we identified through this study's research include:

- Consistency for trade allies, market partners, and customers that span IOU service territories;
- More equality for customers if they can access the same program offerings regardless of which IOU(s) they have;
- Ease of leveraging private sector stakeholder resources if programs are consistent statewide;
- Consistent marketing strategies that may be more efficient and/or more effective;

[50] http://docs.cpuc.ca.gov/published/Final_decision/39643-02.htm

- More streamlined oversight and evaluation due to integrated program implementation plans, work papers, and evaluation approaches;
- May be associated with more comprehensive program strategies, based on the literature review findings;
- Ability to realize greater economies of scale; and
- Lower program administrative costs (over time) – though modest in size based on the literature review findings.

These advantages potentially translate into cost savings and more effective programs (that is, higher energy savings), which combined lead to better cost effectiveness for the portfolio. Some of the programs are already consistent to some degree (as shown in Section 5.1.1), and at least some of the benefits of statewide programs have already been realized. For example, the Upstream Lighting Program has been very consistent across the IOUs since its inception and requires relatively low staff overhead. The Emerging Technologies Program has also benefited from statewide coordination over time, including the creation of the Emerging Technologies Coordinating Council (ETCC), which allows the IOUs and other stakeholders to meet, facilitate collaborations, more efficiently allocate research resources, and limit the amount of technology assessment overlap across service territories. For example, if one IOU is prioritizing a particular measure (for example, water heating), then the other IOUs may focus on other technologies and simply review the findings from the research conducted by the other IOU.

However, many other programs are in the process of being transitioned to statewide and others are fairly inconsistent, either as a result of varying customer needs and/or differences in IOU priorities and internal resources.

The question of how much program administrative cost savings could be realized from statewide program administration is informed by the literature review. Secondary data indicated that many other factors drive variation in program administrative costs, with statewide administration unlikely to be a major factor. However, the literature review also showed that statewide programs have better ACEEE rankings, which indicates they have a broad energy efficiency focus with documented best practices.

Out-of-state program managers that Evergreen interviewed emphasized that the scale of their statewide programs has helped drive the cost effectiveness of their programs through streamlined and reduced administrative costs. They did note that a large market like California may pose some inherent administrative burdens (geographical differences, large variety in customer bases, climate zones, etc.) that could lead to an increase in administrative costs in the short term.

The IOUs indicated there may be modest cost savings with a lead IOU taking on more responsibility for statewide programs, but the other IOUs would still be involved in a coordination and oversight role. In the early stages of a program transitioning to statewide administration, cost savings might be minimal while details are worked out across the

IOUs, but more administrative cost savings could be achieved later on for IOUs not serving as the lead IOU.

There may be additional cost savings for customers and trade allies that realize greater efficiencies by participating in statewide programs, which may lead to increased participation rates and savings, indirectly translating into improved program cost effectiveness. For example, consistency with the New Construction Program statewide can make the participation process easier for both customers with multiple locations across the state and for contractors, developers, and builders that operate across IOU service territories.

6.1.2 Advantages of Regional or Local Administration

The potential disadvantages of statewide administration may also be viewed as potential advantages of regional or local administration. These potential advantages include the following:

- IOUs/implementers can address local customer needs including those of hard-to-reach groups, such as by continuing prior IOU-specific strategies that have been honed and are already in place.
- It may be easier to leverage local partners such as local governments and their resources.
- Regional or local implementers are better able to coordinate offerings with local municipal utilities and air quality districts.
- A regional or local administrator has more control over program spending and savings in their territory or local area.[51]

Many of these issues could still be addressed through a statewide program approach, but there are many details that are yet to be determined. Whether and the extent to which a lead IOU will ensure that local customer needs are met across the state and whether local partners that had been engaged in prior iterations of the program will be emphasized is unknown. There will likely be many priorities that the lead IOU and its implementer(s) are considering, of which meeting energy savings goals will be at the top. It may be that localized concerns such as engaging hard-to-reach customer groups may be a lower priority unless explicit goals are set to increase the priority, or that those concerns get uneven attention across the IOUs based on the lead IOU's preferences and the implementer(s)' capabilities and past experience.

[51] As mentioned previously, Decision 18-05-041 clarified that credit for energy savings generated will be based on contributed funding only, and not in relation to the geographic region in which the energy efficiency measure was sold or installed.

Stakeholders that Evergreen interviewed posited that IOUs are not necessarily the best organizations to understand and meet the needs of hard-to-reach customer segments within the residential and small business sectors. However, the IOUs have focused on hard-to-reach customers somewhat for many years (such as in response to explicit CPUC hard-to-reach goals in years past), and they have formed an array of partnerships and approaches over the last decade to attempt to address them. IOU account representative relationships and other complementary outreach strategies are another feature of IOU administration that has helped to identify and serve more localized needs (such as specific TOU rates, air quality standards, and complementary offerings from the IOU and other local utilities) for larger customers.

If those strategies and resources are maintained across the state by the lead IOU for each statewide program, the potential downsides of statewide administration may be minimized. There are no mechanisms in place at this time to ensure prior successful strategies and resources are maintained, though the system of having all IOUs serve as leads for at least one program does encourage an equitable approach where the lead IOU should be incentivized to address the needs of the other IOUs. However, as stated above, the question of how much the IOUs will continue to prioritize hard-to-reach customer segments is unknown, and it is likely that meeting energy savings goals across IOU service territories will (and should) be a top concern.

In addition to regional program administration (that is, IOU-specific programs), there are local programs in the form of LGPs and additional regional programs in the form of RENs. These program structures offer additional benefits:

- They may be viewed by residential and small business customers more as a trustworthy partner (than an IOU or a third-party implementer).
- They are able to leverage additional local government resources;
- They better understand and have the ability to address localized customer needs;
- They have a proven ability to coordinate with the IOUs to address under-served markets that may be missed by the IOU and statewide programs (but cost-effectiveness may be an issue with that model).

However, LGPs and RENs may offer drawbacks when compared to IOU program administration and third-party program implementation:

- Many local governments and RENs have a learning curve to develop the complex skills and resources necessary for energy efficiency program administration and implementation.
- Government agencies may be relatively difficult to contract with.
- LGPs and RENs operate in the same areas as IOUs and third parties, and the overlap of programs creates more complexity—though this is not necessarily a drawback that is associated with the LGPs and the RENs. Instead, it is a drawback

of the structure that has them operating in the same areas as the IOUs and third parties. By design, the RENs address gaps in IOU programs, and over time through REN/IOU coordination, these issues are being addressed and RENs are identifying their relative strengths and where to focus them.

Comparing administrators is outside the scope of our research; however, regional/local administration looks different for IOUs versus RENs/LGPs, while the general advantages of regional/local administration are similar.

6.2 Key Program Characteristics

One of the goals of this study was to examine the portfolio of IOU programs and determine their key characteristics in order to inform recommendations for statewide programs toward the broader goal of portfolio optimization.

The current IOU portfolio is large and complex. It consists of over 300 programs, which have a lot of potential for overlap in terms of which customer segments and measures they offer. Some programs are focused on a particular delivery channel and measure category (for example, Upstream Lighting), while others are focused on a particular customer segment (for example, Institutional Partnerships). Once the third-party programs are awarded, there will be more programs added to the portfolio and more opportunities for overlap and redundancy.

The IOUs indicated they are in the process of streamlining their portfolios, though their efforts do not appear to be well coordinated at this point in time. Currently, their highest priority is making sure they effectively outsource third-party programs so that they realize their energy savings goals. Though it is understandable that the IOUs should be focused on the third-party solicitations at this time, the issue of portfolio complexity was raised as far back as 2009, with the CPUC directing them to reduce the number to

> *"no more than 10 core statewide programs and perhaps another 20-30 for the entire suite of utility portfolios (not including third party programs)"* (Decision 09-09-047, September 2009).

For this study, Evergreen identified key program characteristics (listed below) based on a review of the portfolio. These characteristics were used to categorize the programs to facilitate analysis since there are so many programs that are difficult to compare (for example, some programs are based on a customer segment, others are based on a specific technology, and still others are based on a delivery channel or some combination of characteristics). Our charge was to develop recommendations for statewide administration not just for the current set of programs, but for future portfolios that may look very different. As such, the assessment also was conducted by program characteristic to ensure the usefulness of findings and recommendations going forward irrespective of how the portfolio is organized. We also developed additional findings and suggestions related to the portfolio optimization that is underway based on the portfolio characterization efforts.

- **Delivery channel** – which channel(s) rebates or services are designed to engage, that is, downstream (end-use customers), midstream, and/or upstream market actors. This variable was mentioned in CPUC Decisions and by stakeholders, program managers, and others we interviewed as one of the main determinants of whether a program should be administered statewide.
- **Consistency across IOUs** – whether the CPUC has required the program to be statewide (in Decision 18-05-041) and also the current status (for example, whether there is a lead IOU and coordination of implementer solicitations across IOUs). There are variations across programs in terms of how "statewide" a program is, with some programs having a lot of consistency since inception. In those cases, some or most of the potential benefits of statewide administration may already have been realized (such as Upstream Lighting). Other programs are very different across IOUs in order to tailor to varying customer needs or based on internal IOU resources and priorities.
- **Geographic area** – whether the program is offered for a specific geographic area, such as by a REN or LGP. Some of the third-party programs that are yet to be awarded may also target a specific geographic area.
- **Customer segment** – which entities are targeted by the program, including residential, commercial, industrial, agricultural end-use customers, trade allies, and other market partners such as municipal utilities and state agencies. While many programs offer measures or services across customer segments, there are important distinctions regarding statewide administration across segments. For example, commercial customers that have many sites that span IOU service territories would likely benefit from statewide administration and streamlining of their program participation. The residential and small business sectors may not see benefits and could possibly experience drawbacks if their local needs were not addressed by the lead IOU and their implementer(s). Some programs are identified by the customer segment that they serve (for example, Institutional Partnerships).
- **Measures or services offered** – including rebates, measure categories, education and training, outreach, financing, and marketing and outreach. The current set of programs offered in the IOU service territories encompass a wide variety of interventions, and it is necessary to distinguish between major types of offerings. Some programs are identified by their offerings (for example, the Finance program or the Education and Training program), while other programs span offerings (for example, LGPs).

The recommendations for programs to be administered statewide (Section 6.3) are followed by recommendations based on program characteristic.

6.3 Recommendations for Statewide Program Administration

Evergreen developed recommendations for statewide administration by program category and subprogram[52] (Table 10) based on the assessment described in Section 5. The recommendations are consistent with the subprograms and program types that the CPUC currently requires to be statewide.

- **Recommendation #1:** Evergreen recommends that the IOUs administer the following categories of programs statewide, consistent with the current CPUC definition. This list is consistent with the current list of programs required to be statewide by the CPUC.
    - Midstream Plug Load and Appliance
    - HVAC
    - New Construction (Residential and Commercial)
    - New Finance Offerings[53]
    - Codes and Standards - Advocacy
    - Lighting
    - Emerging Technologies
    - Workforce Education and Training – Career Connections (K-12)
    - Institutional Partnerships
    - Foodservice Point of Sale Program
    - Midstream Commercial Water Heating
    - HVAC Quality Installation/Quality Maintenance
    - Career and Workforce Readiness

The research identified several additional program categories (listed below) that might realize net benefits from statewide administration if significant transitional issues related to IOU coordination and serving local and hard-to-reach needs could be resolved. The benefits and drawbacks associated with statewide administration could be revisited for these categories after the 2020 programs have been established.

- Energy Advisor – audit programs
- Direct Install – current IOU programs targeted to small and medium business and residential customers

[52] Subprograms are included in the list where the requirement for statewide administration is different across subprograms within a program category. Section 5.1.1 provides a complete list of program categories and subprograms.
[53] The CPUC distinguished new Finance program offerings added in 2016 that are required to be statewide.

- Downstream Rebates – current IOU Deemed and Custom programs[54]

Programs that fall under these categories should be reexamined with respect to statewide administration after the IOUs transition to fully compliant statewide program administration and the third-party programs are awarded.

- **Recommendation #2:** The IOUs should reexamine programs that fall under the categories of Energy Advisor, Direct Install, and Downstream Rebates approximately one year after the transition to fully compliant statewide program administration and the third-party programs have been awarded (such as in 2021). Keeping the identified transition issues in mind, the programs should be examined to determine if they would be most effective if they were administered statewide or regionally.

The transition issues that need to be resolved were identified by many of the IOU program managers and other types of organizations that we interviewed through this study. The issues cut across the programs, and the IOUs will need to address them as they transition to greater third-party implementation and fully compliant statewide programs:

- Developing data sharing protocols for vendors and third parties across the IOUs
- Determining what priority should be placed on serving hard-to-reach customer segments and achieving equitable participation versus achieving cost effectiveness
- Attempting to evenly prioritize meeting local customer needs across the IOU service territories and effectively leverage IOU internal resources such as account representatives and relationships with local utilities.

Program and portfolio managers from other states also added that there can be inherent value in having statewide programs that include flexibility at the regional level. This may come from having a mix of statewide-administered programs and regionally-administered programs in the energy efficiency portfolio or through designing statewide programs to include regional flexibility with regards to measure offerings, marketing, etc. This finding is consistent with CPUC Decisions allowing a mix of statewide and regional programs, and allowing exceptions for local variation of statewide programs such as weather-dependent measures.

The categories of programs that were not recommended for statewide administration based on the research findings are all tailored to meet unique, localized needs—either of code compliance or code development officials, training center attendees, IOU-specific financing, or local governments. The programs that were not recommended for statewide administration are:

[54] There may be additional Direct Install and/or downstream rebate programs that are currently being awarded to third parties that were excluded from this research.

- Finance – Existing Offerings
- Integrated Energy Education & Training (IEET), formerly (Centergies)
- Code Compliance
- Reach Codes
- LGPs

The Energy Center and Code programs have already been extensively coordinated across the IOUs, and many of the benefits of statewide administration have already been realized. For LGPs, each IOU has a different model, which does lead to inconsistencies across the state in the types of benefits and services the local governments receive, though the IOU LGP program managers did indicate that they are coordinating on some elements of statewide administration that are beneficial, including sharing of best practices, considering job order contracting, and creating a statewide database for climate action plans. However, our research did not indicate that the net benefits associated with equity and consistency would exceed the potential drawbacks of losing the relationships that have been developed over time by each individual IOU with their participating local governments. There is a long and complex history associated with the IOUs and their LGPs, and this broad review was not sufficient to resolve the issue of what is the most effective approach to administering LGP programs across the state.

Table 10: Recommendations for Statewide Administration

Program Category[1]	Subprogram[1]	Recommended for SW Admin	
		by CPUC	by Evergreen Study
Audits and Training	Energy Advisor (Audits)	No	Provisional
	Strategic Energy Management	No	NA[2]
	Career Connections (K-12)	Yes	Yes
	Integrated Energy Education and Training (formerly Centergies)	No	No
	Career and Workforce Readiness	Yes[3]	Yes
Codes and Standards	Advocacy	Yes	Yes
	Code Compliance	No	No
	Reach Codes	No	No
Downstream	Direct Install	No	Provisional
	Downstream Rebates	No	Provisional
	Water/Wastewater Pumping Program	Yes[3]	NA[2]
Emerging Technologies	Emerging Technologies	Yes	Yes

Program Category[1]	Subprogram[1]	Recommended for SW Admin by CPUC	Recommended for SW Admin by Evergreen Study
Finance	Finance – New	Yes	Yes
	Finance – Existing	No	No
Government Partnerships	Institutional Partnerships	Yes	Yes
	Local Government Partnerships	No	No
Midstream	Plug Load and Appliance	Yes	Yes
	HVAC	Yes	Yes
	Foodservice	Yes	Yes
	Commercial Water Heating	Yes	Yes
	Residential HVAC QI/QM	Yes[3]	Yes
New Construction	Residential New Construction	Yes	Yes
	Commercial New Construction (Savings by Design)	Yes	Yes
Upstream Lighting	Upstream Lighting	Yes	Yes

[1] Evergreen categorized IOU energy efficiency programs listed in the California Energy Data and Reporting System (CEDARS) data downloaded on December 17, 2018, with some refinements based on IOU response to a data request, and IOU program manager interview responses.
[2] This subprogram was not included in the sample frame.
[3] Directed by the CPUC to be a downstream pilot program.

Table 11 summarizes the recommendations for statewide administration by program characteristic. Examining the results by program characteristic ensures that this study's results will still be useful even after the current portfolio is modified. Program characteristics where statewide administration would lead to the greatest benefits include:

- Upstream and midstream delivery channels that leverage trade allies that span the state;
- Crosscutting programs like Codes and Standards and Emerging Technologies that rely heavily on market partners that span the state;
- Programs where a mass marketing strategy is a major driver of participation; and
- Programs that have a heavy administration component, such as involving rebate processing or inspections.

Table 11: Recommendations for Statewide Administration by Program Characteristic

Program Characteristics Study Recommends for Statewide (SW) Admin
Upstream delivery channel
Midstream delivery channel
Programs that heavily rely on distributors/ manufacturers/retailers
Programs that partner with research labs and organizations/universities and colleges
Programs that extensively coordinate with other energy organizations (CEC, NEEA, Energy Trust of Oregon)
Programs with significant administration functions that could benefit from streamlining across IOUs
Programs that have extensive mass marketing
Programs that heavily rely on Installation Contractors
Programs that heavily rely on Builders/Architects/Raters
Programs that focus on Large Customers (C, I, Ag)
Programs with extensive Customer Data Sharing requirements

Just like there are programs that the study was not able to definitively recommend for statewide administration pending the resolution of transition issues, there are also key program characteristics that fall into the same provisional category (liste below). Programs where these features are very prominent may not be appropriate for statewide administration unless the transition issues mentioned above are resolved.

- Programs that rely on direct engagement with residential and small business customers or public sector customers
- Programs that use a downstream delivery channel

6.4 Additional Suggestions and Recommendations

This final section offers additional recommendations and suggestions related to statewide administration and portfolio optimization, for consideration by the IOUs and the CPUC.

Some of the IOUs have indicated (in interviews and in their Request for Abstracts) that they are looking to consolidate offerings into a small number of sector offerings. PAO (the Public Advocates Office, formerly the Office of Ratepayer Advocates, or ORA) recommended something similar in 2015, with five customer sectors (Residential, Commercial, Public, Agricultural, and Industrial) and a cross-cutting category. Our research was not intended to determine the most optimal portfolio structure, and with the third-party programs to be determined, it may be premature. However, we can conclude that the portfolio is overly complex, and all parties agree there are benefits to be realized from simplification and reduction in the number of programs. We offer a suggestion for the IOUs to consider as they revise their portfolios based on our review of their current portfolios and feedback from stakeholders. The suggestion is intended to address the issues of complexity and overlap. This is not a formal recommendation that is supported by robust research findings to address an explicit study objective, but rather some ideas that came from the research that will need further analysis.

- We suggest that the IOUs reduce the number of programs and address the potential for redundancy in their programs as they revise the structure of their portfolios. . Such an arrangement might consist of the following upstream, midstream, and cross-cutting programs that serve all customers:
    - Upstream Lighting Program
    - Midstream HVAC, Plug Load and Appliance, and Food Service Programs
    - Codes and Standards, Emerging Technologies Program, Workforce Education & Training (WE&T)

  This approach might have downstream offerings (including rebates, finance, and audits) condensed into five customer segments as the PAO suggested:

    - Residential
    - Commercial
    - Industrial
    - Agricultural
    - Public

There are opportunities for the IOUs to more explicitly coordinate their efforts to optimize their portfolios as they make decisions on third-party programs, attempt to reduce the overall number of programs, and reduce the complexity of their portfolios.

- **Recommendation #3:** The IOUs should take advantage of ongoing changes to their portfolios to coordinate their efforts statewide to reorganize and simplify their portfolios. Consistent IOU portfolios would make it easier for trade allies and customers that span IOU service territories, and also would allow for easier oversight and evaluation.

If the IOUs were able to address the transition issues our research identified for downstream programs, even the downstream programs could be administered statewide. There may be a need for complementary local or regional offerings that are aimed at addressing hard-to-reach or other geographic and equity issues, for which the statewide programs are less well suited. This type of design or any other efforts that attempt to resolve the inherent conflict between hard-to-reach/equity and cost effectiveness would benefit from more policy clarity. In prior program cycles, hard-to-reach concerns were addressed by the CPUC by having explicit goals or, later, were based on legacy programs and efforts. As portfolio cost effectiveness has declined over time, it may be time to update the intent and goals related to achieving customer equity and serving hard-to-reach segments.

- The CPUC might consider more clearly establishing how customer equity and serving hard-to-reach customer segments should be prioritized in relation to program savings and cost effectiveness, particularly with respect to programs that are transitioning to statewide administration. Such clarity will help the IOUs and their implementers determine how much effort to place on localized outreach and engagement and ensure that those efforts are evenly applied across service territories.
- There may be justification for a complementary set of local or regional programs that are intended to serve hard-to-reach customer segments—either operated by third-party implementers, LGPs, and/or RENs. Those programs may already be in place, and more may be added after the third-party program awards, but it may be a patchwork rather than a deliberate, consistent effort in line with state goals. More policy clarity would help guide the design of these complementary programs so that it is more deliberately in line with CPUC goals rather than a patchwork. Recommendation #2 (to revisit Energy Advisor, Downstream Rebates, and Direct Install program areas after the IOUs have transitioned and streamlined their portfolios) could also encompass this issue of complementary and overlapping programs, assessing whether the revised portfolios are optimally designed.

A final issue concerns the implementation of statewide program administration in the context of the portfolio refresh that is underway. The IOUs expressed uncertainty about whether the list of mandated statewide programs might preclude them from streamlining their portfolios—such as eliminating or consolidating programs on the statewide list. A similar issue was raised by CEDMC, the third-party implementer trade organization, related to maintaining flexibility while adhering to the CPUC's requirement for statewide program administration.

CEDMC recommended that the CPUC focus on intervention strategy types rather than broad market sectors or measure classes. They encouraged keeping program design options open and not specifying approaches to encourage innovation. This is a theme that cuts across the research findings, that there is no one right way to administer energy efficiency programs. As the Lawrence Berkeley National Laboratory (LBNL) identified in 2015:

> "There is Not One Answer: Any administrative model can successfully deliver cost-effective energy efficiency programs, provided the appropriate policies, oversight mechanisms, personnel and administrative structures are in place."

However, there is a balance between allowing flexibility to encourage innovation and ensuring that the IOUs are responsive in making the necessary changes to realize the benefits associated with statewide administration (and portfolio optimization in general). Our research identified that some flexibility needs to be built into the process for requiring statewide programs at least in the near term as the IOUs award third-party programs and revamp their portfolios. IOU staff indicated that since the CPUC identified a specific list of programs that are required to be statewide, it might limit the flexibility to revamp the portfolio (such as by eliminating a program that is no longer needed, or consolidating across programs). At the very least it introduced uncertainty around the IOUs' flexibility to make substantive changes that would impact programs on the required list.

7 Appendix A: IOU Program Manager Sample Detail

7.1 Sample Design

Evergreen developed a comprehensive database of IOU-administered programs based on the following data sources:

a) The California investor-owned utilities' (IOUs') Energy Efficiency Business Plans (filed January 17, 2017)[55]
b) The California Energy Data and Reporting System (CEDARS)[56]
c) Program data provided by the IOUs in early January 2019

During this exercise, Evergreen also developed additional program groupings based on general program types. Along with the initial program groups, we developed a categorization that allowed us to group similar program types based on other key program characteristics. The main categories of variables created for this exercise are as follows:

- Program type
- Delivery mechanism (e.g., upstream, midstream, downstream)
- Measure / technologies covered
- Statewide status
- Target markets
- Budget
- Energy savings

Based on the program characterization, Evergreen grouped programs based on their key characteristics for the purposes of drawing a sample on which to focus our research. Each program was placed into one of the following categories:

- Audit, Workforce Education and Training
    - Energy Advisor
    - Workforce Education & Training (WE&T)
- Codes and Standards
- Downstream
    - Direct Install

[55] Downloaded from the CAECC website: https://www.caeecc.org/business-plans-1.
[56] Program data downloaded from the CEDARS website on December 17, 2018.

  - Other
- Emerging Technologies
- Finance
- Local Government Partnerships (LGPs)
  - Institutional
  - Local Government
- Midstream
  - Plug Load and Appliance
  - Heating Ventilation Air Conditioning (HVAC)
- New Construction
  - Residential
  - Commercial (Savings by Design)
- Upstream Lighting

Table 12 below shows the budget and energy savings claimed from the CEDARS website for each category for active programs.[57]

Table 12: 2019 California IOU Programs by Category

Program Category	Total Number of Programs	Total 2018 Budget	Total 2018 Gross kWh	Total 2018 Gross Therms
Audit, Workforce Education and Training	50	$98,998,313	356,501,756	9,014,881
Codes and Standards	24	$23,822,112	1,738,257,898	47,937,695
Downstream	106	$338,723,226	717,389,217	48,085,478
Emerging Technologies	12	$13,867,850	0 (non-resource)	0 (non-resource)
Finance	17	$7,468,692	4,952,146	410,638
LGP	91	$99,622,339	115,453,362	1,125,361
Midstream	18	$73,887,814	118,595,578	3,845,686
New Construction	9	$35,765,515	46,940,879	3,093,483
Upstream Lighting	3	$52,764,896	290,869,792	(4,874,537)
Statewide ME&O	1			
Grand Total	**331**	**$744,920,757**	**3,388,960,628**	**108,638,685**

Source: 2018 CEDARS data download on December 17, 2018.

[57] Programs were excluded that were flagged as cancelled in CEDARS or by the IOUs based on a data request response.

Next, a sample of 191 programs was selected from which to recruit for the California IOU program manager interviews. The goal was to get a range of programs to cover the key characteristics that are important to this research, and to include the major programs in terms of budget and energy savings.

Table 13 below shows the same information from Table 12 above, but for the program sample/recruitment pool. As shown, the recruitment pool represents three-quarters or more of the total budget and energy savings claims. Evergreen anticipated interviewing IOU program managers associated with about half of the 191 programs in the sample pool, based on previous experience and considering the tight study timeline.

Table 13: 2019 California IOU Program Recruitment Pool

Program Category	Number of Programs	2018 Budget	2018 Gross kWh	2018 Gross Therms
Audit, Workforce Education and Training	22	$71,526,750	255,699,503	6,687,905
Codes and Standards	23	$23,822,112	1,738,257,898	47,937,695
Downstream	33	$201,904,277	417,342,231	37,343,720
Emerging Technologies	12	$13,867,850	-	-
Finance	16	$6,590,113	4,952,146	410,638
LGP	61	$87,421,378	114,688,362	1,125,361
Midstream	12	$65,866,192	105,614,667	3,400,086
New Construction	9	$35,765,515	46,940,879	3,093,483
Upstream Lighting	3	$52,764,896	290,869,792	(4,874,537)
Statewide ME&O	1	-	-	-
Grand Total	192	$559,529,083	2,974,365,478	95,124,351
% of Total	**58%**	**75%**	**88%**	**88%**

Source: 2018 CEDARS data download on December 17, 2018.

7.2 Pilot Test

Before launching the interviews full-scale, Evergreen tested the interview guide on 12 programs in the first half of February 2019:

- Audit, Education and Training: Residential Energy Advisor (SoCalGas and SCE)
- Midstream: Plug Load and Appliance (for all four IOUs)
- Downstream: Residential Direct Install (PG&E and SCE) and Commercial Direct Install (SoCalGas and SDG&E)
- Residential New Construction (PG&E and SCE)

This set of programs represented a range of program delivery channels and characteristics, allowing a test of whether interview questions and criteria are appropriate across varying program designs. During the interviews, Evergreen tested the draft program manager guide and asked for feedback on the approach and suggestions for improvements. Minor revisions were made to the guide, which is included in Appendix E.

7.3 Interview Completes

After making slight revisions to the interview guide in response to the pilot test, Evergreen conducted the remaining interviews in late February and the first half of March 2019. Including the pilot interviews, a total of 59 IOU program manager interviews were conducted, covering the same number of programs. Table 14 shows the interviews by program category and IOU. As shown, the interviews covered 39 percent of the portfolio in terms of electricity savings. An additional eight interviews were conducted with implementers and trade ally organizations.

Table 14: Interview Completes

Program Category	Number of Interview Completes / Programs					% of Total 2018 Energy Savings Represented by Completes	
	PG&E	SCE	SoCalGas	SDG&E	Total	Electricity (Gross kWh)	Gas (Gross Therms)
Audit, Workforce Education and Training	3	3	4	2	12	31%	26%
Codes and Standards		4			4	39%	-
Downstream	1	3	4	3	11	13%	39%
Emerging Technologies	1		1	1	3	-	-
Finance		2		2	4	-	-
LGP	2	2	5	2	11	99%	100%
Midstream	1	2	2	2	7	76%	41%
New Construction	1	2	1	0	4	39%	54%
Upstream Lighting		1		1	2	81%	74%
Statewide ME&O	1				1	-	-
Total	**10**	**19**	**17**	**13**	**59**	**39%**	**20%**

8 Appendix B: Additional Regulatory Background

This appendix contains relevant excerpts from four CPUC rulings and Decisions, and a summary of prior CPUC Decision excerpts related to the "statewide" issue, from a workshop held in conjunction with the Phase II Workshop 3 (from item 1 below):

1. Administrative Law Judge's Ruling re comments on Phase II Workshop 3 (Statewide and Third Party Energy Efficiency Programs) (April 1, 2015)[58]
2. Ruling of Assigned Commissioner and Administrative Law Judge seeking input on approaches for Statewide and Third Party Energy Efficiency Programs (May 24, 2016)[59]
3. Decision 16-08-019 Providing Guidance for Initial Energy Efficiency Rolling Portfolio Business Plan Filings (August 25, 2016)[60]
4. Decision 18-05-041 Addressing Energy Efficiency Business Plans (June 5, 2018)[61]
5. CPUC Decision excerpts from 2001 to 2012 (from workshops held on March 23-24, 2015)[62]

Verbatim text from the Decisions and rulings are included in the gray boxes throughout this appendix.

8.1 Administrative Law Judge's Ruling re Comments on Phase II Workshop 3 (Statewide and Third Party Energy Efficiency Programs) (April 1, 2015)

"The February 24, 2015 Assigned Commissioner and Administrative Law Judge's Ruling and Scoping Memorandum regarding implementation of energy efficiency "Rolling Portfolios" (Phase II of Rulemaking 13-11-005) (Phase II Scoping Memo) set out the procedural schedule for the current phase of this proceeding. Pursuant to that schedule, on March 23-24, 2015 we conducted a workshop concerning statewide and third-party energy efficiency programs (workshop 3)."

[58] http://docs.cpuc.ca.gov/PublishedDocs/Efile/G000/M149/K822/149822040.PDF
[59] http://docs.cpuc.ca.gov/PublishedDocs/Efile/G000/M162/K005/162005234.PDF
[60] https://docs.wixstatic.com/ugd/0c9650_9afbd868952646bba5ea5b687499fd4b.pdf
[61] https://docs.wixstatic.com/ugd/849f65_25c301572da7419e96482e5dae5c347e.pdf
[62] http://docs.cpuc.ca.gov/PublishedDocs/Efile/G000/M149/K822/149822040.PDF

The workshop presentations were attached to the ruling, which provided a range of information and perspectives, including from the IOUs, TURN, LBNL and implementation firms. Also in the Decision was a list of past CPUC Decision excerpts related to the statewide issue (included at the end of this section.)

The ruling posed a series of questions for parties to comment on – the questions related to Statewide administration were as follows:

"2.1 Statewide Energy Efficiency Programs

2.2.1. Current implementation approach of IOU Statewide programs

1. On the supply side, utility-owned generation projects have been required to compete "head-to-head" with independent power producer bids in RFOs. Could/should that same approach be taken in energy efficiency portfolios?

2. Are statewide programs designed to support efficiency measure pathways to code adoption in coordination with the IOUs' Codes and Standards advocacy?

a. If not, should they be?

b. Does the business plan concept proposed by the joint stakeholders incorporate a "pathway to code" concept?

2.2.2. Should we Standardize Current Statewide Programs?

1. Should we standardize current statewide programs across Program Administrators (Pas)?

2. What kinds of programs lend themselves to statewide leadership on design and implementation?

3. Would it make sense to develop mid-stream and upstream programs at the statewide level to more fully leverage the state's buying power with manufacturers and/or retailers, rather than have each utility develop separate mid-stream and upstream programs?

4. Can/should we simultaneously have regional variations for similar programs (e.g., commercial lighting) and have an overlapping single statewide program for the benefit of those with a statewide footprint?

5. Would the proposed business plan approach envisioned by the joint stakeholders' proposal lend itself to a more standardized statewide approach? If so, how? If not, why not?

2.2.3. Should we Replace Some Statewide Approaches with Regional Approaches?

1. Are there particular "statewide" programs that we should re-label as regional or local?

2. If so, which programs and why?

> 2.2.4. Should we modify the mechanics of Statewide Program Administration?
>
> 1. Do the portfolios have too many programs? If so, how could we modify the statewide PA mechanics help to reduce them?
>
> 2. Should we move to a third-party administrator for some statewide program(s); if so which one(s)?"

8.2 Ruling of Assigned Commissioner and Administrative Law Judge Seeking Input on Approaches for Statewide and Third Party Energy Efficiency Programs (May 24, 2016)

> "This ruling seeks parties' input on several potential program delivery changes to the statewide and third-party offerings in the California Public Utilities Commission's (Commission) energy efficiency portfolios. This ruling includes concepts designed, in part, to respond to the mandate in Senate Bill (SB) 350 (De León, 2015) requiring a doubling of statewide delivered energy efficiency savings in electricity and natural gas end uses of California retail customers by 2030.
>
> These topics were the subject of earlier workshops on March 23, and 24, 2015, and an initial set of comments by some parties filed on or before April 13, 2015, in response to an Administrative Law Judge ruling issued April 1, 2015. In response to the workshops and comments, we have developed proposals for potential approaches to addressing both statewide and third-party program requirements."

These proposed definitions are resolved in Decision 16-08-019, described next.

8.3 Decision 16-08-019 Providing Guidance for Initial Energy Efficiency Rolling Portfolio Business Plan Filings (August 18, 2016)

> "This decision gives policy guidance on several issues related to the filing of energy efficiency business plans, as previously contemplated in Decision 15-10-028, which set up the framework for the energy efficiency Rolling Portfolio process. The decision addresses next steps for regional energy networks, the appropriate baselines to be used to measure energy savings for specific programs and measures, transition for statewide and third-party programs, and changes to the evaluation and shareholder incentive frameworks."

> "On May 24, 2016, an Assigned Commissioner and ALJ Ruling was issued seeking comment on approaches to statewide and third-party programs. The ruling included a proposed definition and approach to statewide programs. This topic was the subject of earlier workshops on March 23 and 24, 2015. The purpose of our emphasis on this type of program was to take advantage of uniform opportunities across the state for customers or market actors whose operations do not vary significantly geographically within California. In part, we wanted to prioritize easy program access to customers, and in part, lower transaction costs for administrators and implementers. A "statewide" emphasis in the portfolios has been a consistent theme in our oversight of utility energy efficiency programs since at least 2002."

The ruling summarizes the comments received, which are summarized further here:

Single Statewide Implementer	Many parties stated that the CPUC should not require a single implementer, that the IOUs may need more than one contractor to perform different roles. The CPUC agreed with the comments and changed the wording so that more than one implementer may be associated with a statewide program.
Eligibility for and Assignment of Statewide Administrator Roles	Parties presented arguments that entities besides IOUs such as RENS should be able to be the administrators. TURN suggested a competitive bid process – but the CPUC said the timeline won't allow it. Some parties said that Statewide programs should be limited to upstream and midstream only, with the CEEIC saying all Statewide administrators should have the same requirements – including having to outsource implementation. Other parties did not agree, since other non-IOU potential administrators are themselves implementers. The CPUC responded that they expected that selecting the Statewide administrative lead for each Statewide program would be worked out through the CAECC process and documented in the Business Plans through a collaborative process.
Cost Sharing and Cost-Effectiveness Across Utility Service Territories	The proposed length of time for IOUs to true up the cost sharing was originally five years, which the CPUC shortened to one year in response to comments. The CPUC clarified that costs will still be born by all IOUs, and savings accrued to each IOU, as it has been done historically.
Coordination with Publicly-Owned Utility Programs	In response to comments from POUs, the CPUC clarified that the POUs are not required to administer the Statewide programs and have autonomy, but they are encouraged to coordinate / collaborate.
Upstream and Midstream Programs and Market Transformation Approaches	Parties tend to agree that upstream and midstream programs should be Statewide, and should have a market transformation focus. The CPUC clarified the definition of midstream. There was disagreement among the parties who submitted comments whether downstream programs should be considered for SW also. PG&E suggested piloting some downstream programs with a Statewide approach (described below).
Local Government Programs	The LGSEC asked that the CPUC designate a statewide implementer for all of the LGPs to ensure consistency in treatment across service territories.

	The CPUC was interested in LGSEC's proposal, and suggested that it be discussed among the program administrators at the CAEECC to see if consensus can be reached. The CPUC asked that the proposal be presented in a business plan proposal for their consideration if there is consensus to do so.
Pay for Performance	CPUC had initially encouraged the PAs to use Pay for Performance in their Statewide programs, but parties disagreed, so the CPUC is not requiring it but encouraging them to use it as much as possible.
Workforce training	In comments on the proposed decision, the BlueGreen Alliance argued that by failing to emphasize the need for quality installation in energy efficiency programs by a trained workforce, this decision contradicts prior guidance in these areas by the Long Term Energy Efficiency Strategic Plan and D.12-11-015. The CPUC clarified that nothing in this decision modifies any of those prior directives, and the Commission still expects the business plans and program designs to address the issue of ensuring and continuously improving workforce and installation quality for energy efficiency measures.

Below, find the most relevant portions of the Decision related to the issues this study is addressing.

Clarifying the definition of "midstream" program interventions:

> "In response to comments on the proposed decision from NCI, we clarify that under our definition of midstream herein for purposes of the statewide requirements, we do not intend to include installers and contractors. This may be different from a midstream definition used for other purposes in the portfolio or in the industry in general."

Clarifying that POS programs are midstream, not downstream:

> "In response to specific comments from SoCalGas, we also clarify that we consider point-of-sale rebates offered through retailers to still be counted as midstream interventions, because the partnership is with the retailer, even though the rebate goes to the end-use customer at the point of sale. The statewide concept here in general is intended to apply to the program partners with whom the program administrators are working directly, all strategies will eventually touch or involve end-use customers in order to produce actual savings, but that does not make all of these programs downstream interventions. The important distinction for purposes of the statewide requirements is about the entity with whom the program administrator is partnering in the program or intervention strategy."

Discussing that some downstream programs may be suitable for a statewide approach:

> "We also do not agree, necessarily, that the statewide designation must be limited to those upstream and midstream types of programs. While it is true that many downstream programs must vary due to the diversity of customers and end uses, it is not clear that that necessarily means that all program designs and approaches downstream must be different. For example, even in the industrial sector, where custom projects vary perhaps the most among any sector because of the diversity of processes involved, it could still be desirable to have a consistent set of program rules, documentation requirements, savings measurement requirements, etc. regardless of the area of the state in which the program is operating."

Identifying pilot programs for testing out statewide approach for downstream programs:

> "As discussed above, while we are convinced of the importance of a uniform statewide approach for upstream and midstream programs, including those focused on market transformation objectives, we think it is important to test out whether the statewide approach can be applied to some downstream program approaches as well.
>
> PG&E, in its comments, suggested piloting the statewide approach in general. We do not believe it is necessarily to pilot the statewide approach for upstream and midstream programs. However, we will apply this logic to the downstream programs and select a few to be piloted as statewide, as discussed further below."

The Decision then provided a summary of Statewide Requirements:

> "**Adopted definition**: A program or subprogram that is designed to be delivered uniformly throughout the four large Investor-Owned Utility service territories. Each statewide program or subprogram should be consistent across territories and overseen by a single lead program administrator. One or more statewide implementers, under contract to the lead administrator, should propose the design and deliver the program or subprogram in coordination with the lead program administrator. Local or regional variations in incentive levels, measure eligibility, or program interface are not generally permissible (except for measures that are weather dependent or when the program administrator has provided evidence that the default statewide customer interface is not successful in a particular location).
>
> Upstream (at the manufacturer level) and midstream (at the distributor or retailer level, but not contractor or installer) interventions are required to be delivered statewide. Some, but not all, downstream (at the customer level, or via contractors or installers) approaches are

> also appropriate for statewide administration. Statewide programs are also designed to achieve market transformation.
>
> **Subprograms Required to be Administered Statewide:** As discussed above, we will require all of the upstream and midstream program delivery types to be administered according to the statewide definition adopted in this decision. *[Evergreen note: Decision 18-05-041, discussed in the next section, provided an updated list of programs.]*
>
> "A quick staff estimate suggests that the programs specifically listed above would compromise approximately 30 percent of current (2016) portfolio expenditures, though we recognize this may change in the future with the business plan filings and proposed changes therein. We would not expect a dramatic change, however. In order to ensure there is no dramatic shift, we will require that at least 25 percent of the program administrators' budgets in the business plans be devoted to statewide programs or subprograms.
>
> In addition, we require the program administrators to pilot the statewide approach with at least four separate programs that are currently considered downstream but which have some statewide elements." *[Evergreen note: The later Decision – 18-05-041, described next, provides the final list of downstream programs to pilot the statewide approach.]*

8.4 Decision 18-05-041 Addressing Energy Efficiency Business Plans (May 31, 2018)

> "This decision approves the energy efficiency business plans of eight program administrators (PAs)."
>
> "Statewide programs are approved, including lead PA assignments, and guidance is included on governance, balancing account treatment, and fund contributions."

The CPUC agreed with SCE's request to:

> "Give all PAs the ability to continue local pilot activities that would otherwise qualify for statewide administration but that are not yet ready for such statewide treatment."

The CPUC identified the statewide programs and the PA leads:

- Midstream Plug Load and Appliance – SDG&E
- HVAC – SDG&E
- New Construction (Residential and Commercial) – PG&E
- New Finance Offerings – SoCalGas
- Codes and Standards Advocacy – PG&E

- Lighting – SCE
- Emerging Technologies - SoCalGas (Gas) and SCE (Electric)
- Workforce Education and Training – Career Connections (K-12) – PG&E
- Institutional Partnerships – University of California and California State University – SCE, and State of California and Department of Corrections – PG&E
- Foodservice Point of Sale Program – SoCalGas
- Midstream Commercial Water Heating – SoCalGas

"As directed in D.16-08-019, the IOUs proposed several downstream programs to be piloted on a statewide basis, as follows:

- Water/Wastewater pumping program for non-residential public sector customers (lead: SCE; annual budget $5.3 million)
    - This program was originally launched out of SCE's IDEEA 365 solicitation process, piloted for approximately 18 months, and is now transitioning to a mainstream third party program.
- Workforce education, and training: Career and workforce readiness (lead: PG&E; annual budget $1.7 million)
    - Career and workforce readiness to support organizations helping members of disadvantaged communities to enter the energy workforce. Collaborating with established training organizations that are preparing the incoming energy workforce, and increasing the capacity of the current workforce through technical upskill initiatives.
- Indoor Agriculture Program (lead: PG&E; budget: not yet specified)
    - This program would support growers in managing resources wisely and reducing electricity costs for agricultural customers. Aims to increase awareness among agricultural customers about behavioral opportunities to reduce energy use.
- Residential HVAC Quality Installation/Quality Maintenance (lead: SDG&E; annual budget: $6.9 million)
    - This is a pay-for-performance program, building experience in offering residential quality installation programs, with SDG&E serving as the lead for the statewide residential HVAC quality installation program CALSPREE.

CPUC approves these except PG&E's indoor agriculture program proposal is rejected. We are aware that PG&E itself desired to amend this program proposal and resubmit its business plan, a motion which was denied by the ALJs largely due to a desire not to restart the clock on processing of the business plans. But it is clear this program is not as well thought-out as some of the other proposals and it appears premature to be approved. Thus, PG&E shall not

> launch this program as a downstream statewide program at this time."
>
> "In order to ensure there is no dramatic shift, we will require that at least 25 percent of the program administrators' budgets in the business plans be devoted to statewide programs or subprograms."
>
> "The CPUC agrees with SCE's request to: Give all PAs the ability to continue local pilot activities that would otherwise qualify for statewide administration but that are not yet ready for such statewide treatment."

8.5 CPUC Decision Excerpts from 2001 to 2012 (from Workshops held on March 23-24, 2015)

Past Decision excerpts on the "statewide" issue[63]:

From D.01-11-066:[64]

> "Statewide programs will continue to be the backbone of the energy efficiency approach for 2002. These programs serve the Commission's policy goals and objectives by allocating funding equitably across customer classes and geography, providing consistent and recognizable program reach and securing both short- and long-term energy savings and peak demand reduction.
>
> Statewide programs must be uniform, with consistent terms and requirements throughout all the utilities' service territories. These consistent terms should include identical application procedures, financial incentives (if applicable), and other program implementation details. If the utilities cannot align their statewide program proposals, the Commission will choose the elements it prefers from those proposed. "

From D.02-03-056:[65]

> "As we discuss below, many of the IOUs' proposed programs are not uniform. We have modified those proposals to achieve consistency across IOU programs to enhance energy savings statewide."

[63] http://docs.cpuc.ca.gov/PublishedDocs/Efile/G000/M149/K822/149822040.PDF.
[64] http://docs.cpuc.ca.gov/publishedDocs/published/FINAL_DECISION/11469.htm
[65] http://docs.cpuc.ca.gov/word_pdf/FINAL_DECISION/14345.pdf

D.03-04-055[66] which authorizes 2003 programs, includes the following "statewide" programs:

- Appliance recycling
- Single-Family Rebates
- Multi-Family Rebates
- Home EE surveys
- Energy Star New Homes
- Standard Performance Contracting
- Express Efficiency
- Nonresidential Audits
- Building Operator Certification and Training
- Savings by Design
- Education and Training
- Codes and Standards
- Upstream residential lighting
- Emerging Technologies
- Marketing and Outreach

Also from D.03-04-055:

> "Some energy efficiency programs should be uniform around the state to promote customer understanding and equitable funding across customer classes and geography."

D.03-12-060[67] contains some further definition:

> "Statewide energy efficiency programs are those that are offered uniformly by the utilities and are designed to promote customer participation on a broader basis. In addition, statewide marketing and outreach programs are designed to coordinate government-sponsored activities with private sector stakeholders including manufacturers and retail sellers of energy efficiency products and services, business and residential building managers, commercial and industrial program managers, and non-governmental organizations… Local programs are those that are narrower in scope, tailored to specific geographic areas or hard to reach customer groups."

[66] http://docs.cpuc.ca.gov/published/FINAL_DECISION/45284-01.htm
[67] http://docs.cpuc.ca.gov/published/Final_decision/39643-02.htm

From D.09-09-047:[68]

We adopt and fund twelve statewide programs, with some modifications specified below to be consistent with the Strategic Plan:

- Residential
- Commercial
- Industrial
- Agricultural
- New Construction
- Lighting Market Transformation
- HVAC
- Codes and Standards
- Emerging Technologies
- Workforce Education and Training
- Marketing Education and Outreach
- Integrated DSM

"The initial utility applications in July 2008 included well over 200 distinct programs. These programs often overlapped within utilities, and failed to coordinate similar programs among utilities. One of our goals is to simplify the existing maze of programs into fewer, clearer, and more coordinated programs that customers, particularly those in multiple jurisdictions, can more easily access and understand the availability of ratepayer-funded programs.

In October 2008, there was an Assigned Commissioner's Ruling that directed the utilities to refile their applications, which stated: "We must reduce very significantly the overall number of programs. We envision no more than 10 core statewide programs and perhaps another 20-30 for the entire suite of utility portfolios (not including third party programs)."

[68] http://docs.cpuc.ca.gov/PUBLISHED/GRAPHICS/107829.PDF

D. 11-04-005[69] from 2011 modified D.09-09-047 and stated the following:

> "We will adopt certain of the modifications sought by the Joint IOUs in this area. It is reasonable to allow small variations to statewide programs to fit the needs of different IOU territories, as long as these variations are generally consistent with the intent and design of the statewide programs."
>
> That decision ordered the utilities to "ensure statewide utility energy efficiency offerings are coordinated (i.e., very similar or the same) across a number of areas, including: 1) program name, b) incentive levels offered, c) delivery mechanisms, d) marketing materials, e) regular inter-utility coordination, f) ongoing review and adoption of best practices and feedback from program evaluations across the utilities, and g) intra-utility coordinated actions with state, local and federal agencies and other key actors."

Footnote 6 in D.12-05-015[70] also contains some language on statewide vs. regional vs. local definitions.

[69] http://docs.cpuc.ca.gov/PUBLISHED/FINAL_DECISION/133880.htm
[70] http://docs.cpuc.ca.gov/PublishedDocs/WORD_PDF/FINAL_DECISION/166830.PDF

9 Appendix C: Response to Comments on Draft Research Plan

This section of the appendix includes comments submitted on the draft research plan in January 2019 along with responses to comments that were prepared by Evergreen with input from the IOU Study Team.

9.1 Joint Non-IOU PA Comments

3C-REN
Tri-County Regional Energy Network

January 2, 2019

The Association of Bay Area Governments (ABAG), on behalf of the San Francisco Bay Area Regional Energy Network (BayREN), Marin Clean Energy (MCE), and the Tri-County Regional Energy Network (3C-REN), collectively "the Joint Non-IOU Administrators", submit these comments to the Statewide Energy Efficiency Program Composition Review, Draft Research Plan. BayREN is a collaboration of the nine counties that make up the San Francisco Bay Area. BayREN administers energy savings programs on a regional level, drawing on the expertise, experience, and proven track record of Bay Area local governments to develop and administer energy efficiency, climate resource and sustainability programs. BayREN was approved as a program administrator in D12-11-015, and has been implementing ratepayer funded programs since 2013. BayREN represents 20% of the state's population and shares territory with PG&E and MCE. MCE has administered ratepayer-funded energy efficiency programs since 2012 focused on commercial, multifamily, and single-family customers. 3-C REN, representing the tri-counties of Ventura, Santa Barbara, and San Luis Obispo, was approved as regional energy network in D.18-05-041.

In addition to those of the IOUs, D.18-05-041 approved the business plans submitted by four non-IOU Program Administrators.[1] BayREN's business plan provides an eight year vision with clear goals, strategies and tactics to increase the access and availability of energy efficiency services to a broad range of ratepayers and sectors. MCE's business plan expands it programs into new areas including serving the agricultural and industrial sectors and to additional participants including large commercial customers. 3C-REN was approved to implement programs focusing on codes & standards, workforce, education, and training, and programs for residential customers in the tri-county region.

[1] In addition to the Joint Non-IOU Administrators herein, the business plan of SoCalREN, submitted by Los Angeles County, was also approved.

D.16-08-019 made clear that utilities are not the only program administrators eligible to take on a lead administrator role for statewide programs. (See Conclusion of Law # 40, page 102.) Moreover, while the lead statewide administrator should be the final decision maker with respect to the statewide program, the lead should consult and collaborate with the other program administrators. (Conclusion of Law # 43, page 103.)

General Comments

The draft Research Plan omits any mention of the four non-IOU program administrators that are actively implementing energy efficiency programs in the state, three of which are by definition regional implementers. This exclusion will preclude an accurate representation of the energy efficiency landscape thereby making any recommendations based on incomplete data. It is critical that non-IOU programs be included in the analysis and that program managers be included in the set of interviews. There is no explanation as to why four of the program administrators and their portfolios have been excluded from the study. While the leads of all statewide programs are currently IOUs, this could change in the future.

Specific Comments

1.2 Research Questions
These questions should not be limited to just the IOUs, but rather should include all eight program administrators. There is no explanation as to why the study will only look at a portion of the statewide energy efficiency landscape. Further, since any recommendations – should they be adopted – would likely impact all program administrators, all programs and administrators should be included.

Task 5
The evaluator should review **all** approved business plans and not just those of the IOUs. By excluding half of the approved business plans, the report will not provide a comprehensive analysis of the California Energy Efficiency landscape.

Step Two: Definition of Pros and Cons of Statewide Administration

Non-IOU Senior Program managers, or their equivalent, should be added to the three identified groups to interview at page 7. This is particularly important since one of the areas of input sought is "interactive effects between regional and statewide programs".

Step 5: Interviews

As indicated above, non-IOU program administrator staff should be added to the interview list. Also, the statements should substitute PA for IOU since there are overlapping territories. For example, "[c]ontractors tend to participate in this program for more than one program administrator [(i.e. PG&E, BayREN, MCE)]".

Step Six: Independent Assessment

- (IOU) should be deleted from the last sentence of the first paragraph.
- An "independent" assessment must include non-IOU PAs.

The Joint Non-IOU Administrators look forward to continue to collaborate on this important study and request that these comments be incorporated into the final plan.

If you have any questions, please do not hesitate to contact us.

Sincerely,

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9.2 SoCalREN Comments

Southern California
REGIONAL ENERGY NETWORK

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Date: January 4, 2019

To: Robert Kasman, CPUC; Alyssa Bruner, PG&E; Evergreen Economics;

From: The Southern California Energy Network

SoCalREN Comments on the Statewide Energy Efficiency Program Composition Review, Draft Research Plan

The County of Los Angeles (County of LA), on behalf of the Southern California Regional Energy Network (SoCalREN) submits these comments to the *Statewide Energy Efficiency Program Composition Review, Draft Research Plan* (Draft Plan). The SoCalREN appreciates the opportunity to submit general comments and specific clarifications regarding the content of the Draft Plan for PG&E's and Energy Division's consideration.

I. GENERAL COMMENTS

The Draft Plan omits any mention of the four non-IOU Program Administrators (PAs) that are actively implementing energy efficiency programs in the state, three of which are by definition regional implementers. This exclusion may preclude an accurate representation of the energy efficiency landscape thereby making any recommendations based on incomplete data. It is critical that feedback and input from non-IOU PAs be included in the analysis and that their program managers be included in the set of interviews that is intended to be conducted in this Draft Plan. Benefits and lessons learned regarding regional administration will be key to developing a proper assessment and recommendation on which IOU programs lend themselves to statewide or regional administration.

In addition, the CPUC in D.16-08-019 provided distinct clarification that although the lead statewide administrator should be the final decision maker with respect to the statewide program, the lead should consult and collaborate with the other program administrators.[1]

II. SPECIFIC COMMENTS

A. Section 1.2: Research Questions (pg. 3)

[1] D.16-08-019, p. 103.

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The SoCalREN applauds the Draft Plan's efforts to identify discerning research questions, however SoCalREN finds that the questions omit a necessary clarification that this Draft Plan's assessment will be in regard to IOU programs only.

- Suggested modification (pg .3):

  "What are advantages and disadvantages of IOU regional vs. IOU statewide program implementation, beyond cost effectiveness (e.g., customer experience, code variation by climate zone, interaction between IOU regional and IOU statewide programs)?
  What criteria should be considered to identify programs best suited to IOU regional vs. IOU statewide implementation?
  What evidence exists to support the criteria of IOU regional vs. IOU statewide program effectiveness and cost-effectiveness?
  What programs, or characteristics of IOU programs and IOU subprograms, can be recommended for statewide implementation, and based on what criteria? What IOU programs, or characteristics of IOU programs and IOU subprograms, may not be well suited for statewide implementation? "

B. Section 2: Task 1 Project Management and Task 4 Final Research Plan (pg. 4-5)

The SoCalREN believes the Draft Plan should include all key stakeholders of energy efficiency administration in the overall study team to ensure that all available subject matter expertise is leveraged and that key contributions to the identification of potential issues and proposed solutions of the Draft Plan are captured.

- Suggested modification (pg. .4): "Evergreen will conduct regular check in calls with the ~~IOU~~ PA Study Team (IOU and non-IOU PAs) to discuss our progress and proactively identify potential issues and propose solutions to prevent any delays."
- Suggested modification (pg. .5): "Evergreen will consider the comments submitted to the PDA and consult with the ~~IOU~~ PA Study Team for additional input."

C. Section 2: Task 5 Data Collection and Analysis (pg. 5-11)

The SoCalREN appreciates the draft plan's effort to collect data regarding regional and statewide administration and applauds the challenging task of identifying a set of specific criteria that will be used to assess whether an ***IOU program*** might be more effective if it were implemented regionally or statewide. However, there is a small concern that this clarification regarding the Draft Plan's focus on

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IOU programs is lacking within this section and that key regional stakeholder data and feedback is also missing under this extremely vital task to the Draft Plan.

- The SoCalREN recommends that a small clarification be applied throughout this section that clarifies programs discussed within this section refer to ***IOU programs***.
- The SoCalREN also recommends that "Step 2" and "Step 5" under Task 5 include non-IOU PA program managers feedback and insight. This will guarantee that all the necessary background information is used to inform the development of "Step 3" and to ensure that "Step 6" utilizes the most comprehensive data for its final independent assessment.

9.3 Study Team Comment Responses

The Study Team (the four IOUs and their evaluation contractor, Evergreen Economics) appreciates the concerns and suggested modifications provided in two sets of comments from:

- The Association of Bay Area Governments (ABAG), on behalf of the San Francisco Bay Area Regional Energy Network, Marin Clean Energy, and the Tri-County Regional Energy Network, collectively "the Joint Non-IOU Administrators," and
- The County of Los Angeles on behalf of the Southern California Regional Energy Network (SoCalREN).

Both sets of comments point out that the draft research plan omits mention of the non-IOU PAs that are actively implementing energy efficiency programs in California, precluding a comprehensive review of the California energy efficiency landscape.

Historically, the IOUs have not evaluated or assessed REN programs in any way—that role was considered the domain of the CPUC. However, the Study Team agrees with comments submitted that in order for this study to be comprehensive, the study scope should be modified to incorporate input and feedback from non-IOU PAs. Likewise, the Study Team would like to emphasize here and in the final research plan that the intent of this study is to conduct an assessment and provide recommendations about program *types* and *delivery strategies* rather than a specific set of programs (IOU-administered or otherwise). The portfolio in 2020 and beyond may encompass a different set of programs than is currently being offered in 2019. At a high level, there is considerable overlap of program types and delivery strategies between IOU programs, and there is overlap between IOU and non-IOU programs, such that a detailed review of every California program is neither necessary nor feasible. To accommodate some of the recommendations received in comments, the Study Team has modified the Research Plan such that during the process of selecting program types and delivery strategies for closer study (i.e., for interviews and assessment in Steps 5 and 6 of Task 5 of the final research plan), Evergreen will attempt to include non-IOU PA program types and delivery strategies as is feasible and consistent with the aggressive study schedule. Furthermore, Evergreen will seek non-IOU PA input on program types and characteristics that may be unique and not covered by similar IOU program types and characteristics considered in the assessment.

Where suggested modifications are consistent across the two sets of comments, the suggestions are adopted. Where suggested modifications differ, the Study Team has attempted to strike a balance between them.

Non-IOU PA-suggested modifications that are consistent across the two sets of comments:

- Non-IOU PA suggested modification: Add interviews with non-IOU senior program managers (or their equivalent) to Task 5, Step 2 of the research.

    - Study team response: We agree with this request and feel it is important to gather input from the non-IOU PAs in response to the research study questions, and have added one telephone interview per non-IOU PA identified in the comments (i.e., ABAG, Marin Clean Energy, SoCalREN and Tri-County Regional Energy Network) plus the fifth non-IOU PA, the Local Government Sustainable Energy Coalition, for a total of five interviews, to our research plan.
- Non-IOU PA suggested modification: Add non-IOU program manager staff to our interview list for Task 5, Step 5 of the research.
    - Study team response: We also agree with this request, and feel it will be useful to gather input from non-IOU PA program managers that manage similar programs as the IOU programs that are the subject of this research. We will seek input from the non-IOU PAs during the Step 2 interviews to identify the appropriate program managers for Step 5. The research plan has been modified to add one to two telephone interviews per non-IOU PA and additional web-based surveys as needed to supplement the interviews (such as to obtain feedback from additional program managers or those that are unable to respond to an interview request during the study interview timeframe).

Non-IOU PA suggested modifications that are inconsistent across the two sets of comments:

- Non-IOU PA suggested modifications: SoCalREN asks us to clarify that the research questions and assessment will be of IOU programs only. In contrast, the Joint non-IOU PAs ask us to review all business plans, including of non-IOU PAs, and include non-IOU PAs in our assessment.
    - Study team response: We agree to a high-level review of the non-IOU PAs' business plans so we understand the types of programs administered by the RENs. As we indicated above, we also plan to add interviews with senior staff and program manager-level non-IOU PA staff so their insights and opinions regarding statewide versus regional administration of programs are captured and incorporated into the assessment.
    - The Study Team has clarified above that our research and assessment will be focused on program *types* and *delivery strategies*, rather than specific programs, and thus should apply to the majority of program types and strategies being used by IOU and non-IOU PAs. The research plan has been modified to make this clarification.
- Non-IOU PA suggestion modification: SoCalREN asks to be added to the Study Team and to regular study team check-in calls and to be able to provide ongoing comment on the study (i.e., outside the public process, which includes opportunities to comment on the draft research plan and draft report).

- Study Team response: Since the CPUC ordered the IOUs to conduct this study, the Study Team believes it is appropriate for the IOUs to manage the study and comprise the Study Team with Evergreen. SoCalREN and other non-IOU PAs will be afforded multiple opportunities to provide input on the study based on the revised research plan, in addition to the two public review periods (this research plan and the draft report).

10 Appendix D: Program Assessment Detail

Appendix D includes two tables that summarize results from in-depth interviews with IOU program managers, implementers, and trade ally organizations by program category. Each row in the tables summarizes a single interview response. The total number of interviews is shown by program category in parentheses. (A total number of 67 interviews were conducted, 59 with IOU program managers and 8 with implementers and trade ally organizations).

The first table (Table 15) is organized by program and includes confidential responses from IOU program managers and implementers that answered the interview questions for a specific program. The table's columns summarize the benefits and drawbacks for various program characteristics. Each program characteristic is denoted in **bold**. After each benefit or drawback, the ranking of the significance of that benefit or drawback toward program savings and cost effectiveness is in parentheses to denote that the interviewee found the benefit or drawback to be minor, somewhat significant, or very significant. Where the interviewer found the identified benefit or drawback to be somewhat unsubstantiated or where it contradicted other information, we made a note in brackets.

Responses from implementers and trade ally organizations that were not specific to the programs listed in this table are included in a separate table below (Table 16), organized by the types of programs the respondents discussed.

The third table (Table 17) summarizes results from the nine completed out-of-state program and portfolio manager interviews. The table's columns categorize the results by state, utility/organization, the sector focus for the interviewee, and the type of energy efficient program administration used by the state, and summarize the overall benefits and drawbacks discussed regarding statewide-administered programs. The summary column on the far right outlines any additional key points discussed by the interviewees including input on the types of programs that may lend themselves to statewide administration outside of their sector focus area.

The last table (Table 18) lists the key program characteristics for each program category shown in Table 15.

Table 15: IOU Program Manager and Implementer Interview Response Summary

Subprogram / Sample Size (n) / Interview #	Benefits of Statewide Administration	Drawbacks of Statewide Administration	Overall Net Benefits and Drawbacks
Energy Advisor / Audits (5) / Interview 1	**Installation Contractors** – Consistency in customer-facing offerings (somewhat) **SAS Vendors** – Streamlined operations if consistent vendor across IOUs (somewhat) **Residential Customers** – Consistency in customer-facing offerings for customers with overlapping IOUs (somewhat) **IOU Administration** – Consistency with the development of one set of customer-facing offerings (somewhat)	**Installation Contractors** – Complexity for contractors to coordinate on and access customer data across utilities (very) **SAS Vendors** – Increase in complexity for vendors to access customer data across four IOUs, potentially requires additional resources (somewhat) **Residential Customers** – Local needs may not be met if lead implementer is unable to address the unique needs across the state (somewhat)	**Overall Drawback.** Benefits would include consistency for utilities and for customers with the development of one set of customer-facing offerings. However, it was identified that the contractors and vendors working with the program data may run into challenges in coordinating and maintaining consistent data protocols, though this issue will be minimized after the initial protocols are developed. A statewide approach would be challenging for the lead administrator because the Energy Advisor programs typically benefit from having regional components that address specific customer needs for a particular service territory. A lead implementer in this setting may not have the direct knowledge or insight into these unique customer needs or marketing approaches.
Energy Advisor / Audits (5) / Interview 2	**Market Actors/IOU Administration** – Complete customer cohesion across the IOUs. Providing a complete analysis of all customers (sharing data), being able to pinpoint customer needs (very); Consistency of offerings and trainings across the IOU territories (minor)	**IOU Administrator/Customers/ Vendors** – Losing the one-on-one with the customers and understanding our markets within our territory. The potential for local needs getting lost in a large scale SW effort (very) **IOU Administrator/Small, Medium & Large Business** – Subject matter experts for individual	**Overall Benefit.** Being able to offer the customer a streamlined process and offerings across the state would be beneficial. However, as noted in many interviews, the fear of losing the one-on-one relationships that IOUs have built over the years is a concern. Program participation may decrease as a result (at least in the short-run

Subprogram / Sample Size (n) / Interview #	Benefits of Statewide Administration	Drawbacks of Statewide Administration	Overall Net Benefits and Drawbacks
		muni's, refineries, and various industries work with [IOU] and know area well. Possibility for confusion and difficulty coordinating across the state (minor) **IOU Administrator** – Increased costs for lead PA. They may have to travel to other territories when it would be cheaper for the IOU in that territory to do so (minor) **Vendors (those conducting audits, etc.)** – Difficulty of having vendors work across IOUs. Current vendors align with [IOU] purpose [short run only] **Vendors** – Complexity for vendors working across IOUs – current vendors are specific for certain industries.	until relationships can be built again). The ability to share customer data and capture that customer's whole energy profile will allow for the lead administrator to better understand the needs of the particular customers.
Energy Advisor / Audits (5) / Interview 3	**Installation Contractors** – Increase consistency across the whole state of California, resulting in reduced market confusion (somewhat); Standardize training across California (somewhat) **IOU Administration** – Consistency in offerings to customers (somewhat); Sharing customer data across IOUs, though possibly confidentiality issues (minor); reduction in long-term maintenance and administration costs with one PA (somewhat)	**IOU Administration** – Significant up-front costs to build a system that would work across all IOUs (very, short term); fewer relationships built with one PM. May lead to lower participation rates (very) **Market Actors** – Coordination with all customers across the state would be difficult (challenge but was dominant this is a drawback) (somewhat) **Commercial Customers** – Centralized account representatives may not be familiar with local	**Overall Drawback.** Consistency across program offerings is seen as a plus; however, the ability to make relationships with other areas (other than the PA territory) would be difficult. A lead implementer may not have the ability to offer what is needed in each region or have that relationship built in the short term. A reduction in market confusion was noted as a benefit. Consistent offerings would minimize confusion.

Subprogram / Sample Size (n) / Interview #	Benefits of Statewide Administration	Drawbacks of Statewide Administration	Overall Net Benefits and Drawbacks
		situations and reduce their ability to serve local customers (very)	
Energy Advisor / Audits (5) / Interview 4	None identified	**Data Sharing** – There are no efficiencies since data is unique to each IOU and since each IOU selects which customers to target and what type of information to present.	**Overall Drawback.** No significant savings as data still has to be handled separately for each utility.
Energy Advisor / Audits (5) / Interview 5	**Residential Customer** – Data privacy is an issue because in order to use green button data (as requested by the CPUC) the customer would need to log into an account number which may be confusing to a customer on a 3P audit tool site. Could mean less people use it because they're concerned about the safety of their information (somewhat)	**Implementer** – Cost savings from doing the same package, contracted once to cover all four utilities, makes sense but the climate is so different (very)	**Overall Drawback.** Would lessen ability to customize to each territory. Concerns about data privacy.
Integrated Energy Education and Training (4) / Interview 1	**Installation Contractors/Market Actors** – Consistency in offerings across the state for groups that operate across service territories (somewhat) **IOU Administration** – Able to leverage resources across IOUs to identify trainings that are consistent across state and work on economies of scale for program offerings (somewhat)	**Workforce Training Orgs** – Commonly specialize in localized efforts, unable to scale at SW level amid lack of resources or focus areas (minor); potential loss of relationships with IOUs that help identify specific targets for trainings and leverage unique community insight for program (minor) **Builders/Architects/Designers/ Other Customers** – Lack of clarity if disadvantaged or rural areas will be focused on for SW program, unknown if implementer will have	**Overall Drawback.** Some trainings already coordinated and co-funded across the state to ensure consistency and to reduce amount of repeated trainings; allows program to utilize reach and economies of scale (example - building operator training). However, there are several regional specific trainings that do not efficiently scale on SW level and may be lost in a statewide model.

Subprogram / Sample Size (n) / Interview #	Benefits of Statewide Administration	Drawbacks of Statewide Administration	Overall Net Benefits and Drawbacks
		knowledge of these current offerings, could lead to lower participation (somewhat); Potentially more costly trainings if SW requirements more stringent than individual IOU offerings, leads to lower participation because too costly for local market actors (ex. lighting requirements in market where not as necessary) (somewhat)	
Integrated Energy Education and Training (4) / Interview 2	**IOU Administration** – Coordinated effort to discuss best practices and leverage insights from similar offerings across service territories (minor)	**Commercial Customers, Builders/Architects/Designers, Consultants** – Potentially less access to particular trainings if only offered in certain regions (somewhat); less regional-specific, relevant offerings (somewhat - very) **IOU Administration** – Additional costs in trying to coordinate trainings and traveling across the state for different types of audiences (somewhat); lack of knowledge for individual markets and audiences – the types of trainings needed in different territories (somewhat)	**Overall Drawback.** Currently, already a good amount of SW coordination, with ongoing PM meetings to discuss best practices and to leverage insights from similar offerings across service territories. However, unlike Career Connections and CWR, IEE&T interacts with unique audiences and unions across service territories. No gained efficiencies by SW administration because of differences across service territories, having to find trainers to travel across state could increase admin costs for PA. Some aspects such as lighting controls program where there are only a couple of required trainings could potentially be SW admin at some point, but other trainings are too complicated and would require significant coordination across the state.

Subprogram / Sample Size (n) / Interview #	Benefits of Statewide Administration	Drawbacks of Statewide Administration	Overall Net Benefits and Drawbacks
Integrated Energy Education and Training (4) / Interview 3	None identified	**IOU Administration** – Not all areas look and function the same, specific needs for specific areas. Difficult for trade partners to coordinate across utilities (minor)	**Overall Drawback.** Due to the localized nature of the program. Ideas are already coordinated across utilities but the need for individual IOU offerings is "crucial to program success."
Integrated Energy Education and Training (4) / Interview 4	**IOU Administration** – Provide more guidance to customers based on collaboration across the IOUs (minor) [Note there is already some collaboration across IOUs]	**Customers** – Differences in needs across the state. It would be difficult to streamline the process so much that it makes sense for everyone. There needs to be efforts that are specific to areas' needs (minor); specific training is tailored to our industries, SW approach may take away from that (minor) **Trade Partners** – Not all areas look and function the same, complexity for trade partners to coordinate across	**Overall Drawback.** Some aspects can easily be made SW, streamlining specific trainings would make sense; however, there are many areas that would have specific needs and streamlining them too much would result in areas "falling through the cracks."
Career and Workforce Readiness (1) / Interview 1	**Market Actors –** Consistency in training opportunities across the state (somewhat) **IOU Administration** – Able to leverage resources across IOUs to identify trainings that are consistent across state and work on economies of scale for program offerings (somewhat)	**Hard-to-reach Markets –** Potentially will focus trainings on most cost effective markets like urban areas which may lead to a lack of focus on more rural and hard-to-reach disadvantaged workers (somewhat)	**Overall Benefit.** While initial concerns exist regarding how the SW program will outline which customer markets will be targeted, viewed as overall benefit because of the scalability of most of the trainings. The SW model should help streamline the training efforts to reach disadvantaged workers across the state.
Career Connections (K-12) (3) / Interview 1	**Market Actors/IOU Administration** – Consistency in offerings across the state (somewhat)	None identified	**Overall Benefit.** Some aspects can easily be made SW, streamlining specific trainings would make sense in

Subprogram / Sample Size (n) / Interview #	Benefits of Statewide Administration	Drawbacks of Statewide Administration	Overall Net Benefits and Drawbacks
			most areas.
Career Connections (K-12) (3) / Interview 2	**IOU Administration** – Consistency in program-facing offerings across the state (somewhat - very); scalability of program participation using SW model (somewhat - very)	None identified	**Overall Benefit.** Consistency in Common Core standards across the state make the K-12 program a good candidate for SW. Provides the necessary resources across service territories and ensures a consistent customer-facing offering. Seen as a somewhat or very significant benefit in expanding the reach of the program and increasing participation in trainings.
Career Connections (K-12) (3) / Interview 3	**IOU Administration** – Consistency in offerings across the state (minor)	**Schools** – Potentially difficult for lead implementer to know the resources available in each service territory (minor)	**Overall Benefit.** Consistency in Common Core standards across the state make the K-12 program a good candidate for SW.
Codes and Standards – Advocacy (2) / Interview 1	**IOU Administration** – Interviewee interpreted SW as including more transparency and documentation which they believed could be helpful, though they already believed that their program took advantage of SW coordination benefits already and that this gave them the ability to solve problems in real time (minor)	**CEC** – Each IOU meets with the CEC. They divide and conquer which topic areas to cover based on their individual strengths and weaknesses; "no one can be an expert on everything." (somewhat to very) **Code Development Bodies** (ICC/ASHRE) – All IOUs are currently involved and if an implementer were to go in place of the IOUs, they'd be under different primes [interviewee was under the impression that implementer would take on more of the work if the SW definition were interpreted more	**Overall Drawback.** [Not for the program in general, but they were concerned about it becoming more SW than they currently have set up] Thinks they've already gone SW in the ways that make sense and that a more conservative interpretation could create uneven focus on the service territory.

Subprogram / Sample Size (n) / Interview #	Benefits of Statewide Administration	Drawbacks of Statewide Administration	Overall Net Benefits and Drawbacks
		conservatively] (somewhat – very) **Case Study Development** – Need to be nimble and work with new contractors to address new technology areas. Imagines it would be challenging for a 3P to do this and to prioritize from 300-400 case study options down to those that are highest priority. [Again this response assumes that a 3P would be involved in a more conservative interpretation of SW.] **Working with Other Utilities** – Concern about QA/QC with regard to other IOUs being responsible for savings outside of their territory. Believes lead IOU can cover at least 80% of SW interest when writing up SOW. IOUs leverage internal IOU staff that is working with things like the grid and can inform case studies (somewhat - very)	
Direct Install (8) / Interview I	**Contractors** – Streamlined role for contractors across the state (somewhat) **Businesses** – Would not be approached by multiple contractors, more streamlined (very)	**Other Utilities** – Will have to rebuild relationships with other utilities. **Contractors** – lessens relationship and ability to work with them on a local level. They currently help contractor to make sure they are able to reach full savings potential (very) **Customer:** "From their standpoint they **really** want to know that their local utility is there to service them."	**Overall Drawback.** Will not be able to "leverage core competencies" and to concentrate on local needs [though not specified in interview]

Subprogram / Sample Size (n) / Interview #	Benefits of Statewide Administration	Drawbacks of Statewide Administration	Overall Net Benefits and Drawbacks
		[Not focused on CE or savings, more about customer service] (somewhat)	
Direct Install (8) / Interview 2	**Businesses** – Chain accounts would have an easier time than the other businesses based on consistency that would come with SW implementation.	**Program Administration** – Scale is large for one PM to take on. Varied climate zones will need to be addressed. Difficulty ensuring that everyone is served equally.	**Overall Neutral.** Sees benefits to consistency across the state but it will "take a lot more work to try to build something consistent." [Note that is a shorter term drawback]
Direct Install (8) / Interview 3	**Installation Contractors** – Consistent rebate offerings allow all customers to be handled equally, increasing participation (somewhat); **IOU Administration** – Minimized stopping and starting of program offerings and a savings goal that is worked towards collectively across IOU territories (very); Consistency across utility programs may lead to marketing savings down the road (somewhat) **IOU Account Reps** – Ability to reach a larger SW base, increasing cost effectiveness and savings (somewhat) **Residential Customers (in IOU overlap)** – Consistency of SW admin program could lead to increased participation (somewhat)	**Installation Contractors** – Difficulty in making regional offerings more flexible (minor); program changes if consensus needed across IOUs (very) **IOU Administration** – Difficulty leveraging local partners (somewhat); Need to communicate program changes or customer data across utilities slows processes down and adds additional administrative burden (somewhat) **IOU Account Reps** – Need to communicate across utilities slows down processes and adds additional administrative burden (minor) **Residential Customers (in IOU overlap)** – Lack of localized programs could decrease customer satisfaction and potentially participation (minor to somewhat)	**Overall Drawback.** For downstream programs, administering statewide can potentially limit the IOUs from leveraging local partners and concentrating on local customer needs. The extra layer of needing IOU consensus can slow down potential innovations and make implementation more difficult and expensive. While program managers identified some value in program consistency from customer and market partner perspective, overall viewed statewide administration as a drawback with regards to savings and cost effectiveness because of the extra administrative costs and lack of regionalized approaches.
Direct Install (8) / Interview 4	**Installation Contractors** – Consistent offerings and marketing material for contractors working	**Installation Contractors** – Cannot customize offerings and marketing in individual areas (very); slower	**Overall Drawback.** Statewide administration may provide some consistency benefits for installation

Subprogram / Sample Size (n) / Interview #	Benefits of Statewide Administration	Drawbacks of Statewide Administration	Overall Net Benefits and Drawbacks
	across service territories, easier to participate and drive end use customer participation (somewhat) **IOU Administration** – Consistency across utility programs may lead to marketing savings down the road (somewhat) **IOU Account Reps** – Ability to reach a larger SW base, increasing cost effectiveness and savings (somewhat) **Residential Customers (in IOU overlap)** – Consistency of SW admin program could lead to increased participation (somewhat)	reaction to potential program changes if consensus needed across IOUs (very) **IOU Administration** – Potentially harder to leverage local municipal partners who may help advertise local installation dates in specific communities (very)	contractors and administrative staff but overall viewed as a drawback because of the loss of regional focus and flexibility. Difficulty in leveraging local partners that help drive participation and processes may slow because of internal coordination that could hurt cost effectiveness and timeliness of program. Inconsistency in direct install offerings at SW level, some coordination between IOUs previously but not as much currently. Because the program is customer facing, it leverages the existing regional knowledge of the IOUs to provide measures and contractor support that their customers need. However, SW approach could potentially drive program participation and help market the program using SW resources that smaller IOUs currently do not have [PM open to some benefits]
Direct Install (8) / Interview 5	**IOU Administration** – Cost savings from consolidating admin labor costs (minor)	**Commercial Customers** – Less of a focus on smaller businesses, more on those with multiple sites (minor)	**Overall Neutral.** Thinks that SW implementers would likely focus more on companies with multiple sites rather than stores with just one or two addresses. Interviewee was not positive that that would increase savings, and a risk that you may serve less total customers. Indecisive on if management costs could go down on behalf of utility.

Subprogram / Sample Size (n) / Interview #	Benefits of Statewide Administration	Drawbacks of Statewide Administration	Overall Net Benefits and Drawbacks
Direct Install (8) / Interview 6	**3P Implementer** – Able to process and track large amounts of data in centralized location (minor) **Contractor** – Increase in volume, easier to participate (minor - somewhat)	**IOU Administration** – Difficult to coordinate efforts across IOUs to align consistent offerings; needs in certain regions may not be prioritized (very) **Contractors** – May focus on low hanging fruit or may focus only in one territory not giving enough attention to various regions (very)	**Overall Drawback.** Overall somewhat to very significant drawback because of the difficult to coordinate offerings across IOUs in SW program. Also, different climate zones require different measures, SW program may not be able to address the needs of all areas across the state, whereas regional-administered programs can focus on specific needs of localized customer base. In SW model, more resources devoted to Admin initially instead of marketing, engineering, fieldwork and driving participation.
Direct Install (8) / Interview 7	**Installation contractors** – Potential to expand participation and increase scale (minor - somewhat)	**Data sharing** – Working with multiple utilities (IOUs and non-IOUs) requires extra screening and data cleaning processes that add administrative burden (somewhat) **IOU Administration** – Difficult to agree across IOUs what measures should be offered to residential customers, certain territories may benefit from certain measures that are not a focus for other territories (minor - somewhat); loss of regional touch with known customer base (somewhat - very)	**Overall Drawback.** Overall a minor drawback for Direct Install program because statewide program may be too broad and lack the focus on individual customer bases that a regional program can offer. Regional approach allows for IOUs to partner with non-IOU utilities and water districts to create an even more targeted regional program.
Direct Install (8) / Interview 8	**IOU Administration** – Cuts down on costs of administration.	**Businesses** – Thinks that attention would shift to the businesses with more than one address to focus	**Overall Neutral**. "You may reduce costs but you may also serve fewer customers" so it's a tradeoff.

Subprogram / Sample Size (n) / Interview #	Benefits of Statewide Administration	Drawbacks of Statewide Administration	Overall Net Benefits and Drawbacks
		outreach on places where you work with a single point of contact to get work done at multiple addresses. Unclear to interviewee what the impact of this would be on savings.	
Downstream (5) / Interview 1	None identified	**IOU Administration** – Differing markets across the state that wouldn't be able to be realized in a SW administration. This would reduce participation, reducing savings and cost effectiveness (very) **Customers (Commercial, Industrial, Agriculture)** – Differing markets across the state that wouldn't be able to be realized in a SW administration. This would reduce participation, reducing savings and cost effectiveness (very) **IOU Account Representative** – Participants in the program have typically come from face-to-face interaction. The relationships that have been built would be lost in the process of SW (very)	**Overall Drawback.** The program manager felt that there were no benefits to SW administration. However, during the discussion of drawbacks, the PM mentioned that a streamlined process would be good for the customer to allow for more certainty in the custom measures and what could be expected. A common drawback (also heard from other PM interviews) was the worry of losing the utility relationships with the customers in their territory. Having one PA wouldn't serve the other IOU territories well.
Downstream (5) / Interview 2	**Builders** – Consistent offerings across the state make it easier to participate across service territories (minor) **Installation Contractors** – Consistent offerings across the state make it easier to participate across service territories (minor)	**IOU Account Reps** – Personal touch element goes away with SW offering, lack of regional touch point (minor) **IOU Administration** – Significant short term efforts to align measure offerings, data collection methods and customer outreach methods	**Overall Drawback.** Currently a SW manual used across IOUs, but different requirements for each. Some IOUs have more advanced programs than others, in terms of offerings and cost effectiveness. As a result, seen as a very significant drawback to go SW because of the

Subprogram / Sample Size (n) / Interview #	Benefits of Statewide Administration	Drawbacks of Statewide Administration	Overall Net Benefits and Drawbacks
	IOU Administration – Cost savings from consolidating admin labor costs (minor)	(somewhat) **Commercial Customers** – Switch to 3P implementation may lead to less focus on customer satisfaction and ease of participation, additional confusion on who to communicate with on non-EE issues (somewhat)	amount of time and resources it would take to align measures, websites, marketing and outreach, data sharing methods, and overall customer targeting strategy. Additionally unclear how budgeting across service territories would be implemented.
Downstream (5) / Interview 3	**Installation Contractors** – Consistent offerings across the state make it easier to participate across service territories (minor) **Commercial Customers** – Consistent offerings across the state make it easier to participate across service territories (minor)	**Contractors** – May have existing relationships with IOUs if operate primarily in single service territory; 3P implementer may not operate in same area and make that communication regarding program updates more difficult (minor) **Commercial Customers** – Some customers work primarily with IOU account reps to complete rebates, would have a new, unfamiliar touch point with implementer at SW level (minor) **IOU Administration** – Significant coordination required upfront to align measures, eligibility requirements, data sharing (somewhat)	**Overall Drawback.** Overall, while long-term consistency may be beneficial for the program, the SW model viewed as a minor drawback because of the additional costs and resources required to provide that level of consistency across IOUs. Particularly challenging when ensuring that there is not overlap with other upstream and midstream offerings. Current design limits this overlap by IOU but SW model could make that more challenging for downstream programs that do not want to include or double count measures included in the upstream or midstream SW programs.
Downstream (5) / Interview 4	**3P implementer** – If you had streamlined reporting mechanisms and no longer needed to work within reporting and payment for each utility you may see some benefits [somewhat indirect to main program characteristic discussion] (somewhat)	**Other utilities** – May be difficulty in short term establishing relationships (minor)	**Overall Benefit.** Though some hiccups at first, would likely see savings in the long term from streamlined implementer reporting and payment processes.

Subprogram / Sample Size (n) / Interview #	Benefits of Statewide Administration	Drawbacks of Statewide Administration	Overall Net Benefits and Drawbacks
Downstream (5) / **Interview 5**	None identified [Consistent offerings across the state make it easier for contractors to participate across service territories (minor)]	**Implementer** – May focus just on regions where climate means a measure is more cost effective (this is a benefit for CE, but for fairness across territories it's a drawback (minor); Also expressed concern that a 3P would offer incentives at a higher rate in certain regions and that customers may be confused about that if they find out (minor)	Not identified by interviewee.
Emerging Technologies (3) / **Interview 1**	**Research Orgs** – Single point of contact for organizations working with multiple IOUs more efficient to allocate resources to one entity (minor - somewhat) **Technology Manufacturers** – Single point of contact for organizations working with multiple IOUs making it more efficient to allocate resources to one entity (minor - somewhat) **IOU Administration** – Do not duplicate research efforts, allows focus on broad area at a time (very)	**IOU Administration** – Individual IOUs lose some control and need to enhance communication (minor)	**Overall Benefit.** Under SW model, subprograms will be rolled up into general ET program. Currently coordinating SW because don't want to duplicate resources when conducting assessments or studies. Have the ET Coordinating Council (ETCC) that includes the four IOUs and LDWP, SMUD, CEC, goal is to look through tech proposals and figure out who is assessing what. ET moving forward will benefit from engaging with C&S and resource programs to continually move products forward. The SW model is seen as a very significant benefit in this regard because it helps scale these efforts moving forward. "Where there is potential opportunity, or benefit, lot of foundational issues with tech industries. Like HVAC for example, if there is not kind of a comprehensive

Subprogram / Sample Size (n) / Interview #	Benefits of Statewide Administration	Drawbacks of Statewide Administration	Overall Net Benefits and Drawbacks
			unified force of moving things along the tech life cycle, the individual efforts won't move the needle. It takes SW engagement level to move forward. It's an opportunity for sure."
Emerging Technologies (3) / Interview 2	**Technology Manufacturers** – Potentially increased focus on certain techs as scale of the program increases SW, 3P implementer may could help expedite process (minor) **Stakeholders** – Increased efficiency with single CA rep for orgs like GTI or Frontier that operate SW or national (minor) **IOU Administration** – Do not duplicate research efforts, allows focus on broad area at a time (very); admin efforts are consolidated leading to cost savings (minor)	**IOU Administration** – Significant amount of admin coordination needed upfront with 3P implementers to ensure program functions properly. Especially when coordinating across electric and gas measures with two different lead PAs (minor)	**Overall Benefit.** Monthly collaboration meetings SW, maintain a shared spreadsheet of ongoing projects; planning for outreach events that are done collectively. Looking toward an ETCC website to act as public depository of completed published reports. Huge potential benefit overall if 3P implementer brings in new approaches to finding innovative and new technologies; redesigning the program to do a better job. Definitely opportunities to save through scaling technologies and consolidating admin costs but will require coordination across IOUs to lend their expertise within certain technologies and within certain regions. Overall, long term, minor benefits to the program.
Emerging Technologies (3) / Interview 3	**Manufacturers/Incubators/ Accelerators** – Single entity to coordinate with to address all of CA vs. individual utility reps (minor); expedited funding process potentially which allows program to test and evaluate techs faster and get to	**Universities/Research Labs** – Currently have membership type structure with annual dues, switching to SW model might make it more challenging because they are used to working with individual utilities (minor)	**Overall Benefit.** Despite some moderate concerns that lead PA may prioritize certain regions over others, overall optimistic about long-term benefit of statewide model. Is sometimes tough to try to quantify results from ET as they are adopted

Subprogram / Sample Size (n) / Interview #	Benefits of Statewide Administration	Drawbacks of Statewide Administration	Overall Net Benefits and Drawbacks
	market faster (somewhat - very); expanded scale allows for more "risky" trials where individual utilities may not be able to take on risk component alone (somewhat) **IOU Administration** – SW model allows for projects to be assessed by utility budgets and allocated based on where expertise and resources are (minor); consistent messaging and marketing (minor); expanded scale allows for more "risky" trials where individual utilities may not be able to take on risk component alone (somewhat) **Stakeholders (EPRI, CEE, GSI)** – Single touch point, instead of having to work with all utilities, will expedite process and streamline (minor)		into resource programs. It will be important for SW model to think about how ET fits in with other resource programs and focus on transfer of successful products into the market. It will almost be important to coordinate on electric and gas offerings with two PAs – might be tough to understand how you split into two buckets for certain measures. Overall long term benefits though because of scale and ability to streamline some of the processes, which will help vendors to have uniform process across IOUs. Will depend though on the 3P or 3Ps selected for the program because not many orgs have expertise across such a wide range of measures. Some thought has been put into having multiple 3Ps, each responsible for one type of measure (ex. HVAC)
Finance – New (2) / Interview 1	None identified. Already SW.	None identified. Already SW.	**Overall Benefit.** One of the few interviewees that thought that having one IOU coordinate instead of the others would be beneficial in saving time. Mostly because it's already run by a state agency so they don't seem to have much say in it as is (the IOUs). Administered by state agencies across four market segments: residential, multifamily, small business, and non-

Subprogram / Sample Size (n) / Interview #	Benefits of Statewide Administration	Drawbacks of Statewide Administration	Overall Net Benefits and Drawbacks
			residential. Residential is being administered now and is implemented by a state agency (so already pretty SW). They have one SW lead. Have an IT contractor. Marketing is already consistent through CSE.
Finance – New (2) / Interview 2	**Residential Customers** – Simplified, consistent process for accessing financing (minor) **Installation Contractors** – SW process in theory simplifies participation process and can increase contractor involvement (minor)	**Residential Customers** – Potential barrier in interest rates being 6-7% vs. the 0% on current OBF option. (minor) **Installation Contractors** – Same as above **Financial Institutions** – Same as above	**Overall Benefit.** New SW pilot will allow for financing without direct participation in another EE program. In theory, new financing options will expedite enrollment process and simplify offerings. However, PM unsure if the interest rates will be a barrier to customers when compared to OBF offerings. Contractors and even financial institutions may turn to other solutions because of the rate. It could be an overall minor benefit given the consistency but hard to predict given the timing.
Finance – Existing (2) / Interview 1	[Could simplify things for lenders and allow for leveraging of 3P capital]	[Many differences across IOUs, on-bill aspect means it will need to tie into each IOU]	**Overall Neutral.** Currently there are differences in funding, loan terms, loan caps, source of funding and how balancing account is merged.
Finance – Existing (2) / Interview 2	**IOU Administration** – Consistency in offerings to customers across IOU territories (minor); consistent marketing and outreach material focused on a single offering (minor) **Commercial Customers** – Leveraging of 3P capital to fund more	**Account Reps** – Role not clearly defined in SW model with regards to level of outreach to customers, could lead to less personalized interactions (minor) **Installation Contractors** – Potentially additional training for	**Overall Drawback.** Currently, all on-bill financing programs have significant SW coordination across IOUs with regular meetings and similar offerings. However, overall would be a minor to somewhat significant drawback because SW

Subprogram / Sample Size (n) / Interview #	Benefits of Statewide Administration	Drawbacks of Statewide Administration	Overall Net Benefits and Drawbacks
	projects, larger scale of program (somewhat - very) **Financial Institutions** – Leverage economies of scale of SW program, consistent offerings across the state (somewhat)	contractors to be eligible across the state, lowering interest for some local contractors (minor) **Commercial Customers** – Potentially the on-bill elements no longer show up from familiar IOU, added layer of complexity for customers and IOUs to ensure correct info shows up on bill (minor) **IOU Administration** – Differences across IOUs (e.g., have to participate in resource program offering or not) (somewhat); additional coordination and data sharing required across IOUs (somewhat) **Residential Customers** – Lack of familiarity with 3P could cause customer confusion and lack of trust in program, and increased resources to customer service (minor)	model potentially loses the individual utility outreach element and coordination from financing to resource program participation and savings. Very unclear how full SW model would account for differences in IOU offerings and the "on-bill" element of the financing. Potentially some short term issues with ironing out the change from IOUs to a 3P in terms of who is sending the financing bill and the lack of customer familiarity but once plan outlined, process should become more efficient. Will require considerable amounts of coordination across the IOUs to ensure all customer bases are accounted for. Key to financing program success is keeping the participation process simple for customers and contractors. If process is overly burdensome, will likely find other financing solutions.
Institutional Partnerships (8) / Interview 1	**Office of President (UCs)/Chancellors (CSUs)** – If the programs they were referred to were SW – it would avoid some confusion (somewhat)	**Office of President (UCs)/Chancellors (CSUs)** – Lower engagement with smaller territory colleges and there may be less of a focus on developing work papers for applicable measures to the region (differing climate zones); may be helpful to offer flexibility (as is done in the definition), but the	**Overall Drawback.** All leveraged offerings are not currently consistent across IOUs such as OBF, which would make SW implementation a challenge. Currently one lead IOU and the IOUs pay into a co-funding agreement. The lead IOU already works with just one implementer though this staff person has monthly

Subprogram / Sample Size (n) / Interview #	Benefits of Statewide Administration	Drawbacks of Statewide Administration	Overall Net Benefits and Drawbacks
		downside is that different CZs have different needs and focus in the broader sense may be put on measures in lead IOU CZ. (somewhat); overall focus could move to IOU territories with lowest hanging fruit (very); less one-on-one attention from local utilities. Monthly IOU, 3P and university meetings help to move projects forward [though in the end came to the conclusion that 3P may be able to do this alone].	meetings with the campuses in [IOU] territory. [Already implemented with many SW elements so interviewee interpretation of it being an overall drawback is in the context of the SW definition being more conservative]
Institutional Partnerships (8) / Interview 2	None identified	**State of CA** – Concerns that certain IOU territories will not be given as much attention despite the importance of local relationships - "because of privacy issues they have to sometimes work with the agencies themselves to talk about the buildings." (minor)	Minor concerns about representation.
Institutional Partnerships (8) / Interview 3	Not applicable	Not applicable	Ending in 2020
Institutional Partnerships (8) / Interview 4	**CDCR** – Already leverage a single point of contact. (very)	**CDCR** – At the local level, account executives work with each local site and they already have relationships with site leads to cover bill issues, pressure issues, and other things that will continue despite structure of this program. Not sure how this will change but are waiting to see what 3P under SW comes up with to see	**Overall Benefit.** Already work with a single point of contact though it is unclear how move to 3P would affect this program.

Subprogram / Sample Size (n) / Interview #	Benefits of Statewide Administration	Drawbacks of Statewide Administration	Overall Net Benefits and Drawbacks
		"what gaps they need to fill."	
Institutional Partnerships (8) / Interview 5	**3P** – Single point of contact (already exists) so state already knows they can go direct to the 3P and they have one AE to work with (somewhat) **State of CA** – Would be better for the state (save time) if all incentives were the same across the state (somewhat)	None identified	**Overall Benefit.** Makes sense to have SW since there one AE that works with all facilities and since there is one point of contact at the state level. Trainings are already offered SW (by 3P), offerings currently differ though by IOU.
Institutional Partnerships (8) / Interview 6	**Colleges** – Consistency across the state, single point of contact (minor) **IOU Administration** – Incentives and programs would be identical across service territories/overlapping customers (very)	**Colleges** – New touch point of 3P implemented program, potential lack of prioritization in rural/hard to reach areas (minor) **IOU Administration** – Added strain on lead PA to manage individual relationships with community colleges (minor); lack of control for individual IOUs with existing relationships with participants and potential participants (minor - somewhat) **Other Utilities (water and electric municipalities)** – Uncertain how existing partnerships with IOUs and municipalities will persist in SW model, leaving a gap for certain customers with non-IOU electric (somewhat) **Account Reps (from non lead PA)** – Lack of connection with SW admin meetings and customer outreach meetings (minor)	**Overall Benefit.** Both the community college and UC partnerships currently have significant SW elements including consistent coordination across IOUs, quarterly management meetings and consistent attempts to adapt programs to changing SW standards. UC program leverages scale of multiple campuses and additional resources to complete for complex EE upgrades that CC can't afford to do. Currently a lot of uncertainty as to who and how the programs will be implemented by a 3P SW including how they will balance focus across electric and gas measures, what areas will be targeted (urban vs. rural) and how the program will be marketed to potential participants. Significant benefit for the programs to be administered SW because of the level of consistency that will exist across

Subprogram / Sample Size (n) / Interview #	Benefits of Statewide Administration	Drawbacks of Statewide Administration	Overall Net Benefits and Drawbacks
			the service territories and because the IOUs are already coordinating on a SW level.
Institutional Partnerships (8) / Interview 7	**Colleges** – consistency across the state, single point of contact (minor) **IOU Administration** – incentives and programs would be identical across service territories/overlapping customers (very)	**Colleges** – New touch point of 3P implemented program (minor) **Other Utilities (water and electric municipalities)** – Uncertain how existing partnerships with IOUs and municipalities will persist in SW model, leaving a gap for certain customers with non-IOU electric (somewhat) **Account Reps (from non lead PA)** – Lack of connection with SW admin meetings and customer outreach meetings (minor)	**Overall Benefit.** Both the community college and UC partnerships currently have significant SW elements including consistent coordination across IOUs, quarterly management meetings and consistent attempts to adapt programs to changing SW standards. UC program leverages scale of multiple campuses and additional resources to complete for complex EE upgrades that CC can't afford to do. Currently a lot of uncertainty as to who and how the programs will be implemented by a 3P SW including how they will balance focus across electric and gas measures, what areas will be targeted (urban vs. rural) and how the program will be marketed to potential participants. Overall, PM thought it would be a somewhat significant benefit for the programs to be administered SW because of the level of consistency that will exist across the service territories and because the IOUs are already coordinating on a SW level.
Institutional Partnerships (8) / Interview 8	**Counties** – Sharing best practices - already doing this (minor)	**Counties** – So much diversity. Varied internal infrastructure, have to learn	**Overall Drawback.** Noted that they primarily work either with

Subprogram / Sample Size (n) / Interview #	Benefits of Statewide Administration	Drawbacks of Statewide Administration	Overall Net Benefits and Drawbacks
	Contractors/3Ps – Standardized contracts would be useful for the LGs/counties in working with contractors. But they've already started this (somewhat)	how each org makes decisions, political motivations, turnover, challenge for one IOU to figure out the relationships with all of these local partners (somewhat) **Regional Organizations** – Also very diverse, "unless you have a local administrator that understands these differences (staff turnover, various initiatives, varied interest) you're going to have catastrophic results." "Having an understanding of the local region will increase your results." (very)	counties or regional organizations. This is a good example of a hybrid - there are some things that work well SW (like standardized contracts provided for LGs) but others that are too complex to simplify across the state. While the framework can be similar, it is challenging to fit all the square, rectangular, triangle pegs into the same round hole.
Local Government Partnerships (3) / Interview 1	**Lead Local Partners** – If the IOUs had the same set of offerings there would be more streamlined communications and expectations about what they could spend money on (very) **Local Governments** – Standard job order contracting would help clear some hurdles that allows contractors to already cover hurdles (minor) [but this could be done without going fully SW]	**Lead Local Partners** – if trying to connect to SW programs – it is easier to have SW, but there is a variety of programs and a variety of needs. **Local Governments** – Everyone is so unique so there are no efficiencies to be had in working with each LG. "It's administratively taxing to have everyone with different needs."	**Overall Drawback.** Parts of it are beneficial like best practice sharing and things that are scalable but interaction with the LGs is key and that is best done locally and in person. PM noted, "all of the IOUs have their own set of bureaucracies ... every IOU has their own set of legal folks, sourcing folks, and all of these things have to be aligned." This suggests similar framework and expectations could be useful and may make procurement, invoicing, accruals more streamlined; however, it would be quite a bit of effort to align.
Local Government Partnerships (3) / Interview 2	**Cities** – Consistency across all program measures and incentives	**IOU Administrator** – Having one point of contact, who may or may not	**Overall Neutral.** SW may provide consistency across local government

Subprogram / Sample Size (n) / Interview #	Benefits of Statewide Administration	Drawbacks of Statewide Administration	Overall Net Benefits and Drawbacks
	would allow for a more streamlined process and the ability to provide all customers with an equal opportunity to receive the same benefits (somewhat) **IOU Administrator** – Sharing data across all IOUs would be a benefit for any program; however, there are many hoops to jump through before that would work (somewhat)	have any connection to the community, will deter customers from participating. Having that connection and ability to connect using something they have in common (IOU) is useful when getting customers to participate (very); Streamlined marketing resulting from SW model would potentially deter many from participating. Difficult to market all measures and offerings to all potential SW participants due to varying offerings needed in individual local governments. (very) **Cities** – Having one point of contact, who may or may not have any connection to the community, will deter customers from participating. Having that connection and ability to connect using something they have in common (IOU) is useful when getting customers to participate (very)	offerings but would require significant resources to align across all IOUs and local governments. Local partners have voiced in the past that they want to maintain a voice in the program and the statewide scale may inhibit the influence of local partners.
Local Government Partnerships (3) / Interview 3	**Program Administration** – May have cost efficiencies if the IOU passes off the project reviews to implementer (somewhat); easier coordination with custom program if that was SW, but unclear if that is going to be SW or not (minor); allows for tracking and coordination to be streamlined without having the onus all on the SW PM (somewhat)	**CDCR** – Potential drawback if the local sites are unable to leverage their existing relationships with account managers (minor)	**Overall Benefit.** Program manager noted that SW admin may be an overall benefit because you can save costs though this depends on how risk averse the lead IOU is for the custom program. Some utilities are more bold in their approach, which may mean they get dinged for savings down the line.

Subprogram / Sample Size (n) / Interview #	Benefits of Statewide Administration	Drawbacks of Statewide Administration	Overall Net Benefits and Drawbacks
Midstream HVAC, Foodservice, Commercial Water Heating (3) / **Interview 1**	**3P implementer** – If you had streamlined reporting mechanisms and no longer needed to work within reporting and payment for each utility you may see some benefits (somewhat)	**Other Utilities** – Short-term drawback from needing to establish relationships (minor)	**Overall Benefit.** Though some hiccups at first, would likely see long run savings from streamlined implementer reporting and payment processes. They work to seek out measures and get work papers completed.
Midstream HVAC, Foodservice, Commercial Water Heating (3) / **Interview 2**	**Program Administration** – May find efficiencies from consistent implementation and oversight.	**Implementer** – Differences in climate zone may create challenges for implementer. "If they deliver just based on savings goals then they'll focus on one climate zone and one territory."	**Neutral.**
Midstream HVAC, Foodservice, Commercial Water Heating (3) / **Interview 3**	**IOU Administrator** – A single PA would be able to get benefits from economies of scale and reduced administrator effort, and measures being able to be distributed across the state (minor); consistency across the IOUs (including offerings and marketing) would reduce market confusion and standardize reporting standards (minor); processing and sharing customer data benefits the lead PA by allowing them to properly target unique market needs (somewhat) **Commercial Customers** – Consistency across the IOUs would reduce market confusion and standardize reporting standards (minor)	**IOU Administrator** – Lead PA may not be as familiar with local markets and stakeholders in certain areas of the state, may lose some existing relationships (minor); difficult to coordinate on the different business requirements for each individual IOU such as database, cyber security, and data privacy requirements leading to additional "transition costs" and potential for misuse of customer data. (minor - somewhat); difficult for single SW PA or implementer to handle, manage and exist with other stakeholder groups (somewhat – very) **Commercial Customers** – Potentially not as much familiarity and accessibility to local markets and	**Overall Benefit.** Identified several key benefits and drawbacks but the current program manager was somewhat neutral because of the lack of clarity on how SW administration could actually be implemented. There are many benefits and drawbacks noted but given the money, time and resources there would be both benefits and drawbacks seen. The program manager noted that "depending on the design of my program at a SW level, there could be many benefits seen - if that design is innovative and is designed to be scalable across the entire state then it could work but I think that this hasn't been truly thought out yet."

Subprogram / Sample Size (n) / Interview #	Benefits of Statewide Administration	Drawbacks of Statewide Administration	Overall Net Benefits and Drawbacks
	Manufacturers and Distributors – Consistency across state in HVAC technology and offers, increased sales (minor - somewhat)	leading to reduction in program savings and cost effectiveness. To address these issues may increase "transition costs" (minor) **Stakeholders** – Difficult to have a single SW implementer with the existing infrastructure to handle, manage and exist with the other stakeholder groups. Existing IOU staff have already created these relationships (very)	
Midstream PL&A (4) / Interview 1	**Manufacturers** – Increased volume of sales and participation (minor to somewhat); easier coordination with single utility contact (somewhat to very); consistency in program offerings (somewhat to very) **Distributors** – Increased volume of sales and participation (somewhat); easier coordination with single utility contact (somewhat); consistency in program offerings (somewhat to very) **Retailers** – Increased volume of sales and participation (minor); easier coordination with single utility contact (somewhat); consistency in program offerings (somewhat – very); big box retailers do not need to localize marketing efforts, making it more cost effective to participate (somewhat) **Installation Contractors** – SW	**Manufacturers** – May dissuade manufacturers left off of a statewide offering list from promoting program-eligible products (minor) **Installation Contractors** – If SW makes it difficult or confusing for contractors to get customers to participate, could drive down participation and potential savings (minor to somewhat)	**Overall Benefit.** Noted that there will be some organizational challenges to designing SW program that may lead to some minor drawbacks initially but acknowledged it would be tough to gauge until the program specifics and implementation strategy are laid out. Viewed overall as a benefit because of the ability to leverage resources across IOUs and increase the scale of the program overall.

Subprogram / Sample Size (n) / Interview #	Benefits of Statewide Administration	Drawbacks of Statewide Administration	Overall Net Benefits and Drawbacks
	admin might lead to more efforts to influence contractors into being an active part of the program, by increasing customer outreach and subsequent participation, especially for measures (i.e., water heaters) that require installation contractors to work with customers (somewhat to very) **Residential Customers (in overlapping IOU territories)** – Easier participation process (very); cost effectiveness (minor); consistent messaging across regions **IOU Administration** – Easier participation process (minor for cost effectiveness); consistent marketing efforts across IOU service territories (minor)		
Midstream PL&A (4) / Interview 2	**Manufacturers** – Consistency in program offerings and rebate amounts (example Nest) (very) **Distributors** – Consistency in program offerings and rebate amounts; leverage scale when pushing product to contractors (ex. look at RPP program, everyone following the same rules) (very) **Retailers** – Consistency in program offerings (somewhat); big box retailers do not need to localize marketing efforts, making it more cost effective to participate	**Non-lead PA IOUs** – Potential lack of influence on selected measures, may lead to "uneven playing field" for certain utilities (ex. [IOU] - gas only) (somewhat) **Residential Customers** – Loss of intimate relationships with utilities that interact with individual customers on local level (somewhat)	**Overall Neutral.** PM was overall neutral despite the strong benefits noted in consistency gains. Concerned about prioritization of gas in SW model. Assuming the program accounts for electric and gas measures on a relatively even scale, overall a benefit in terms of driving savings going forward.

Subprogram / Sample Size (n) / Interview #	Benefits of Statewide Administration	Drawbacks of Statewide Administration	Overall Net Benefits and Drawbacks
	(somewhat) **Installation Contractors** – Consistency in program offerings and eligibility requirements makes it easier for contractors to engage with program (very) **Residential Customers (in overlapping IOU territories)** – Easier participation process (very); cost effectiveness (minor)		
Midstream PL&A (4) / Interview 3	**Manufacturers** – Increased volume of sales and participation (somewhat); easier coordination with single utility contact (somewhat) **Distributors** – Increased volume of sales and participation (somewhat); easier coordination with single utility contact (somewhat) **Retailers** – Increased volume of sales and participation (minor); easier coordination with single utility contact (somewhat) consistency in program offerings (somewhat) **Installation Contractors** – SW admin might lead to more efforts to influence contractors into being an active part of the program, by increasing customer outreach and subsequent participation, especially for measures (i.e., water heaters) that require installation contractors to work with customers (somewhat) **Residential Customers (in**	**IOU Administration** – Lack of control from individual utilities that could lead to litigation issues. "Our programs do work on judgment calls and if you're not here sometimes you don't understand the call fully and it would be tough across regions" (somewhat); additional admin costs to unify (somewhat - very)	**Overall Benefit.** PM originally thought it would be a somewhat significant drawback because of the additional admin costs and resources required to align the programs. However, noted that it would be a benefit long term if they were able to standardize offerings across the state (see benefits to market actors) and then react to certain regional variations.

Subprogram / Sample Size (n) / Interview #	Benefits of Statewide Administration	Drawbacks of Statewide Administration	Overall Net Benefits and Drawbacks
	overlapping IOU territories) – Consistent messaging across regions (minor) **IOU Administration** – Single process and procedure for offering particular measure a certain way (somewhat)		
Midstream PL&A (4) / Interview 4	**Manufacturers** – Leveraging the scale of a SW program, having more skin in the game to target customers that will provide savings (very); program consistency makes partnership with utilities easier, willing to be more interested because of larger stakes (very); potentially broaden product offerings (very) **Distributors** – Consistency across SW, benefit from scale (very) **Retailers** – Large chains benefit from consistent marketing of offerings across state (somewhat); consistency and scale (somewhat) **IOU Administration** – Consolidation of costs, more cost effective and efficient (somewhat) **Residential Customers** – Potentially a broader list of product offerings (ex. pool pump being offered SW opens it up for customers that may not currently have access) (somewhat)	**Manufacturers** – Less regional influence (for example, one company may be included in program or not, and if not included that's a huge drawback if their product doesn't qualify more broadly across the state.) (somewhat)	**Overall Benefit.** Overall significant benefit because of the possibility of expanding the program and increasing savings. Money in will yield more savings and more customers and will lead to the program being more cost effective to administer. In general, program consistency will make a huge difference for market actors and administration.
Res New Construction (3)	**Installation Contractors** – One	**Program Administration** – Will	**Overall Benefit.** Program is already

Subprogram / Sample Size (n) / Interview #	Benefits of Statewide Administration	Drawbacks of Statewide Administration	Overall Net Benefits and Drawbacks
and Commercial New Construction (Savings by Design (1) / **Interview 1**	set of program rules and requirements makes it easier for contractors to participate (somewhat) **Manufacturers** – Possibility that it helps them to lower their manufacturing costs (somewhat) **Distributors** – May make it easier to source items (somewhat to very) **Builders** – May find it easier to work across territories (somewhat)	take longer to do contracting SW, in part because of different IOU data sharing systems (somewhat). Unclear how they will cater to local regions such as in rebuild areas.	developed collaboratively amongst all the utilities. Program manager noted, "a lot of what we do represents what should be done with implementation." Slated to be SW already, will benefit from the consistency across the statewide program which could help drive participation. "The ship gets bigger so moving the ship is harder but you may make a bigger impact."
Res New Construction (3) and Commercial New Construction (Savings by Design (1) / **Interview 2**	**Builders/Architects** – One set of program rules and requirements makes it easier for builders to participate (somewhat) **Installation Contractors** – One set of program rules and requirements makes it easier for contractors to participate (somewhat) **Manufacturers** – Consistency makes it easier to participate and promote eligible equipment (very) **Distributors** – Consistency makes it easier to participate and increases market (somewhat) **Raters** – Paid by one administrator; helps streamline and more cost effective (somewhat)	None mentioned	**Overall Benefit.** Statewide administration was seen as being beneficial for program savings and cost effectiveness by driving statewide energy efficiency adoption in households. Market actors engaging with the program oftentimes work across regions, and consistency can help drive program participation. When weighing all of the potential benefits and drawbacks, program managers thought statewide administration would be an overall benefit, one of which saying a minor benefit and one saying a very significant benefit.
Res New Construction (3) and Commercial New Construction (Savings by	**Installation Contractors** – Consistent marketing material and offerings across service territories	**Residential Customers** – Potentially slower process if 3P responsible for all rebate processing	**Overall Drawback.** Significant SW approach already in terms of guides, measures and incentives. All

Subprogram / Sample Size (n) / Interview #	Benefits of Statewide Administration	Drawbacks of Statewide Administration	Overall Net Benefits and Drawbacks
Design (1) / Interview 3	(somewhat - very) **IOU Administration** – Admin costs are lowered by leveraging a single IOU (somewhat)	and communication (minor); potential loss of personal relationship with IOU (somewhat); easier for builders to operate in specific areas with the program, may leave certain hard-to-reach customers without many offerings (somewhat) **Contractors/Builders** – Potential loss of personal relationship with IOU (somewhat) **IOU Administration** – Unclear how existing partnerships with non-IOUs will be impacted by SW model (somewhat)	calculated and all consistent SW. But, experience has shown that there are already issues with the program when looking at building conditions in various regions identifying what the local customers need. As builders identify specific regional offerings that work for their climate zones, regional flexibility is essential for the program. Viewed as a somewhat significant drawback for the program because a single PA may cause more confusion on the various local markets and not identify the nuances across the state.
Res New Construction (3) and Commercial New Construction (Savings by Design (1) / Interview 4	**Marketing** – While currently account managers work to connect businesses/designers to the program, under the SW definition they could see that a 3P could choose or not choose to recruit that way depending on if they found it useful (somewhat); also see benefit in having a website for the whole state since the program is pretty consistent (somewhat to very) **3P Implementers** – Larger role for 3Ps likely under SW. Believes that with careful IOU management that the 3P may be able to minimize costs as they are profit motivated and have less regulatory demands. (very)	**3Ps** – May focus on low hanging fruit or may focus only in one territory not giving enough attention to various regions (very) **Commercial Customers** (designers who represent their business customers) – May not have representatives to work with (at the IOUs) that are as familiar with the building codes that apply where they are (somewhat)	**Overall Benefit.** Though will depend on adjustment to 3P and what programs are proposed. Also depends on how energy savings are calculated.
Upstream Lighting (2) /	**Manufacturers** – Leverage	**Manufacturers** – Ability to vary	**Overall Benefit.** Manufacturers are

Subprogram / Sample Size (n) / Interview #	Benefits of Statewide Administration	Drawbacks of Statewide Administration	Overall Net Benefits and Drawbacks
Interview 1	economies of scale at SW level which allows them to explore new technologies and increase savings (very) **IOU Administration** – Knowledgeable 3P implementer could help streamline program and open the door for more participation and savings (somewhat)	offerings by utility based on needs may be disrupted by 3P implementation (minor); potential limit on territories they can operate in across the state or what retailers they can work with (somewhat) **IOU Administration** – Thousands of individual retailer accounts in program, unclear 3P implementer has resources to manage all of these relationships across service territories, may require additional admin resources for lead PA to manage invoicing, data tracking, etc. (somewhat)	excited about the SW approach for upstream lighting because they are able to leverage their economies of scale which should enable them to focus on new lighting tech going forward. From IOU perspective, seen as a potential minor drawback because of the volume they currently do; however, a well constructed SW program and implementer will be beneficial to the other groups involved with program and should lead to long-term admin cost savings as material streamlined.
Upstream Lighting (2) / Interview 2	**Manufacturers** – Leverage economies of scale at SW level, have consistent offerings across IOUs (minor); consistent single point of contact across the state (minor) **Retailers** – Leverage economies of scale at SW level, have consistent offerings across IOUs (minor); consistent single point of contact across the state (minor)	**IOU Administration** – Loss of reach on individual territories, inability to leverage existing relationships (minor)	**Overall Benefit.** Overall probably a minor to somewhat significant benefit (in terms of efficiency) despite a potential drawback to the individual IOUs because of control over territory. Excluding the 3P cost, it's probably an overall more cost effective approach, ironing out the processes quickly. Dealing with manufacturers and large retailers that are used to operating across the state and are looking to leverage economies of scale to make the program more cost effective; slated to go SW soon.

Table 16: Implementer and Trade Ally Interview Response Summary

Trade Ally/Implementer Area of Expertise / Sample Size (n) / Interview #	Benefits of Statewide Administration	Drawbacks of Statewide Administration	Overall Net Benefits and Drawbacks
Residential (Multifamily) Sector Programs (2) / Interview 1	**Installation Contractors/Builders/ Property Owners** – Consistency can lead to increased participation and scale (somewhat) **Data Sharing** – SW program should include single data collection system making it easier to share data once implemented (minor - somewhat)	**IOU Administration** – Difficult to coordinate resources across IOUs (minor) **Hard-to-reach Customers** – SW program may not target these customers, lack of regional flexibility to accommodate (somewhat) **3P Implementers** – May design program to target specific cost effective areas that means certain regions may not be prioritized (minor)	**Overall Drawback.** While coordinating on marketing, best practices and strategies statewide were all noted as direct benefit to the program, statewide administration overall seen as a minor to somewhat significant drawback because of the lack of regional focus. Statewide program may lead to prioritizing certain customers and market segments (i.e., larger MF projects) at the expense of other MF customers that benefit from local PAs addressing their individual needs.
Residential (Multifamily) Sector Programs (2) / Interview 2	**Residential Customers** – Consistent and "fair" offerings across the state (minor); consistency for owners with properties across multiple service territories (minor) **Installation Contractors** – Consistent equipment and rebate offerings, easier process (minor)	**IOU Administration** – Difficult to design a "one size fits all" program when customer-facing (downstream), lack of regional focus potentially (minor - somewhat) **Residential Customers** – Contractors may "cherry-pick" certain projects leaving some customer segments underserved (minor - somewhat)	**Overall Drawback.** Overall a minor to somewhat significant drawback for statewide administration because of the loss of personal touch provided by a regionally administered program. Other programs that rely less on regional flexibility and contractor/property owner engagement (midstream or upstream) may benefit from the overall consistency of a statewide-administered program.
Residential Sector Programs (1) / Interview 1	**Marketing** – Consistent and streamlined messaging to market actors and customers across the state (minor) **Builders** – Consistent program offerings and marketing materials (somewhat)	**IOU Administration** – Can be more difficult to coordinate and/or partner with local entities such as municipalities, air quality organizations, non-IOU utilities (somewhat) **Builders** – Program design may not focus on their localized needs if	**Overall Drawback.** Overall a minor or somewhat significant drawback for a program like this focused on more localized needs that benefits from regional flexibility and knowledgeable market actors (builders, community choice aggregators, residential customers). Did

Trade Ally/Implementer Area of Expertise / Sample Size (n) / Interview #	Benefits of Statewide Administration	Drawbacks of Statewide Administration	Overall Net Benefits and Drawbacks
		working in specific regions only (minor - somewhat) **Hard-to-reach Customers** – SW model may lead to prioritizing efforts (including measure offerings and market actor focus) elsewhere in easier to reach and centralized locations (somewhat)	note that other midstream and upstream programs can benefit from SW administration because of the ability to make offerings more consistent, driving market actor interest and participation.
Public Sector Programs (1) / Interview 1	**IOU Administration** – Admin costs should decrease over time as efforts are consolidated to single IOU (somewhat)	**IOU Administration** – Initial drawback in reconfiguring regional offerings to fit on SW model, adds administrative burden (minor - somewhat); difficult to leverage existing relationships established with public sector, can be extremely time consuming to merge into SW model (somewhat - very) **Public Sector** – Lead PA may not be as familiar with local public sectors of other IOU service areas, efforts may not be as valuable for those public sectors (somewhat)	**Overall Drawback.** Overall somewhat of a drawback for public sector because of current offerings so regionally focused. Public sector and LGPs have developed engaged local stakeholders who have helped coordinate regional solutions that may not be as applicable statewide.

Table 17: Out-of-State Interview Response Summary

State	Benefits	Drawbacks	Summary
Minnesota / Xcel Energy / Residential Sector / Utility only	+ Enables manufacturers/distributors/ retailers to ramp up production as the scale of program increases; consistency in their offerings SW.	- Requires more intervention to maintain quality (ex. Additional training for contractors, implementing QI). - Hard to manage across large regions, especially somewhere as large as CA. - Potential inability to leverage account reps that have established commercial customer relationships.	SW administration can help provide consistency for market actors and potential customers, especially midstream applications. However, SW viewed overall as somewhat of drawback – especially for downstream programs – because of the potential loss of the expertise individual utilities have over their customer bases. Hard to get everyone "up to speed" and "on the same page" across the state. Significant upfront administration challenges with coordination and training.
Oregon / Energy Trust / Residential Sector / Mix	+ Consolidation of administration costs helps increase cost effectiveness. + Easier participation requirements for market actors because of consistency. + Ability to leverage customers with locations across service territories with single offering. + SW offering more aligned with SW energy goals.	- Can be difficult to accommodate regional needs with a single program offering (ex. Certain measures have more uptick in some areas than others, hard to know prioritization of those measures in SW program.) - Potentially difficult to balance the needs of the individual utilities in designing programs and rebated equipment. - Difficulty in marketing (needing different messages to different customer bases).	Overall, SW program administration seen as a benefit when implemented by a 3P familiar with the utility landscape and the individual needs of different markets. Important part of SW programs is to acknowledge regional differences and work towards having flexibility to accommodate the varying needs when possible while maintaining consistency on the administrative side.
Oregon / Energy Trust / Commercial	+ Consistent offerings across electric and gas utilities. + Consistency for market actors	- Difficult to coordinate across four large utilities with individual savings goals, customer data.	Differences between SW administration and SW coordination. The coordination SW for certain offerings can help make things more consistent and standardized but allows market actors

State	Benefits	Drawbacks	Summary
Sector / Mix	that can utilize scale of SW program to scale resources and "build business plans out of the programs that create new jobs and increase market" (ex. SEM training). + Admin cost savings from consolidation and increased scale.	- Reputation of 3P implementers may disrupt relationships of stakeholders and interested parties in CA energy market (ex. Lockheed in CA, "how would that work with Sierra Club?"). - Loss of direct link to customers that utilities maintain with their own programs. - Potential gaps by climate zone if no regional differences integrated into program design. - Disconnect between goals (ex. Savings vs. customer satisfaction or savings vs. earnings) "I think there is a competing dynamic of saving energy and folks that don't get it but want to improve customer satisfaction."	operating across territories to leverage their resources. In CA, coordination can be very difficult for resource programs because of the necessity to align savings targets, measure offerings, etc. At some point, SW programs may become "too big" and could become too standardized to the detriment of regional requirements and individual customer needs. Also extensive pressure on 3P implementers to understand the regulatory structure and how to validate savings – expertise that individual utilities have. When implemented by cohesive 3P, seen as overall benefit but when coordinated through utilities can be a minor drawback, especially for downstream programs.
New York / ConEdison / Residential Sector / Mix	+ Consistent training offerings for contractors. + Consistency and economies of scale of SW program is very significant for manufacturers.	- Lack of individual utility control over marketing messaging, incentive levels, and equipment offerings that best serve customers. - Potential loss of relationships between contractors/distributors and customers; very localized in NY.	In recent years, because communication and coordination has improved with NYSERDA, SW functionality works well for utilities and NYSERDA as both groups have more clearly defined roles (downstream, resource acquisition and some upstream for utilities, while NYSERDA is looking at fundamental market transformation). Important for utilities to manage their own resource acquisition programs because of their intimate ties to their specific customer groups but opportunities exist to leverage upstream and market transformation

State	Benefits	Drawbacks	Summary
			programs at SW level if properly implemented. Utilities are focused on energy savings every year to meet policy goals while a 3P organization – like NYSERDA – has longer term goals that allow programs like ET to have a longer development period and can lead to more market transformation. Best examples of SW programs are coordinated with utility programs – utilities offering incentives at one level and NYSERDA at another, or NYSERDA developing techs that utilities can then go and market through a program. Viewed as an overall benefit for midstream and upstream programs, more of an overall drawback at downstream program level.
New York / ConEdison / Regulatory / Mix	+ For ET, ability to test mechanisms across the state.	- Broad scope of SW program could lead to prioritization of easier to reach customers, leaving gaps in hard-to-reach communities.	(Summary for previous row covers this interview as well)
New York / NYSERDA / Codes and Standards, Upstream and Midstream Programs / Mix	+ Simplified communication channels for market actors operating across service territories. + Consistency broadens scope for contractors, distributors, manufacturers; more participation = more volume and potential for market transformation ("bend the transformation curve"). + Lower administration costs. + Consistency for customers with multiple locations across the SW.	- Lack of customer connection at local level. - Loss of autonomy and flexibility from individual IOUs. - Initial difficulty in coordinating data management and tracking policies across IOUs (and market actors).	Based on experience in CA market, believes SW programs can help drive savings in "core programs" (upstream, midstream, C&S, etc.) where there already is coordination across IOUs. Utility programs then help fill in the gaps on the regional level through offerings like Direct Install (and other downstream programs). Currently helping NY utilities evaluate the cost effectiveness of SW programs by doing case study work on commercial programs, comparing downstream, midstream (SW), upstream (SW) cost effectiveness, cost of resource acquisition, and potential energy savings. Initial findings showed

State	Benefits	Drawbacks	Summary
	+ Consistent marketing, easier for market actors to get the messaging out at scale.		net positive for SW midstream approach, leading to the thought that SW admin will be an overall benefit for upstream and downstream programs. Believes the best system coordinates offerings between SW and regional based on their intervention touch point and goals.
New York / NYSERDA / Large C,I,A and some Residential Sector / Mix	+ Consistency adds scale for SW programs that increases manufacturer and distributor interest. + Helps foster a community of market actors that can coordinate on SW program (ex. Vendors in Time Energy Management program).	- Lack of customer connection at local level (ex. Downstream programs). - Potentially difficult to get utilities to coordinate on best type of program design, data sharing methods, legal, etc. - Difficult to set and achieve targets for individual utilities potentially because certain measures have much greater uptick in certain regions vs. others. "Policy not aligned with actual demand in the market."	SW model helps provide consistency to market actors and customers within midstream and upstream programs. Alignment and consolidation of offerings is especially beneficial for SW programs from NYSERDA because it allows the programs to separate from utility's reputations and be associated with an org that is well received in the market. Downstream programs in NY and any fragmented customer markets can be more difficult to coordinate because there are regional factors and a need for strong ties between local contractors and their customer bases. This would also include the difficulties associated with custom programs that tailor offerings to individual customers. SW is especially useful in ET and pushing new technologies into the market (ex. Energy Time Management; currently have SW meetings with vendors and potential clients across state).
Vermont / Efficiency Vermont / Residential, Commercial	+ Established close connection with customers and market actors to identify direct needs and challenges (product of smaller state). + Consistency SW allows for	- Less control from individual utility standpoint. - Can be difficult to implement change across IOUs initially.	SW model helps provide consistency in the market and can expand the reach of EE programs. More difficult to administer/implement SW programs in a larger state like CA but is doable if you account for the need to include flexibility

State	Benefits	Drawbacks	Summary
and Industrial Sectors / SW Only	addressing customer needs "broadly" and "equitably". + Encourages more participation for market actors operating SW with multiple locations (ex. bundling offerings, scaling projects). + Consistency and ability to streamline operations major factor for manufacturers, distributers, contractors, etc.		when necessary (ex. Commercial custom offerings) to accommodate regional needs. Efficiency Vermont in a unique position because of how much control they have over the EE portfolio in VT, would be a different type of SW approach in CA that would require significant coordination between lead PAs.
Vermont / Efficiency Vermont / Director (All Programs) / SW Only	+ Lower administration costs and improve economies of scale. + Single process for market actors to have to go through to participate. + Single point of contact for market actors to discuss program with.	- For large markets, can be difficult to coordinate across utilities for offerings, marketing, etc.	Seen significant efficiency gains in VT as a result of consistency of SW offerings that focus on market transformation (16% of VT electric mix). SW administration has led to an increase in the magnitude of savings and helped scale measure adoption such as cold climate heat pumps. Having a single, simple participation process for market actors can help increase participation and drive savings. Even downstream programs, if implemented by a "trusted messenger" can benefit from consistency of SW model while including flexibility as needed. Build in the need to tailor locally into the SW program design. Big difference with CA in terms of size and scale. Efficiency Vermont also has a great reputation in the market, something the CA IOUs may not have. SW viewed as an overall benefit but will be more difficult in the CA market because of scope and scale compared to smaller states.

Table 18: Key Program Characteristics by Subprogram

Subprogram	Key Program Characteristics
Energy Advisor / Audits	Installation Contractors, Residential and Small Business Customers, Customer Data Sharing, Program Administration
Integrated Energy Education and Training/Centergies	Installation Contractors, Builders/Architects/Raters, Program Administration, Large Customers (C, I, Ag)
Career and Workforce Readiness	Program Administration
Career Connections (K-12)	Program Administration
Codes and Standards – Advocacy	Other Energy Organizations (CEC, NEEA, ETO), Program Administration
Codes and Standards – Code Compliance	Program Administration, Installation Contractors, Public Sector Customers
Codes and Standards – Reach Codes	Other Energy Organizations (CEC, NEEA, ETO), Program Administration, Public Sector Customers
Direct Install	Installation Contractors, Residential and Small Business Customers, Account Representative, Customer Data Sharing, Program Administration
Downstream	Customer Data Sharing, Program Administration, Installation Contractors, Large Customers (C, I, Ag), Mass Marketing
Emerging Technologies	Distributors/Manufacturers/Retailers, Program Administration, Research Labs & Organizations/Universities/Colleges
Finance – New	Program Administration, Installation Contractors, Residential and Small Business Customers
Finance – Existing	Program Administration, Residential and Small Business Customers, Large Customers (C, I, Ag)
Institutional Partnerships	Research Labs & Organizations/Universities/Colleges, Program Administration, Public Sector Customers
Local Government Partnerships	Program Administration, Public Sector Customers
Midstream HVAC, Foodservice, Commercial Water Heating	Mass Marketing, Program Administration, Distributors/Manufacturers/Retailers, Mass Marketing,

Subprogram	Key Program Characteristics
Midstream PL&A	Installation Contractors, Distributors/Manufacturers/Retailers, Mass Marketing, Program Administration, Residential and Small Business Customers
Res New Construction and Commercial New Construction (Savings by Design)	Installation Contractors, Distributors/Manufacturers/Retailers, Builders/Architects/Raters, Residential and Small Business Customers, Program Administration
Upstream Lighting	Distributors/Manufacturers/Retailers, Residential and Small Business Customers, Mass Marketing, Program Administration

11 Appendix E: Program Manager Interview Guide

Bottom Up Bottom-Up Statewide Energy Efficiency Program Composition Review Interview Guide

[Brief introduction] Evergreen Economics is soliciting input from program managers for a Bottom-Up Statewide Energy Efficiency Program Composition Review that we have been hired to conduct on behalf of the IOUs.

We will keep your responses confidential.

Identification of Key Program Characteristics

[In this section, only ask about program characteristics that are relevant to specific program.]

First, I'd like to ask you about some of the characteristics of your particular program.

Q1. To start, can you please give me a brief overview of [program name] and how it is currently administered?

Q2. What type of market partners or trade allies does [program name] engage with? *[Interviewer to check any boxes mentioned by interviewee – probe based on program type]*

- ❏ Local building professionals
- ❏ Equipment manufacturers
- ❏ Equipment distributors
- ❏ Retailers that sell energy efficient equipment
- ❏ Contractors
- ❏ Suppliers
- ❏ Stakeholders (such as industry trade groups, other EE organizations such as NEEA and ETO, other energy organizations such as CEC)
- ❏ Builders
- ❏ Architects
- ❏ Research labs
- ❏ Raters (e.g., HERS)
- ❏ Other utilities (water, electric and gas IOUs and municipals, etc.) – record type
- ❏ Air quality management districts

- ❑ Other – specify _______________

Q3. [If multiple partners mentioned] Of the market partners you just mentioned, which one(s) do you think are the most important for program success?

Q4. If Q1 includes contractors ask: Do those contractors typically work in more than just your utility's service territory?

Q5. *[If applicable]* What types of end use customers does [program name] engage with? [prompt with list]

- ❑ Residential customers
- ❑ Small or medium business customers
- ❑ Large business customers
- ❑ Industrial customers
- ❑ Agriculture customers
- ❑ Public sector (e.g., city or county buildings)
- ❑ Other _______________

Q6. [If multiple end use customers mentioned] Which customer segments does [program name] engage with most?

Benefits and Drawbacks of Statewide Administration, by Key Characteristic

[In this section, repeat the survey battery for each major characteristic identified in the prior section, e.g., for each major market partner, end-use customer class and program operation]

[*For programs that are required to be Statewide by the CPUC*:] as you and the other IOUs are developing program plans for 2020 and beyond, we want to ask you about the benefits and drawbacks associated with your program being administered statewide, according to the CPUC definition.

[***For programs that are not required to be Statewide by the CPUC***:] For this next section, we want to ask you about benefits and drawbacks that might occur if your program was required to be administered statewide, according to the CPUC definition.

As a reminder, the CPUC defined Statewide programs as having a single IOU lead administrator with one or more third party implementers under contract w/ a single lead IOU. Statewide programs also have consistent implementation across service territories including incentive levels, measure eligibility (with exceptions for weather dependency) and marketing and outreach.

A regional program, by contrast, would be administered by each individual Program Administrator who may hire their own third party implementers and have tailored approaches for their area.

Q7. Thinking about [program name], what would be the **benefits** of statewide administration in terms of **[CHARACTERISTIC[S] FROM Q2 AND Q5]**? [*record all benefits – if they only mention one, ask – any other benefits?*]

Q8. *[For each benefit listed by respondent ask:]* Thinking about the [program name] overall, would you say [**BENEFIT**] would be a very significant benefit, somewhat significant benefit, or a minor benefit in terms of program savings and cost effectiveness of the program? [*Probe on short term vs. long term benefits]*

- ❑ Very significant benefit
- ❑ Somewhat significant benefit
- ❑ Minor benefit

Q9. What would be the **drawbacks** of statewide administration of [program name] in terms of **[CHARACTERISTIC[S] FROM Q2 AND Q5]** for program savings and cost effectiveness? (*record all drawbacks – if they only mention one, ask – any other drawbacks?*) [*Probe on short term vs. long term drawbacks]*

Q10. *[For each drawback listed by respondent ask:]* Thinking about [program name] what would you say [**DRAWBACK**] would be on the same scale. That is, a very significant drawback, somewhat significant drawback, or minor drawback for the program savings and cost effectiveness?

- ❑ Very significant drawback
- ❑ Somewhat significant drawback
- ❑ Minor drawback

Q11. Now, I have a few more program aspects that we may not have discussed yet. What would be the **benefits** of statewide administration of [program name] in terms of [READ Q11 OPTIONS] for program savings and cost effectiveness? For each benefit, please classify whether it is a very significant benefit, somewhat significant benefit or minor benefit for the program. [*Probe on short term vs. long term benefits]*

- ❑ Marketing and outreach methods and materials
- ❑ *[If not already covered]* Outreach to trade allies
- ❑ *[If the program addresses medium or large customers:]* Use of account representatives and their marketing ability
- ❑ Varying measure offerings or rebate amounts for hard-to-reach customers

- ❏ [*For downstream programs*] Processing a large volume of incentives or rebate payments for customers
- ❏ Processing and sharing customer data

Q12. What would be the **drawbacks** of statewide administration of [program name] in terms of [READ Q11 OPTIONS] for program savings and cost effectiveness? For each drawback, please classify whether it is a very significant drawback, somewhat significant drawback or minor drawback for the program. [*Probe on short term vs. long term drawbacks]*

- ❏ Marketing and outreach methods and materials
- ❏ *[If not already covered]* Outreach to trade allies
- ❏ *[If the program addresses medium or large customers:]* Use of account representatives and their marketing ability
- ❏ Varying measure offerings or rebate amounts for hard-to-reach customers
- ❏ [*For downstream programs*] Processing a large volume of incentives or rebate payments for customers
- ❏ Processing and sharing customer data

Overall Benefits and Drawbacks of Statewide Administration

Q13. Are there any other potential benefits that we did not discuss that might be associated with statewide administration of [program name]?

Q14. Thinking about [program name] overall, would you say [**BENEFIT**] would be a very significant benefit, somewhat significant benefit, or a minor benefit for program savings and cost effectiveness?

- ❏ Very significant benefit
- ❏ Somewhat significant benefit
- ❏ Minor benefit

Q15. Are there any characteristics of [program name] that we did not discuss where statewide administration would be **a drawback**?

Q16. Thinking about [program name] overall, would you say [**DRAWBACK**] is a very significant drawback, somewhat significant drawback, or minor drawback for the program savings and cost effectiveness?

- ❏ Very significant drawback
- ❏ Somewhat significant drawback
- ❏ Minor drawback

Q17. Weighing all the potential benefits and drawbacks, do you think statewide administration for [program name] would be more of a benefit or drawback overall for the program savings and cost effectiveness?

- ❑ Overall a benefit
- ❑ Overall a drawback
- ❑ Neutral (do not read this option, record only if they offer it as a first choice)
- ❑ Not sure (do not read this option, record only if they offer it as a first choice)

Q18. [*If overall a benefit or drawback*] Would you say the overall impact would be very significant [benefit / drawback], somewhat significant [benefit / drawback], or minor [benefit / drawback] for the program savings and cost effectiveness?

- ❑ Very significant
- ❑ Somewhat significant
- ❑ Minor

Q19. Why do you say that?

Q20. Are there any trade allies and/or implementers who have a substantial role in this program that we should try to include in our interviews to capture their input regarding the Statewide v. regional administration issue? *[Capture organization and key contact name(s), and very briefly identify the extent of their role in the program to confirm it is substantial.]* Note that we have a short, fixed schedule for this research in order to meet a CPUC ordered deadline, so while we will attempt to get their feedback, it may not be possible.

Q21. [*If not covered through earlier questions ask*:] That is the end of our interview guide. Do you have any comments about the interview approach that might help us improve our study?

Closing

Thank you for taking the time to participate in this pilot test and provide your thoughtful feedback.

12 Appendix F: Summary of Recommendations

Appendix F contains a list of the report's recommendations.

Study Title: Bottom-Up Statewide Energy Efficiency Program Composition Review		**Study Manager:** IOUs	
Recommendation	**Summary of Findings**	**Recommendation**	**Recommendation Recipient**
1	Based on the program characterization and interviews that identified potential benefits and drawbacks of statewide administration, Evergreen developed recommendations for program categories and subprograms that should be administered statewide. The recommendations are consistent with the CPUC's required list of statewide programs in Decision 18-05-041.	We recommend that the IOUs administer the following categories of programs statewide, consistent with the current CPUC definition. This list is consistent with the current list of programs required to be statewide by the CPUC. • Midstream Plug Load and Appliance • HVAC • New Construction (Residential and Commercial) • New Finance Offerings[71] • Codes and Standards - Advocacy • Lighting • Emerging Technologies • Workforce Education and Training – Career Connections (K-12) • Institutional Partnerships • Foodservice Point of Sale Program • Midstream Commercial Water Heating • HVAC Quality Installation/Quality Maintenance • Career and Workforce Readiness	IOUs

[71] The CPUC distinguished new Finance program offerings added in 2016 that are required to be statewide.

Study Title: Bottom-Up Statewide Energy Efficiency Program Composition Review		**Study Manager:** IOUs	
Recommendation	**Summary of Findings**	**Recommendation**	**Recommendation Recipient**
2	The research identified several issues that the IOUs will need to work through as they transition to greater third-party implementation and fully compliant statewide programs. These issues include developing data sharing protocols across IOUs, determining the priority of serving hard-to-reach customers, and ensuring local needs are addressed and local resources are effectively tapped across the state. If these transition issues are resolved, three more categories of programs could potentially be recommended for statewide administration. These program areas are categorized as "provisional" at this time regarding statewide administration: Energy Advisor (Audits), Direct Install and Downstream Rebates.	The IOUs should reexamine programs that fall under the categories of Energy Advisor, Direct Install, and Downstream Rebates approximately one year after the transition to fully compliant statewide program administration and the third-party programs have been awarded (such as in 2021). Keeping the identified transition issues in mind, the programs should be examined to determine if they would be most effective if they were administered statewide or regionally.	IOUs
3	The IOUs are revising their portfolios as they award third-party programs and seek to simplify and reduce the number of programs. There are opportunities for the IOUs to more explicitly coordinate these efforts so their portfolios are consistent.	The IOUs should take advantage of ongoing changes to their portfolios to coordinate their efforts statewide to reorganize and simplify their portfolios. Consistent IOU portfolios would make it easier for trade allies and customers that span IOU service territories, and also would allow for easier oversight and evaluation.	IOUs

13 Appendix G: Summary of Draft Report Comments and Responses

Appendix G contains a summary of comments received on the draft report and Evergreen and the Study Team's response to each. Table 19 lists the single comment received via the PDA, along with a summary of additional comments provided to Evergreen via email or during the public webinar.

Table 19: Draft Report Comments and Evergreen/Study Team Responses

Name	Organization	Comment Format	Date	Comment	Comment Response
Carol Yin	Yinsight	PDA	5/7/19	Would it be possible for the evaluation team to include an appendix with recommendations presented using the table from the CPUC Energy Division Impact Evaluation Standard Reporting Guidelines? Thank you! https://pda.energydataweb.com/api/downloads/1399/IESR_Guidelines_Memo_FINAL_11_30_2015.pdf	Yes, we added an appendix (F) that summarizes the recommendations
Christie Torok	CPUC ED	Email with Word document attachment	5/7/19	Requesting clarifications to be made to the Executive Summary	Clarifications added to the Executive Summary
Carol Yin	Yinsight	Email with a document attachment	5/8/19	Asking for us to make clarifications regarding how the Emerging Technologies Program (ETP) is characterized	Edits made to more clearly characterize ETP
Reggie Wilkins	SCE	Email	5/13/19	Commenting on how use of the ACEEE scorecard rankings might imply that statewide programs are superior, when that may not be the case	Edits made to the Executive Summary to indicate that there is correlation, not necessarily causality
Study Team Discussion	PG&E/Evergreen	Phone discussion following public presentation	5/6/19	Decision to add more caveats about the lit review findings to the Executive Summary	Edits made to Executive Summary
Cynthia Mitchell	Consultant to TURN	Informal comments via email with a document attachment	5/6/19	Requesting clarifications to be made to the Executive Summary	Clarifications added to the Executive Summary
Rob Kasman	PG&E	Email	5/1/19	Add to Executive Summary that we included the REN programs in our review in response to draft research plan comments	Text added to Executive Summary

Name	Organization	Comment Format	Date	Comment	Comment Response
Athena Besa	SDG&E	Email	5/14/19	Request to add mention of an excerpt from D.18-05-041 at page 82: "D.16-08-019 addressed the issue of allocation of savings credit for statewide programs based on budget contributed by each IOU PA. We clarify that this means that credit for energy savings generated will be based on funding contributed only, and not in relation to the geographic region in which the energy efficiency measure was sold or installed."	Suggested text added to Sections 3.2 and 6.1.2