Assessment of Regional Energy Networks

CPUC Contract Group B: Deliverable 22B Year 3 Study

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# 1.	Executive Summary

The Opinion Dynamics evaluation team, with Tierra Resource Consultants as its sub-contractor, is pleased to present to the California Public Utilities Commission (CPUC) this Assessment of California's Regional Energy Networks (RENs), as part of the Year 3 Efficiency Program Oversight and Evaluation of the Group B Sectors. This study is referred to as Deliverable 22-B in the Group B Contract between the CPUC and Opinion Dynamics.

## 1.1	REN Overview and Study Purpose

The RENs, which are organized at the local/regional government level, provide energy efficiency (EE) program offerings to the residents, businesses, and municipalities in their service territories. According to CPUC Decision (D).19-12-021, REN activities must meet one of the following three criteria:

- "Activities that utility or community choice aggregator (CCA) program administrators cannot or do not intend to undertake.

- Pilot activities where there is no current utility or CCA program offering, and where there is potential for scalability to a broader geographic reach, if successful.

- Activities serving hard-to-reach markets, whether or not there is another utility or CCA program that may overlap."[1]

The discussion section of (D).19-12-021, also requested that RENs demonstrate to the CPUC the unique value that they are providing. Specifically, on page 30/31 the Decision states that "Existing or prospective RENs will be required to show how their program offerings supplement those of overlapping REN, utility, and CCA program administrators or implementers. […] The RENs shall also propose savings goals and metrics associated with their unique value, as well as a methodology for measuring progress toward their metrics, in their business plans and ABALs." The RENs subsequently proposed unique value metrics in their 2021 Annual Budget Advice Letter (ABAL). Each REN's unique value metrics demonstrate their unique value proposition and are intended to be measured over time.

At the outset of this research, the CPUC and the evaluation team agreed to focus the third year of this study on RENs that offered ratepayer-funded EE programs to customers during the 2019, 2020 and 2021 program years. This included the Bay Area Regional Energy Network (BayREN) which serves the nine counties of the San Francisco Bay Area; the Southern California Regional Energy Network (SoCalREN) whose service territory includes 12 counties in the Southern and Central California areas, and the Tri-County Regional Energy Network (3C-REN) which serves the counties of San Luis Obispo, Santa Barbara and Ventura.

The main objectives of this evaluation were to (1) continue the three-year assessment of REN data tracking and reporting processes for program years 2019–2021, and (2) examine each REN's efforts to align with the segmentation and metrics requirements of D.21-05-031, which required PAs to assign each program within their EE program portfolios to a market segment based on its primary purpose: resource acquisition, market support, or equity.[2] These are defined as:

- **Resource acquisition:** Programs with a primary purpose of, and a short-term ability to, deliver cost-effective avoided cost benefits to the electricity and natural gas systems.

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[1] D.19-12-021, page 89
[2] D.21-05-031, page 52-53

- **Market support:** Programs with a primary objective of supporting the long-term success of the energy efficiency market by educating customers, training contractors, building government partnerships, or moving beneficial technologies towards greater cost effectiveness.

- **Equity:** Programs with a primary purpose of providing energy efficiency to hard-to-reach or underserved customers and disadvantaged communities in advancement of the CPUC's Environmental and Social Justice (ESJ) Action Plan. Improving access to energy efficiency for ESJ communities may provide corollary benefits such as increased comfort and safety, improved indoor air quality, and more affordable utility bills, consistent with Goals 1, 2 and 5 in the ESJ Action Plan.

D.21-05-031 also directed the California Energy Efficiency Coordinating Committee (CAEECC) to form working groups to develop and vet new reporting metrics for the market support and equity program categories to be considered alongside the portfolio filings due from all PAs in February 2022, with any proposed metrics to be filed as part of the portfolio applications.[3] The decision clarified that although programs must be assigned to one of the above-defined categories, the categories are not meant to be mutually exclusive. Thus, market support and equity programs may also contribute to resource savings, and resource acquisition programs may contribute to secondary market support or equity outcomes.[4] However, the new market support and equity metrics are intended to only capture outcomes arising from programs designated to those respective segments. In other words, secondary contributions from programs within other the other two market segments are not currently included within the reported metrics.

1.2   REN Overview and Study Purpose

The evaluation team employed various research methods to conduct this evaluation, including reviewing PA regulatory filing documents, such as advice letters, business plans, joint cooperation memos, and annual reports; as well as analyzing primary and secondary program data provided by the RENs; and conducting in-depth interviews. First, we submitted data requests to the RENs for program datasets, data collection protocols, and supporting program materials for program years 2019, 2020 and 2021. The CPUC defined a non-resource program[5] as one that "has no directly attributed energy savings but that supports the EE portfolio through activities such as marketing or improved access to training and education." In contrast, EE programs that are intended to achieve and report quantified energy savings (e.g. MW, GWh and MMTh) are classified as resource programs. As such, programs formally known as non-resource programs are likely to be assigned to either the market support or equity segments, while resource programs are likely to be assigned to the resource acquisition segment. However, because programs may serve more than one purpose, the final determination regarding a program's assignment to a given market segment are ultimately at the discretion of the PA upon filing their applications and may eventually be determined by the CPUC. For instance, a PA may determine that a program's primary focus is equity, but it may also contribute resource savings without being formally designated as a resource acquisition program.

Upon receipt of the requested data from the RENs, we reviewed the materials and assessed their data collection processes to ensure consistent data tracking, reporting, and management. The evaluation team reviewed data collection forms and tools, protocols, data storage and management systems, and reporting practices. This effort also investigated the business processes, training efforts, and field activities involved in data collection and tracking by speaking with program managers and select staff members, such as

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[3] D.21-05-031, page 86
[4] D.21-05-031, page 17
[5] During the Year 3 evaluation cycle the term "non-resource program" was phased out in favor of "market support" and "equity" programs. The CPUC definition of non-resource programs can be found on the CPUC's EE Shareholder Incentive Mechanism page: https://www.cpuc.ca.gov/General.aspx?id=4137

representatives of implementation partners, trade allies[6], and others who are required to collect and submit data.

We subsequently examined materials documenting the RENs' plans to achieve the policy goals articulated in D.21-05-031. These efforts included review of the CAEECC Market Support and Equity Working Groups' (WGs) meetings and final reports; the RENs' 2021 Annual Budget Advice Letter (ABAL) and 2022-23 Biannual Budget Advice Letters (BBALs); the RENs' 2024–2031 business plan filings; and associated 2024–2027 portfolio application files provided by the RENs regarding their program segmentation and metrics development. The research team also conducted 24 in-depth interviews speaking with more than 60 people, including representatives from BayREN, SoCalREN, 3C-REN; their primary program implementers;[7] and select trade allies. The interviews were conducted with the RENs and their implementers to help the evaluation team to understand the processes and rationales for segmenting their programs and developing metrics and indicators. These discussions, as well as interviews with trade allies, explored how the RENs are implementing their data tracking systems, including data collection tools, systems, and handling practices. In-depth interview guides were approved by Energy Division staff and are provided for reference in Appendix A.

1.3   Key Findings and Recommendations

This subsection provides findings and recommendations from the research and evaluation activities conducted in the Year 3 Assessment. Note that not all findings have an associated recommendation.

Findings Related to Portfolio Segmentation and Metrics

- **Finding #1:** Based on the segmentation tasks of this study, the evaluation team finds the RENs have articulated their initial segmentation strategies and metrics in their business plan filings. The evaluation team also notes that all three RENs are actively working to collect the necessary baseline data and refine their data collection protocols and practices to ensure they can capture the required information to set segmentation metric targets and report on their resource acquisition, market support and equity metrics by 2024. In future years, the REN programs should be measurable and assessable by third-party evaluators. Any segmentation metric evaluation efforts starting in 2023 would likely be limited to an assessment of any data the respective RENs have been able to collect since their filings.

  - **Recommendation:** Once the RENs have had the chance to finish collecting baseline data in 2022 and 2023, a full evaluability assessment of their baselines and ongoing data collection protocols will be feasible and should be conducted to determine if metrics and targets are set appropriately and if data collection and reporting are yielding meaningful data and insights.

- **Finding #2:** The evaluation team's in-depth interviews revealed widespread implementer praise for the RENs' new portfolio segmentation schemes and the associated metrics. The close alignment between the CAEECC Market Support and Equity WGs recommended metrics and many of the REN unique value metrics proposed in the RENs' 2021 ABALs, validates the many efforts undertaken by the RENs since the evaluation team began evaluating them in 2019. Moreover, the implementers were pleased that the new metrics provide a way to align their equity and market support program activities with those offered by other PAs in a manner that demonstrates collective progress for the

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[6] Trade allies are third parties who assist the primary program implementer with delivery, such as licensed contractors, real estate professionals, engineers, consultants, community-based organizations, etc.

[7] In the case of the BayREN, we also spoke with representatives from Grounded Research, a third-party evaluator hired by BayREN to conduct a process evaluation of BayREN programs, who played an integral role in the development of BayREN's value metrics.

state of California. In some cases, the new statewide equity and market support metrics (statewide metrics) also afforded a new way of measuring progress.

■ **Finding #3:** Metrics should focus on a program's most important activities and outcomes and tie performance to annual PA goals and cumulative statewide targets across all PAs. Additionally, both statewide and the RENs' unique value metrics and indicators should provide direction, demonstrate progress, and hold implementers and PAs accountable for performance. However, the desire for more metrics should be weighed against the effort required to gather the data.

■ **Finding #4:** Multiple implementers and trade allies expressed an interest in conveying the importance of balancing the insights gained from any new statewide or unique value metrics with the burden of providing additional data. As stated by one trade ally, "You need to decide if you want do the best good or the most good." The 'best good' may mean new insights from new metrics, but if people are not willing to comply with providing the requisite information, then they will not participate, and they will complete fewer projects. Requiring less information may result in completing more projects and delivering more energy savings—potentially doing "more good" overall.

■ **Recommendation:** While the CPUC should allow the RENs and their implementers discretion in their selection of which metrics best apply to their programs, it should simultaneously maintain requirements regarding data collection for a minimum number of shared metrics to ensure adequate data to assess program performance and to ensure meaningful contributions to any aggregated statewide totals from all PA programs. The dynamic tension between latitude of choice and necessity of measurement may encourage creative solutions regarding new ways of collecting data that minimize operational overhead while still yielding meaningful data from EE program participants. For instance, program implementers might require customers to complete an online or paper form to submit the extra data before their rebates are processed. This would bypass the need for customers to share information prior to the start of the project and any subsequent delay in rebate processing would be attributable to the customer's timely submittal of their own paperwork.

■ **Finding #5:** While shared statewide metrics and REN unique value metrics may both be quantitative measures; they serve different purposes. Shared statewide metrics are designed to show compliance and contributions toward statewide goals and objectives. In contrast, the RENs' value metrics reflect somewhat different activities and outcomes since they are intended to demonstrate the RENs' unique contributions to the PAs' EE portfolios. Having both types of metrics allows the RENs greater reporting flexibility and more opportunity to showcase their gap-filling activities that might otherwise be lost when individual program performance numbers are combined with overall PA portfolio metrics or aggregate statewide numbers that reflect contributions from all PAs.

■ **Finding #6:** Although unique value metrics are a meaningful way to track and demonstrate the RENs' unique contributions to PAs' EE portfolio, in some cases they still do not demonstrate the full value of the RENs' activities because there is currently no CPUC-approved way to quantify the non-energy benefits arising from the ways the RENs are filling gaps in the marketplace. Neither the statewide shared metrics nor the RENs' unique value metrics effectively capture the economic development benefits and other non-energy benefits that arise from some REN activities.

■ **Recommendation:** Until such time as the CPUC approves a formal framework to determine non-energy benefits, the evaluation team suggests the RENs do their best to document and illustrate these additional benefits in their annual reports, such as quantifying the number of jobs or newly educated/credentialled workers added within their service territories.

■ **Finding #7:** Some statewide metrics/indicators may require personally sensitive information from customers. Customers may be reluctant to share such information when compared to the relevance and value of the services that they are receiving in exchange for sharing this personally sensitive data. A related issue is the seemingly insufficient training provided to the people who are asked to collect sensitive personal data. While the RENs and implementers we interviewed all reported providing training regarding personally identifiable information (PII) and their protocols for data handling and data security, none mentioned any training regarding how to appropriately ask people for sensitive information. While in many cases simply encouraging someone to complete a form need not require special training, program participants may be reluctant to share equity-related data.

  ■ **Recommendation:** The CPUC, PAs, and/or a CAEECC WG should draft best practices for how implementers can collect PII and other sensitive information and how to speak with program participants to encourage them to share the requisite personal information necessary to comply with reporting new statewide metrics.

■ **Finding #8:** Some statewide metrics call for information that could be better provided by third parties with better access to existing data or with the ability to gather primary data from multiple sources. For instance, air quality improvements may be best addressed by an air quality management district. Similarly, because PA service territories overlap and customers are exposed to information from multiple sources, surveys to assess awareness, knowledge, attitudes and behaviors (AKAB) may be better conducted by a third-party capable of assessing the broader population.

  ■ **Recommendation:** The CPUC should consider delineating distinctions within the required statewide metric categories to differentiate between (1) those that can be readily collected from project data, customers, and participating trade allies or other professionals; and (2) those that require external data from third parties such as public agencies, partnerships with outside organizations like air quality management districts, and/or extensive data collection such as surveys of populations that span multiple PA service territories.

■ **Finding #9:** The evaluation team found that in some cases segmentation metrics "fit," but they did not "make sense" for certain programs. For example, the CAEECC WGs developed metrics to document the percentage of program participants out of a larger group. While this may make sense for large scale programs run by the IOUs, it may make more sense for the RENs to report actual participant counts. For instance, the BayREN Green Labeling program trains 200 to 300 real estate professionals each year, but there are more than 200,000 realtors[8] working in California, including tens of thousands in the Bay Area alone. Because a few hundred participating professionals per year represents a tiny fraction and that number is not likely to grow substantially given the program's budget, in instances such as these, participant counts may be more appropriate than percentages. Because metrics must ultimately produce meaningful insights, they must necessarily be crafted to consider the scope, scale, and budget of the program being measured. The evaluation team finds that in such cases, it is reasonable for the RENs to use their unique value metrics to report on program activities rather than using statewide metrics.

■ **Finding #10:** The new statewide market support metrics call for tracking participants in various activities. While this is straightforward at the level of an individual person, it becomes more complicated when identifying commercial and public sector participants or contractors since these organizations and businesses can have multiple individuals working at the same firm or agency (e.g., facility managers, sustainability coordinators, energy managers, HVAC installers, etc.). This can

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[8] National Association of Realtors, https://cdn.nar.realtor/sites/default/files/documents/monthly-membership-05-2022.pdf

confuse participation counts and percentages, especially considering the likelihood that different events could conceivably count participants at different levels (e.g., counting the number of organizations in attendance regardless of the number of personnel attending or counting each individual person singularly when multiple participants are with the same organization).

- ■ **Recommendation:** The CPUC should consider requiring PAs to include definitions for the units of measure (e.g., training participants, contractors, requests for information, etc.) and the qualifications for inclusion (e.g., 100% vs. more than 50% attendance) used within their reporting metrics. PAs should also be required to point out any heterogeneous counts (e.g., individuals + facilities + agencies) included in their final singular portfolio wide number being reported for a given metric.

- ■ **Finding #11:** Because the statewide metrics have only recently been proposed, the CAEECC WGs have not had time to attend to the myriad of details associated with the metrics they established and open questions remain, such as how to avoid double counting of participants, activities or outcomes due to overlapping PA programs or inconsistent definitions. While this may not be an issue on an individual program reporting level, it is important for any aggregated statewide metrics.

  - ■ **Recommendation:** Until such time as the CPUC approves specific rules regarding reporting and the avoidance of double counting, the CPUC should consider requiring each implementer and each PA to document in their filings how they have quantified their program performance and what they have done to prevent double counting, such as providing definitions of the units counted (e.g. contractors vs employees) and the eligible groups from which those units were drawn (e.g. within a geographic boundary, customer class, etc.).

Findings Related to the Data Management Assessment

BayREN

- ■ **Finding #12:** Based on the data review and interviews with BayREN staff, the evaluation team found BayREN's data to be of high quality, reasonable mergeability and moderately complete, except for phone numbers, which could be entered more consistently.

- ■ **Finding #13:** Based on in-depth interviews with the BayREN program implementation teams, the evaluation team found all BayREN programs have well-established methods for documenting and explaining data flows and data management.

- ■ **Finding #14**: While all BayREN implementers appear to maintain adequate data security protocols, an implementer who supports BayREN's multifamily program has less rigorous data security standards than the others. For instance, while this multifamily implementer requires unique logins for their technical assistants, they do not provide specific training regarding how to handle PII, despite its centrality to data handling.

  - ■ **Recommendation:** The evaluation team recommends that BayREN, as well the other RENs, conduct a data security review across all programs to ensure all implementers and any others with access to PII or other customer records maintain industry best practice standards.

SoCalREN

- ■ **Finding #15:** The evaluation team found the majority of SoCalREN's tracking data fields to be sufficiently populated and of good quality, except for phone numbers which were inconsistent.

Additionally, SoCalREN's tracking datasets generally include most of the mergeable fields that allow for traceability between market support activities and CPUC program data. The evaluation team found no significant data completeness, quality or mergeability issues in five program databases, while two showed issues with data completeness. Upon investigation, the evaluation team found that the implementer for SoCalREN faced challenges regarding accessing data pertaining to underage students and this explained much of the issue.

■ **Finding #16** SoCalREN provided ample program documentation regarding protocols, tools, and practices. SoCalREN's resource data processes and procedures are well honed to minimize errors.

■ **Finding #17:** SoCalREN demonstrates a commitment to protecting the data within its data systems, as well as the systems used by its program implementers. While data handling and data security protocols differ by program implementer, SoCalREN requires compliance with the California Consumer Privacy Act (CCPA) wherever PII is involved.

3C-REN

■ **Finding #18:** The robustness of 3C-REN's data tracking and reporting is significantly better than observed in past studies of RENs and LGPs. However, while the tracking datasets 3C-REN provided include the most common fields necessary to merge program data with CPUC data (e.g., customer name, full address, phone number, and email address), we identified gaps in the data completeness of 6 key mergeable fields including name, address, city or zip code, phone, date of participation, and email.

　　■ **Recommendation:** 3C-REN should continue to work with its program implementers to identify existing barriers and potential solutions to collecting better customer contact info for their activities by requiring a minimum of at least one way to contact the customer, and to implement a standardized approach to data entry and validation across its programs, particularly with respect to key mergeable fields.

■ **Finding #19:** All 3C-REN's programs use Salesforce for customer relationship management (CRM) and data tracking, and SharePoint for data storage and collaboration across agencies and implementers. While these systems have built-in data security, 3C-REN did not provide specific data security documentation. However, when asked during in-depth interviews 3C-REN staff explained that they ensure the security of their data by limiting access, using two-factor authentication, and transferring files through secure file protocols. They also require implementers to pass IOU Third-Party Security Reviews.

■ **Finding #20:** The evaluation team finds that 3C-REN data systems are secure as identified through interviews, but 3C-REN's documentation did not discuss its data security policy.

　　■ **Recommendation:** 3C-REN should clearly define its security policies to clearly articulate how participant data under its control is secured.

2. Regional Energy Networks and Study Overview

2.1 Regulatory Background

Regional Energy Networks (RENs) are coalitions of local governments created to provide new or unique value to the CPUC's energy, climate, and equity goals by administering EE programs independent of other PAs. The REN concept originated from the desire of local governments to undertake EE program design and management more freely. RENs were initially intended to augment or supplement existing utility EE portfolios by leveraging local governments' experience directly administering EE programs from the American Recovery and Reinvestment Act.

In D.12-11-015, the CPUC approved the creation of two RENs to administer EE programs in northern and southern California. The Bay Area Regional Energy Network (BayREN) falls entirely within the PG&E service territory; it also overlaps with the Marin Clean Energy (MCE) service territory. Meanwhile the Southern California Regional Energy Network (SoCalREN) covers much of the Southern California Edison (SCE)/Southern California Gas (SCG) joint service territories. Later, D.18-05-041 approved the Tri-County Regional Energy Network (3C-REN), which covers, San Luis Obispo, Santa Barbara, and Ventura counties. The 3C-REN territory overlaps with those of PG&E, SCE and SCG. In D.21-11.013, the CPUC approved the EE business plan of the Inland Regional Energy Network (I-REN), which includes Riverside and San Bernadino Counties. On March 4, 2022, Redwood Coast Energy Authority filed a motion for approval of their EE portfolio application on behalf of Rural Regional Energy Network (RuralREN) that would cover a patchwork of inland Central California regions and areas along the northern and central California coast. Because neither I-REN nor RuralREN had active programs during the 2020 or 2021 program years, they are not discussed further in this report. Table 1 below summarizes the counties served by BayREN, SoCalREN, and 3C-REN, as well as the overlapping territories of other program administrators.

Table 1. Regional Energy Networks at the Time of the Study

REN	Counties Served	Overlapping PA Territories
BayREN	Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, Santa Clara, Solano, Sonoma	PG&E, MCE
SoCalREN	Imperial, Inyo, Kern (partial), Kings (partial), Los Angeles, Mono, Orange (partial), Riverside, San Bernardino, Santa Barbara (partial), Tulare (partial), Ventura	SCE, SCG
Tri-County REN	San Luis Obispo, Santa Barbara, Ventura	PG&E, SCE, SCG

D.12-11-015 introduced specific criteria to evaluate REN proposals, which intended to have RENs fill gaps in the IOUs' portfolios and serve HTR customers. The CPUC found these criteria to "have served reasonably well since they were instituted."[9] In D.19-12-021, the CPUC revised these criteria to include CCAs and clarified that RENs are meant to fill gaps in all PA portfolios. RENs are required to meet at least one of the following revised criteria from D.19-12-021:

- Offering activities that the utilities or CCAs cannot or do not intend to undertake.

- Piloting activities where there is no current utility or CCA program offering, and where there is potential for scalability to a broader geographic reach, if successful.

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[9] D.19-12-021 page 30.

- ■ Offering activities serving HTR markets, regardless of whether there is another utility or CCA program that may overlap.[10]

D.19-12-021 recognized the RENs have been in place long enough to no longer be considered pilots, The decision also requires newly formed RENs, and all existing RENs, to include a governance structure that includes more than one local government, so they remain regional in nature. Each approved REN must submit joint cooperation memos (JCMs) developed with each geographically overlapping PA. The JCMs are designed to address program and customer overlaps, including those with IOUs, CCAs that offer ratepayer-funded EE programs, and existing or newly formed RENs. The decision further clarified that REN business plans must:

- ■ Be vetted by stakeholders through the CAEEC;

- ■ Include an explanation of their REN governance structure; and

- ■ Include benefit-cost ratios and savings targets, as RENs are not required to meet a cost-effectiveness threshold.[11]

Further noted in D.19-12-021 are the changes in the landscape of funding for EE programs in California given that the budgets and roles for Local Government Partnerships (LGPs) are shrinking and that CCAs are increasingly showing an interest in administering EE programs. Because the RENs are designed to offer programs outside of utility and CCA activities, the decision maintains that RENs should continue to serve customers. The decision places no restriction on the customer segments or program areas served, so long as at least one of the above revised criteria from D. 19-12-021 is met. This decision was intended, among other things, to reduce the uncertainty about the future of the RENs raised in D.16-08-019 with the caveat that in the event of changing circumstances, the topic could be revisited.

The discussion section of (D).19-12-021, also requested that RENs demonstrate to the CPUC the unique value that they are providing. Specifically, on page 30/31 the Decision states that "Existing or prospective RENs will be required to show how their program offerings supplement those of overlapping REN, utility, and CCA program administrators or implementers. [...] The RENs shall also propose savings goals and metrics associated with their unique value, as well as a methodology for measuring progress toward their metrics, in their business plans and ABALs." The RENs subsequently proposed unique value metrics in their 2021 Annual Budget Advice Letter (ABAL). Each REN's unique value metrics demonstrate their unique value proposition and are intended to be measured over time.

Since D.19-12-021, PAs have been increasingly challenged to maintain cost-effective portfolios that simultaneously meet various policy objectives. This is primarily due to the diminishing availability of cost-effective measures. Consequently, to maintain cost-effectiveness, PA's have been installing more costly measures and projects, reducing focus on HTR customers, and, in some cases, scaling back or eliminating programs that provide only indirect energy savings while furthering the CPUC's important policy goals.

On May 26, 2021, D.21-05-031 acknowledged these challenges, stating "[t]he traditional definition of resource programs, or programs which deliver energy efficiency savings, neglects the nuance that certain programs that deliver some energy savings have other primary objectives, such as supporting equity goals or long-term market success. These programs serve an important function, but because of their high costs, tend

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[10] D.19-12-021, page 32 https://docs.cpuc.ca.gov/PublishedDocs/Published/G000/M385/K864/385864616.PDF.

[11] RENs are not required to meet a cost-effectiveness threshold because they inherently serve the needs of HTR customer segments that are naturally less cost-effective to serve. Additionally, they do not have the same ability as IOUs to offset cost-ineffective programs within a larger portfolio of largely cost-effective programs

to weigh down portfolio-level cost effectiveness calculations."[12] In an effort to reduce the conflict between cost effectiveness and other equally or more important policy objectives, D.21-05-031 adopted a new approach to segmenting the EE program portfolios, into programs with primary purposes of resource acquisition, market support, or equity. [13] The decision defines these segments as follows:

- **Resource acquisition**: Programs with a primary purpose of, and a short-term ability to, deliver cost-effective avoided cost benefits to the electricity and natural gas systems.

- **Market support**: Programs with a primary objective of supporting the long-term success of the energy efficiency market by educating customers, training contractors, building partnerships, or moving beneficial technologies towards greater cost-effectiveness.

- **Equity**: Programs with a primary purpose of providing energy efficiency to hard-to-reach or underserved customers and disadvantaged communities in advancement of the Commission's Environmental and Social Justice (ESJ) Action Plan. Improving access to energy efficiency for ESJ communities may provide corollary benefits such as increased comfort and safety, improved indoor air quality, and more affordable utility bills, consistent with Goals 1, 2 and 5 in the ESJ Action Plan.[14]

D.21-05-031 requires all PAs to assign each EE program to one of these three segments for the purpose of portfolio reporting and tracking. IOU budget allocations to market support and equity programs are capped at 30% of total budgets but are no longer limited by the total resource cost test (TRC). In the absence of strict cost-effectiveness limitations, the CPUC directed PAs to develop metrics and criteria for evaluating the progress of their market support and equity programs, as well as to utilize the CAEECC to develop and vet metrics for these types of programs.[15] The CPUC will evaluate the PA's segmentation metrics in the 2024–2027 energy portfolio applications when deciding whether to approve the portfolio proposals.

2.2   RENS Covered in this Study

This Year 3 study examines the three RENs that actively administered EE funds in the 2019, 2020 and/or 2021 program years. The following sections provide summaries of each REN included in this study as well as overviews of the RENs' program offerings and activities based on our review of the data and materials received in response to this year's data request.

2.2.1   Bay Area Regional Energy Network (BayREN)

BayREN, led by the Association of Bay Area Governments (ABAG), is a collaboration of the nine counties of the San Francisco Bay Area: Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, Santa Clara, Solano, and Sonoma. Since 2013, BayREN has offered more than seven million residents of these counties regional-scale EE programs, services, and resources alongside PG&E and MCE EE program offerings. BayREN collaborates and coordinates with PG&E; however, its programs are distinct from PG&E's offerings. BayREN's programs are divided into three sectors: Residential, Commercial, and Cross-Cutting. BayREN continues to

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[12] D. 21-05-031, Assessment of Energy Efficiency Potential and Goals and Modification of Portfolio Approval and Oversight Process, Page 11. https://docs.cpuc.ca.gov/PublishedDocs/Published/G000/M385/K864/385864616.PDF.
[13] D.21-05-031, page 52-53
[14] D. 21-05-031, Page 14
[15] CAEECC working groups developed both metrics and indicators. Metrics have specific targets and timelines, while indicators are things to watch and report to assess progress. For reader convenience when this report refers to metrics, the term is intended to also include indicators.

focus on its six programs with no new programs for 2022.[16] BayREN's Portfolio Plan for 2024–2027 proposes two new equity and two new market support programs.[17]

2.2.2   Southern California Regional Energy Network (SoCalREN)

With the County of Los Angeles serving as its lead agency, SoCalREN administers EE programs for more than 20 million residents and over 700 public agencies in 12 counties that overlap with the SC) and SCG service territories. During 2020 and 2021, SoCalREN offered programs targeting homeowners, local governments, public agencies, low-income communities, contractors/energy professionals, and commercial and multifamily property owners. SoCalREN's programs are divided into four sectors: Public, Residential, Finance, and workforce education and training (WE&T). Program changes in 2021 included the launch of Kits for Kids Program and the closure of the Multifamily Financing Program due to low participation.[18] In 2022, SoCalREN began a new program called the Streamlined Savings Pathway. SoCalREN's Portfolio Plan for 2024–2027 proposes three new resource acquisition programs, eight new market support programs, eight new equity programs, and one new Codes & Standards (C&S) program.[19]

2.2.3   Tri-County Regional Energy Network (3C-REN)

In May 2018, the CPUC approved 3C-REN to administer EE programs to residents and businesses located in the Ventura, Santa Barbara, and San Luis Obispo Counties with the intent of filling gaps left in WE&T, local government training, and full-service EE services for HTR markets. This approval allowed 3C-REN to offer three programs beginning in mid-2019 including WE&T, C&S, and the Residential Direct Install Program for Hard-to-Reach Customers. In 2021, 3C-REN launched the Home Energy Savings (HES) program for multifamily dwellings and closed the HES single family direct install program.[20] In 2022, 3C-REN relaunched the single family HES program as an NMEC offering. 3C-REN's 2024–2027 Portfolio plan proposes two new market support programs and one new equity program.[21]

2.3   Key Research Questions

During this third year of the study, the evaluation team assessment of the RENs built upon the cumulative knowledge gained during previous years. The research questions for the Year 3 study were designed to explore data issues identified in past studies and to examine RENs in the context of the current policy environment. Research issues covered in this Year 3 assessment included the following:

- ■ What were the RENs' primary current and planned REN resource and non-resource activities?

- ■ Were REN metrics appropriately designed to indicate progress toward goals and milestones?

- ■ How were REN activities and outputs contributing to the RENs' unique value metrics and CPUC objectives?

- ■ What were the RENs' existing and emerging data collection practices and protocols, particularly involving non-resource activities?

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[16] https://www.bayren.org/sites/default/files/2022-05/2021%20BayREN%20Annual%20Report-11x17.pdf
[17] https://www.bayren.org/sites/default/files/2022-03/A2203XXX%20-%20BayREN-02%20-%20Portfolio%20Plan%20Testimony.pdf
[18] https://socalren.com/sites/default/files/2021%20SoCalREN%20Annual%20Report.pdf
[19] https://socalren.com/sites/default/files/Exhibit_2_SoCalREN_2024-2027_PortfolioPlan_03042022.pdf
[20] https://s33258.pcdn.co/wp-content/uploads/2022/05/3C-REN_2021-Annual-Report_FINAL.pdf
[21] https://s33258.pcdn.co/wp-content/uploads/2022/03/A2203XXX-3C-REN-02-Portfolio-Plan-Testimony.pdf

- What were the data handling, tracking, and transfer practices between RENs and other PAs?

- How might REN data tracking practices for resource and non-resource activities be improved to become more effective?

- How did RENs and their implementation contractors improve the evaluability of REN resource and non-resource activities?

2.4   Research Tasks

For this third-year assessment of RENs, the evaluation team conducted the research tasks listed in Table 2 below to address the key research questions presented in Section 2.3.

Table 2. Research Tasks for RENs Third-Year Assessment

Evaluation Tasks	Description
Data Request and Material Review	The team submitted a data request to BayREN, SoCalREN, and 3C-REN to acquire files relating to REN value metrics, resource and non-resource program tracking databases, tracking data handling protocols, CRM system access, Total System Benefits (TSB) and portfolio segmentation, and contextual documents showing activities conducted from 2019–2021. The evaluation team reviewed responses to understand each REN's activities and intended outcomes.
Interview Guide Development and In-Depth Interviews	The team used the data request materials to inform development of the interview guides. We conducted in-depth interviews with each REN, implementing partner staff, and trade allies to assess alignment of each individual REN's activities with their proposed unique values and to determine how effectively the RENs are collecting that data. The team also assessed data collection tools, systems, and handling practices.
Value Metrics Assessment	The team sought to identify evidence that the RENs are filling gaps, piloting unique approaches, targeting the hardest-to-reach customers or customer segments within their respective territories, and/or adding value in alignment with their JCMs and based on their unique expertise and relationships with stakeholders.
Database and Tracking Assessment	The evaluation team assessed the data collection methods, systems, and practices of REN activities to ensure accurate, consistent, and complete tracking, management, and reporting. The team also documented new systems and practices implemented to accommodate recently proposed unique value metrics or new statewide metrics.
Reporting	This report details REN portfolio segmentation and metrics process, data tracking systems and practices, and REN contributions to resource savings, market support, equity, and other value pillars.

2.5   Data Request

On behalf of the evaluation team, the Energy Division submitted data requests to BayREN, SoCalREN, and 3C-REN on May 21, 2020. The evaluation team then spoke with REN staff to clarify questions as necessary and received responses from each REN by June 11, 2021. After materials review, the evaluation team followed up with each REN to request any missing data. The RENs provided additional files for review as appropriate. The data requests were extensive and covered a wide range of documents, databases, and other program records including:

- Applicable program staff names and contact information so the evaluation team could set up in-depth interviews to discuss each REN's approach to portfolio segmentation, metrics, and data management.

- Files associated with REN value metrics including:

    - Documentation used during the creation of value metrics,

    - Internal and external documents used to explain or disseminate value metrics,

    - Official final documentation of value metrics for the CPUC,

    - Description of steps taken to initiate tracking of value metrics, and

    - Sample data collected on metric to be used as evidence of contributions to relevant value pillars.

- All internal resource and non-resource activity tracking databases, including fields that allow records to merge to the CPUC program tracking database of claimable EE savings. The evaluation team preferred this be provided via a single file containing all tracked non-resource data. We also requested that the RENS provide files in a database format, such as an MS Excel workbook, and asked RENs not to provide tracking databases in PDF or MS Word since these are difficult or impossible to use for our analysis.

- Documentation of REN and implementing partner resource and non-resource tracking data collection protocols, tools and practices for non-resource and resource activities. This included examples or blank templates of

    - Data collection forms, including hard copy, digital, and online data intake forms;

    - Any available flowcharts or process diagrams explaining the flow of program, customer or implementer information; and

    - A summary of all practices and protocols for data collection, handling, transfer, and storage for each resource and non-resource program.

- Examples of or access to REN and implementer CRM systems such as Salesforce, other associated data storage systems, or other tools used to track engagements with participants in non-resource activities undertaken by the RENs.

- Any plans or documents detailing future or current changes, particularly if any are related to topics from D.21.05.031.

- Any available files that provide context to the evaluation team on the types of activities conducted between 2019–2021 including:

    - ABALs,

    - Annual reports,

    - JCMs,

    - Program theory and logic models for all resource and non-resource programs, and

    - Program descriptions, implementation plans, and associated materials.

3.   Portfolio Segmentation and Metrics

3.1   Methodology

In light of D.21-05-031, Energy Division staff asked the evaluation team to explore how the RENs plan to segment their programs and track these new segmentation metrics. Additionally, the evaluation team was asked to provide recommendations regarding best practices for establishing and collecting metrics the Energy Division should consider when evaluating the RENs on the new shared statewide segment-specific metrics. This approach recognizes that while each REN may be pursuing a different path, the CPUC desires an evaluation-oriented perspective regarding the types of tracking and performance information that it has directed all PAs to collect and report. This may go towards supporting Energy Division-sponsored retrospective evaluation efforts for future program years.

In response to this directive, the evaluation team conducted in-depth interviews with staff from each of the RENs, their third-party implementation partners, and participating trade allies to assess how portfolio segmentation and metrics were propagated across the breadth and depth of the REN EE portfolios. We intended to learn about their approaches to segmenting their portfolios and selecting appropriate statewide and unique value metrics. As part of this process, we also reviewed the following files from each of the three RENs: 2020 and 2021 Annual Reports; Joint Cooperation Memos filed for 2021 and 2022; BBALs for program years 2022 and 2023; and 2024–2027 energy portfolio applications. Based on these tasks, the following subsections provide

- An overview of each REN's segmentation strategies and metrics.

- An assessment of the evaluability of these segmentation strategies and metrics for supporting CPUC-sponsored retrospective evaluation efforts.

- Recommendations regarding best practices for establishing and collecting metrics.

3.2   Overview of REN Segmentation and Metrics

On average, the three RENs are devoting 52% of their budgets to equity programs, 24% to market support, 16% to resource acquisition, and 8% to other (Table 3).[22] Despite the differences in how the three RENs allocated their budgets, multiple conversations during our in-depth interviews and a review of all REN document submissions demonstrated that their approach to portfolio segmentation and distribution of budgets reflects their alignment with: CPUC guidance, efforts to respond to gaps in the markets, steps to address underserved populations, and support for deeper energy savings and carbon reductions with a strong emphasis on providing EE services to traditionally HTR markets. The following subsections discuss each REN's proposed portfolio segmentation and metrics in more detail.

Table 3. 2024-2027 REN Segmentation Summary

REN	Equity	Market Support	Resource Acquisition	Other (C&S, EM&V)	Total Portfolio[a] ($M)
BayREN	63%	16%	12%	9%	$162
SoCalREN	27%	35%	37%	1%	$226

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[22] Source: Raab Associates, CAEECC Full Quarterly Meeting Slides, March 10, 2022.

REN	Equity	Market Support	Resource Acquisition	Other (C&S, EM&V)	Total Portfolio[a] ($M)
3C-REN	65%	20%	0%	15%	$71
Average	52%	24%	16%	8%	$153

[a] Total Portfolio Budget includes budget for programs, EM&V, ME&O, administrative costs, and C&S.

3.3 BayREN

BayREN's portfolio consists of six existing programs and four newly proposed programs that will launch upon CPUC approval. Of these programs, three are segmented as equity, three as market support, one as resource acquisition, and one as C&S (Table 4). According to BayREN management, this apportionment represents its commitment to its core value pillars that support more than just a drive for cost-effective energy savings programs.

Table 4. BayREN Portfolio Segmentation

Segment	Sector	Program	Gap Filling	Pilot	HTR	Existing/ Proposed
Resource Acquisition	Commercial	BayREN Business	✓		✓	Existing
Market Support	Cross-Cutting	Water Upgrades $aves	✓	✓	✓	Existing
	Residential	Green Labeling	✓	✓		Existing
	Public	Targeted Decarbonization Services	✓			Proposed
		Integrated Energy Services	✓			Proposed
Equity	Residential	Single Family (Home+)	✓		✓	Existing
		Bay Area Multifamily Building Enhancements (BAMBE)	✓	✓	✓	Existing
	Commercial	BayREN Refrigerant Replacement (BRRR)	✓		✓	Proposed
	Cross-Cutting	Climate Careers	✓			Proposed
Codes & Standards	Cross-Cutting	Codes & Standards	✓		✓	Existing
4 Segments	4 Sectors	10 Programs	10	3	6	6 Existing 4 Proposed

During in-depth interviews, the BayREN leadership team explained the process behind their segmentation decisions. Their process began by defining each program's primary purpose and then considering secondary objectives. This includes considering CPUC definitions, goals of the CPUC ESJ Action Plan,[23] and BayREN's many strategy documents and program implementation plans. The process was made somewhat easier since BayREN had previously mapped each program's program theory and logic model (PTLM) to its unique core values and metrics. In some cases, the decision to designate a program for a primary segment was

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[23] CPUC Environmental & Social Justice Action Plan, Version 2.0 Draft (ESJ Action Plan), available at https://www.cpuc.ca.gov/news-and-updates/newsroom/environmental-and-socialjustice-action-plan

straightforward. Others required more extensive conversations regarding the program's intended primary audience, its targeting strategy, any necessary updates to program implementation, and tracking and reporting considerations. Moreover, when it came to equity considerations, BayREN stated the following in its 2022–2023 Bi-Annual Energy Efficiency Program and Portfolio Budget Request.

> *"While 'equity' programs have been defined in D.21-05-031 and are being further refined by the CAEECC working group, as directed by the Commission, BayREN has its own additive definition. For BayREN, equity means addressing systemic barriers to energy efficiency and electrification, especially for, and in collaboration with, equity priority communities and those who disproportionately face energy burdens, climate impacts, and are underrepresented in policy and decision-making. Thus, even for programs that are not deemed to be in the equity segment, BayREN's equity principles will be incorporated into the program design and outreach strategies."[24]*

Decisions regarding equity and program segmentation were part of the larger process of preparing BayREN's most recent business plan and portfolio application. To prepare the filings, BayREN hosted 15 meetings with stakeholder groups to gather input on barriers to EE and decarbonization and how to leverage BayREN programs to support specific local jurisdictional goals regarding energy, health, equity, and resilience through energy upgrades. These conversations ultimately led to a fine tuning of existing programs and the crafting of four newly proposed programs to fill a variety of market gaps.

Although BayREN's programs are all intended to fill gaps in the market, some are more heavily concentrated on equity objectives, while others are more focused on market support activities. Nonetheless, each of BayREN's programs include elements designed to contribute to both the equity and market support segments. Moreover, while BayREN's pay-for-performance Business Program is its only formal resource acquisition program, the REN also plans to claim energy savings arising from its single family and multifamily programs. Its other programs will continue to support resource acquisition through market support and equity program activities that may not have direct links to claimable energy savings. To explain how its programs cross boundary definitions and contribute to all three portfolio segments, BayREN provided the information shown in Table 5.

Table 5. BayREN Proposed Portfolio Segmentation for Existing Programs

BayREN Program Name	Primary Portfolio Segment	Supplementary Program Elements		
		Resource Acquisition	Market Support	Equity
Commercial	Resource Acquisition	▪ Pay-for-performance program design: only actual savings incentivized	▪ Contractor training ▪ Use of new technologies	▪ Small- and medium-sized businesses ▪ Geographic targeting in priority equity communities
Water Upgrades $aves	Market Support	▪ Savings may be claimed due to updates to Water-Energy Nexus Calculator	▪ Builds partnerships ▪ Introduction of new technologies	▪ Serves renters with little or no up-front cost ▪ Immediate reduction in utility bill ▪ Removes traditional barriers for participation

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[24] BayREN 2022-2023 Bi-Annual Energy Efficiency Program and Portfolio Budget Request, p5.

BayREN Program Name	Primary Portfolio Segment	Supplementary Program Elements		
		Resource Acquisition	**Market Support**	**Equity**
Green Labeling	Market Support	▪ Home Energy Score report offers energy efficiency recommendations and referrals to EE programs	▪ Training of assessors and real estate professionals on energy efficiency and transparency at time of sale/major renovation	▪ Materials provided in non-English ▪ Energy efficiency transparency can result in action thereby lowering utility bills
Multifamily	Equity	▪ Minimum 15% energy savings	▪ Partnerships with Community Benefit Organizations, public ▪ agencies, etc.	▪ Affordable properties ▪ Small properties with tenant ownership
Single Family	Equity	▪ Deemed measures	▪ Contractor outreach and training	▪ Middle-income focus ▪ Renters ▪ Non-English speakers (residents and contractors)
Codes & Standards	Codes & Standards	▪ Increased compliance ensures more energy savings realized	▪ Training of building departments ▪ Pilot new technologies	▪ Increased code compliance helps ensure people live in legal and safe dwellings ▪ Equity perspective provided with reach codes support so can be considered in the adoption of local policies

The BayREN Business Program also provides an example of how BayREN's programs contribute to multiple sectors, and consequently why the program requires a diverse set of metrics for tracking and reporting. The PTLM shown in Figure 1 illustrates how, despite its designation as a resource acquisition program due to its pay-for-performance structure, the program design also contributes to equity and market support goals. It emphasizes equity by targeting HTR small- and medium-sized businesses (SMBs) in underserved communities, and it provides market support by building a pipeline of competitive aggregators capable of serving the SMB market. Under current rules per D.21.05.031, programs must be designated as a single segment, and because this program is classified as a resource program, its contributions to equity and market support will not be included in formal statewide metrics. Those contributions will instead be captured and reported in BayREN's unique value metrics. Because contributions from programs such as the BayREN Business Program are likely to contribute meaningfully to equity and market support—and because those contributions will not count in the statewide equity and market support tabulations—the evaluation team suggests the CPUC reconsider the requirement to only including contributions to statewide tallies from the primary market segment to which the program has been assigned.

Figure 1. BayREN Logic Model Mapping Outcomes to Segments and Metrics
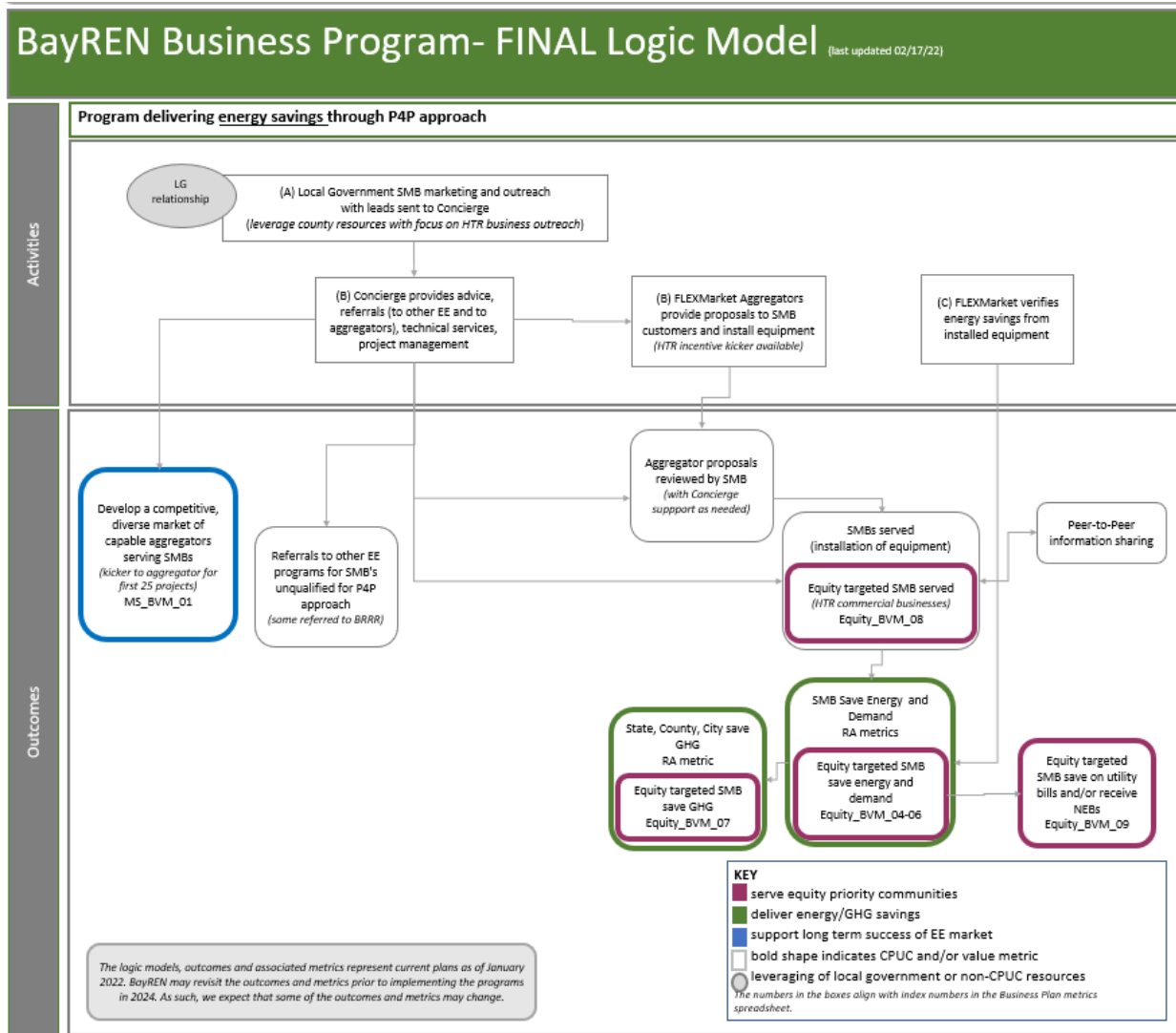
Source: Bay Area Regional Network, BayREN Logic Models Excel File, 2/17/22, Business P4P tab.

The Bay Area Multifamily Building Enhancements (BAMBE) program presents an example of how D.21.05.031 enabled BayREN to further advance the portfolio's efforts to fill gaps and better address the needs of the most underserved customers within the sector. Much of the program's prior award-winning success can be attributed to its no-cost technical assistance (TA) activities that help multifamily property owners overcome initial barriers to participation. The program's focus is on helping property owners identify energy efficiency opportunities; however, in many cases EE is not a top priority for them. In response, BayREN more closely aligned the program with the ESJ Action Plan, which prompted the program to work with strategic partners to expand its focus to additional co-benefits via a new TA Plus offering. To that end, in 2021, BayREN worked with two county public health agencies and the Bay Area Air Quality Management District to secure a $2 million grant that will be used to launch the Bay Area Healthy Homes Initiative (BAHHI). BAHHI will leverage the BAMBE program to improve indoor air quality for families over-burdened by air pollution as well as those with family members living with asthma.

BayREN's efforts to establish unique value metrics began after D.19-12-021. The REN enlisted Grounded Research and Consulting, a third-party evaluation firm, to conduct a process evaluation and facilitate the process of better defining BayREN's value proposition. This work culminated in BayREN's "value pillars," which refer to the value beyond energy savings that BayREN provides to its customers and the communities it serves. BayREN's three key unique values are listed below:[25]

- BayREN builds human and organizational infrastructure within local jurisdictions so that Bay Area communities are better able to save energy and reduce GHG emissions.

- BayREN obtains energy savings locally, while also supporting local difficult to serve populations.

- BayREN tests innovative solutions that have the potential to help local jurisdictions increase energy savings and reduce greenhouse gas emissions.

BayREN developed metrics to show progress towards these value pillars and demonstrate the value BayREN delivers beyond what is captured in the standard CPUC compliance metrics measured in kWh, kW and therms. As a result, BayREN had already done a considerable amount of strategizing, planning, and implementing of data tracking activities prior to the release of D.21.05.031. Consequently, the BayREN team was well prepared to respond to the directive to participate in the CAEECC WG efforts to establish shared statewide metrics during 2021.

In addition to sending representatives to the CAEECC WG meetings, the Grounded Research team met with county representatives and program leads to map each program's PTLM to the new market segments and BayREN's unique value pillars in addition to suggesting metrics. Program managers determined which metrics made the most sense for their programs, subtracting from, adding to, and adjusting the metrics as necessary to align with updated goals and better manage activities according to any updated program implementation plans. The program managers worked with the implementers to incorporate any new data fields, collection practices, and reporting templates needed for the new metrics.

Across all metrics listed in the mandatory reporting workbooks included with the 2024–2027 Portfolio Applications, BayREN indicated that 59% were applicable to its activities (Table 6). Of these metrics, BayREN found 65% of the CPUC-required business plan (BP) metrics to be applicable, as well as 42% of equity metrics and 30% of market support metrics. In many cases, the new statewide metrics aligned closely with those already collected by the programs. Examples include counts and percentages of projects, buildings, people, and customer engagement activities. Due to this alignment, BayREN reduced the number of its unique value metrics due to this alignment. BayREN now tracks just nine unique value metrics for equity and 15 unique value metrics for market support. Nonetheless, BayREN also monitors dozens of other metrics and measures that program leads and implementers need to effectively accomplish program objectives, such as tracking marketing campaigns, overseeing EE projects, providing training, and managing budgets and people.

Table 6. BayREN Applicable Statewide Shared Metrics

Segment	Total Count	Applicable	% Applicable
Business Plan	336	220	65%
Equity	50	21	42%
Market Support	50	15	30%
Total	436	256	59%

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[25] BayREN Core Value and Proposed Value Metrics Memo, 07/06/20. https://pda.energydataweb.com/#!/documents/2399/view

The BayREN Water Upgrades $aves Program provides an example of a mature program with a close alignment between pre-existing BayREN value metrics and the new statewide metrics. To further demonstrate the value of its activities, the Water Upgrades $aves Program also tracks other unique metrics beyond the standardized options. For instance, the program already tracked counts of customers, projects, and participating partners so these mapped readily to the new statewide metrics. However, because it is a water-focused program, BayREN tracks gallons of water saved, as well as estimates of lifecycle net kWh, kW and therm savings based on the embedded energy in the water. Because the CPUC does not request these metrics from other PAs, BayREN reports them with its unique value metrics.

In some instances, BayREN found that the statewide metrics "fit" but that they did not "make sense." For example, the Green Labeling program trains approximately 200–300 real estate professionals each year. While this is a respectable level of training for a program of its size, the statewide market support metric calls for reporting the percentage of real estate professionals who have been trained. Because California has more than 200,000 realtors,[26] including tens of thousands in the Bay Area alone, a few hundred per year represents a tiny percentage and that percentage is not likely to grow substantially given the program's budget. As a result, BayREN indicated it makes more sense to report the program's contributions as a count instead of a percentage.

A similar issue arose regarding the Green Labeling program's reporting on the percentage of homes that receive home energy scores. The evaluation team supports decisions like these to use unique value metrics to report on program activities rather than standardized statewide metrics. Because metrics must ultimately produce meaningful insights, they must necessarily be carefully crafted to consider the scope, scale, and budget of the program they are measuring. Nonetheless, the evaluation team recommends that RENs ensure they do in fact count and report participants so that their contributions can be tallied and tabulated at the statewide level where overall percentages might be more meaningfully considered.

Overall, the BayREN approach to metrics seeks to ensure its preferred value metrics and statewide metrics are broad enough to demonstrate the REN's contributions while not inhibiting program implementers with the time and expense of reporting less meaningful data as well as retaining flexibility to innovate. For instance, in 2022 BayREN's C&S team, PG&E and the statewide reach code team joined forces to start a new webinar series on reach codes. Rather than creating a new metric for this, it made more sense to capture data relative to existing metrics, such as the number of jurisdictions that adopt and implement energy policies.

Lastly, when the evaluation team conducted the Year 2 study of the RENs, BayREN provided limited information regarding targets and goals associated with its unique value metrics and milestones. The evaluation team noted that without predefined targets to accompany the metrics, it is challenging to evaluate meaningful progress. BayREN responded by indicating they felt it was premature to do so and that targets would be set in future years once baselines have been established and early data has been collected. They have taken the same stance with many targets for the new statewide metrics. While the evaluation team again recognizes that this is a reasonable, if conservative, approach, we believe meaningful targets are necessary to align expectations, drive program performance, and assess program effectiveness. As such, we encourage BayREN to establish targets at the earliest appropriate opportunity. We also encourage the CPUC to provide clear guidance regarding the timeframe within which all targets for all programs should be documented.

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[26] National Association of Realtors, https://cdn.nar.realtor/sites/default/files/documents/monthly-membership-05-2022.pdf

3.4   SoCalREN

SoCalREN's portfolio comprises 10 existing programs and 18 newly proposed programs that will launch upon CPUC approval (Table 7). Across both existing and new programs, seven are designated as resource acquisition, 10 are considered market support, 10 are segmented as equity, and one is assigned to C&S. This ambitious expansion reflects SoCalREN's commitment to filling gaps in the market, while demonstrating its three core values of (1) delivering energy and climate impacts, (2) building energy capacity and economic resilience, and (3) expanding EE access and benefits to underserved and HTR and disadvantaged communities (DAC) communities.

Table 7. SoCalREN Portfolio Segmentation

Segment	Sector	Program	Gap	Pilot	DAC/HTR	Existing/Proposed
Resource	Public	Metered Savings				Existing
		Streamlined Savings Pathway				Proposed
		Water Infrastructure				Proposed
	Residential	Whole Building MF				Existing
		Small HTR MF DI			✓	Proposed
		Kits4Kids				Existing
	Agriculture	Ag-Retrofit	✓			Proposed
Market Support	Public	EE Project Delivery Program				Existing
		Energy Resiliency Action Plan	✓			Proposed
		Regional Partner Initiatives	✓			Proposed
		Water & Wastewater Strategic Energy Management (SEM)	✓	✓		Proposed
	Commercial	SMB Energy Advisory	✓		✓	Proposed
		CA Green Business Network	✓			Proposed
	Agriculture	Agriculture Project Delivery	✓			Proposed
	Finance	Agriculture Finance	✓		✓	Proposed
	WE&T	E-Contractor Academy				Existing
		WE&T Opportunity Hub	✓			Proposed
Equity	Public	DER DAC Program				Existing
		Rural-HTR Public Rural- HTR Public Agency Direct Install (DI)			✓	Proposed
		Underserved Schools SEM	✓	✓		Proposed
	Commercial	Small Commercial Direct Install			✓	Proposed
		Food Desert EE Equity	✓			Proposed
	Agriculture	Local Agricultural Direct Install			✓	Proposed
	Finance	Public Agency Revolving Loan Fund				Existing
	WE&T	WE&T Agriculture	✓			Proposed
		Green Path Careers			✓	Existing
		Architecture Construction Engineering Students (ACES)			✓	Existing
Codes & Standards	Crosscutting	C&S Compliance Enhancement				Proposed
4 Segments	6 Sectors	28 Programs	12	2	8	10 Existing/ 18 Proposed

When D.21.05.031 was released, SoCalREN was already in the process of working with implementers to develop its forthcoming business and portfolio plans based on previously stated core values and unique value metrics. Therefore, SoCalREN made incremental changes where necessary to address the new segmentation scheme and incorporate the new statewide metrics developed by the CAEECC WGs. After the decision, the SoCalREN team recognized the close parallels between its previously stated five core values and the three-fold segmentation scheme outlined in the decision. Accordingly, the REN team refined their values to align with the three new resource acquisition, market support, and equity market segments and then assigned key objectives for each segment: delivering energy and climate impacts; building energy capacity and economic resilience; and expanding access to EE benefits. It next defined three or four sub-outcomes for each segment

and then addressed gaps among the six market sectors with an existing or newly proposed program. Figure 2 below distills SoCalREN's portfolio segmentation rationale.

Figure 2. SoCalREN Segment and Sector Alignments
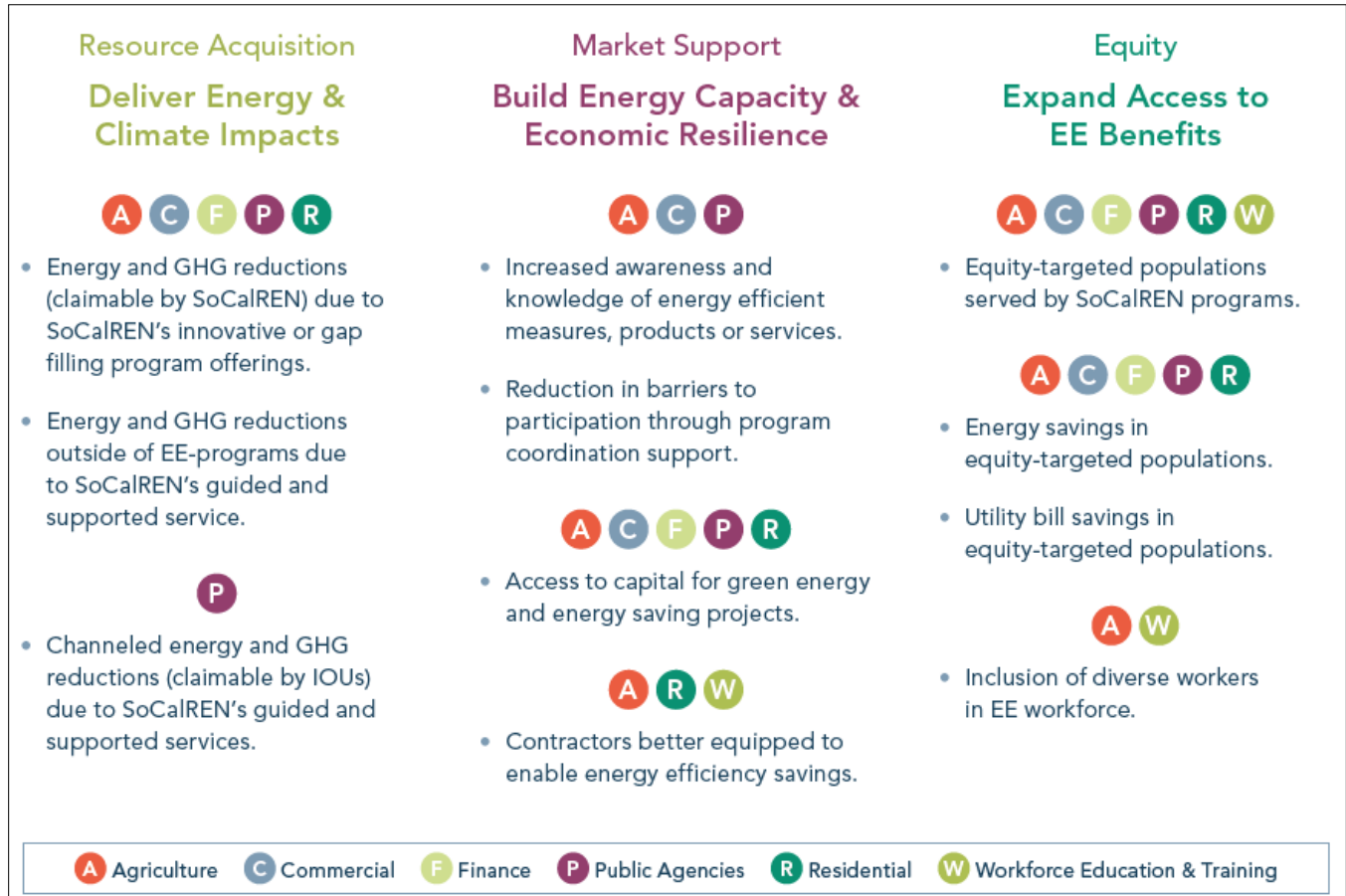
Source: SoCalREN 2024–2031 Strategic Business Plan, March 4, 2022, Page 28.

Despite the expansion in the number of programs, SoCalREN indicated its portfolio has been redesigned with slimmer, more targeted programs that work symbiotically with other SoCalREN programs. Its WE&T efforts provide a good example of this slimming and targeting process. While the cross-cutting program had previously been designed to deliver training to multiple audiences via subprograms to create a labor pipeline of skilled workers, when SoCalREN revisited its portfolio, the REN split its WE&T efforts into smaller stand-alone programs focused on distinct target audiences. The move was more than merely administrative. It also increased SoCalREN's ability to enhance the synergies between programs. For instance, while SoCalREN's Whole Building Multifamily program is designated as a resource acquisition program open to all multifamily property owners, the program also works in concert with the E Contractor Academy. The Academy is a WE&T program that provides market support—and improves equity—by helping disadvantaged small business contractors identify ways to participate in SoCalREN's multifamily program and other IOU programs. Thus, the programs work synergistically to support the industry, improve equity, and achieve claimable savings.

During and after SoCalREN's participation in the CAEECC WG meetings, each of their program implementation teams discussed program outcomes, pre-existing value metrics, and the new metrics to determine those that best applied to their updated programs. SoCalREN also convened multiple meetings to ensure all

implementers worked together to agree on a uniform set of methodologies and metrics to ensure consistent portfolio-wide reporting. Fortunately, the new metrics were fairly closely aligned with previously stated value metrics. Consequently, SoCalREN only needed to make relatively minor adjustments to align metrics across programs and sectors and operationalize program activities to accommodate new reporting. Nonetheless, coordination was of central importance.

The new market support metrics call for tracking participants in WE&T activities. While this is straightforward at the level of an individual person (e.g., a student participating in SoCalREN's Architecture, Construction, Engineering Students (ACES) program) it becomes more complicated when identifying a participant in a public sector program. Would that participant be the individual, the facility the person represents, or the agency as a whole? What if multiple people from the same facility or agency attend a training? A similar question arose with the definition of contractors. An individual HVAC contractor working for a residential program is straightforward, but how do you count multiple people working for the same firm? What about contracting firms working for public agencies? How do you deal with subcontractors? Likewise, related questions arose when it came to determining the criteria to be included within a given count. For example, what percentage of a training event needed to be attended to qualify—100%, more than 50%, or some other percentage?

Questions like these, highlighted the need to clarify and solidify definitions since SoCalREN will ultimately report one combined metric for its portfolio—and that number will be combined with portfolio level metrics from other PAs to derive statewide numbers. This insight leads the evaluation team to recommend that the CPUC consider requiring PAs to include definitions for the units of measure (e.g., training participants, contractors, requests for information, etc.) and the qualifications for inclusion (e.g., 100% versus more than 50% attendance) that are used within their reporting metrics. The team also recommends that PAs should also be required to point out any heterogeneous counts (e.g., individuals + facilities + agencies) included in their final singular portfolio-wide number being reported for a given metric.

Across all metrics listed in the mandatory reporting workbooks, SoCalREN indicated that 69% were applicable to its activities (Table 8). Of these, SoCalREN found 61% of the business plan metrics to be applicable, as well as 96% of equity metrics and 92% of market support metrics. Because many of the new statewide metrics aligned closely with those already collected by the programs to document SoCalREN's core values, SoCalREN could reduce the number of its unique value metrics from more than 100 to 54. Those remaining provide further insights into the REN's gap-filling and HTR activities. Examples include the following:

- Number of WE&T participants receiving skill certificates by type of certificate
- Number of projects where external (non-IOU) financing was leveraged by MF properties due to support by SoCalREN
- Number of participating contractors and number of participating buildings in HTR (rural) or underserved areas made aware of the program due to the partner's marketing
- Estimated annual bill savings by DAC/HTR owner and by tenant
- Number of local governments using SoCalREN data evaluation tools and assistance to enhance C&S activities and policies

Table 8. SoCalREN Applicable Statewide Shared Metrics

Segment	Total Count	Applicable	% Applicable
Business Plan	336	206	61%
Equity	50	48	96%
Market Support	50	46	92%

Segment	Total Count	Applicable	% Applicable
Total	436	300	69%

When SoCalREN filed its 2021 Annual Budget Advice Letter (ABAL),[27] it indicated its plans to use 2020 as the baseline year for many of metrics. However, while preparing its most recent business and portfolio plan filings, the REN opted to use the 2019 program year as its predominant baseline year since both 2020 and 2021 were adversely impacted by the COVID-19 pandemic. Because many metrics and programs associated with SoCalREN's proposed portfolio are new, the REN necessarily needs to set future year baselines for new programs. The evaluation team finds this appropriate and reasonable.

SoCalREN's efforts since our Year 2 study demonstrate the direct application of the evaluation team's recommendation to "Define outcomes, likely in the PTLMs, and then discuss how they support one or more of the unique values SoCalREN provides;" and to "create metrics or use those already in its business plan or PTLMs, and then discuss how they support one or more of the unique values SoCalREN provides." When the evaluation team conducted our previous evaluation, we remarked on the extensive and detailed efforts that SoCalREN undertook to develop its value metrics and cited its 2021 ABAL as an example of well-defined metrics that other RENs could emulate. That care and attention is reflected in the segmentation approach, program design, and associated metrics SoCalREN included in its most recent business and portfolio plan filings. This year's evaluation again finds SoCalREN's thinking regarding standardization of units, definitions, and requirements to be similarly exemplary.

3.5   3C-REN

3C-REN's portfolio consists of four existing programs and three newly proposed programs that will launch upon CPUC approval. As shown in Table 9 below, three programs are assigned to the equity segment, three to the market support segment, and one to C&S. 3C-REN currently does not have any existing or proposed resource acquisition programs.

Table 9. 3C-REN Portfolio Segmentation

Segment	Sector	Program	Gap Filling	Pilot	HTR	Existing/ Proposed
Resource Acquisition	None	None				None
Market Support	Agriculture	Agriculture Technical Assistance	✓			Proposed
	Cross-Cutting	Building Performance Training	✓			Existing
		Energy Assurance Services	✓		✓	Proposed
Equity	Residential	Single Family Home Energy Savings	✓		✓	Existing
		Multifamily Home Energy Savings	✓		✓	Existing
	Commercial	Commercial Marketplace Program	✓		✓	Proposed
Codes & Standards	Cross-Cutting	Energy Code Connect	✓			Existing
4 Segments	4 Sectors	7 Programs	7	0	4	4 Existing 3 Proposed

During in-depth interviews, the 3C-REN leadership team explained their rationale for how they segmented their portfolio of programs. 3C-REN considered three resources in determining their segmentation:

[27] SoCalREN's 2021 ABAL, September 1, 2020, p.65-77/110 or attachment F-1 to F13. Document available at CAEECC.

- The guidelines and requirements set forth in previous CPUC decisions regarding the goals and objectives of RENs in the broader California energy efficiency portfolio.

- 3C-REN's overarching principles, which inform everything they are trying to achieve through their portfolio.

- The CAEECC equity and market support working group meetings and subsequent reports.

3C-REN thought through each program's primary purpose and matched each to the segmentation category with the most similar intent. 3C-REN also recognized that although many of their programs have multiple purposes, the requirement limiting each program to a single segmentation category meant focusing on a program's primary purpose for determining its segmentation category. For example, 3C-REN's single family, and multifamily programs produce energy savings, but these programs have significantly higher costs per project and per energy savings because their target audiences are HTR customers and underserved ESJ communities. 3C-REN segmented these programs as equity rather than resource acquisition since the primary intent of these programs is not resource acquisition.

Similarly, 3C-REN's Commercial Marketplace program was also designated as an equity program because its core target audience is small businesses that are historically difficult to serve due to their owners having less financial and human capital, as well as having a multitude of competing business priorities that are generally considered more important by the customer than EE improvements. 3C-REN's intention with the Commercial Marketplace program was to leverage and synergize its existing relationships with community-based organizations, municipalities, and other community entities in the region to amplify regional small business initiatives, such as the Green Business program, to bring additional resources and help small businesses achieve greater energy savings. Thus 3C-REN's leadership team felt it was a natural fit for the equity segment.

While the 3C-REN leadership team found the equity programs to be intuitive and relatively straightforward to categorize, they had more internal conversation about the programs they designated as market support. For instance, 3C-REN could make a case to categorize its WE&T program as an equity program since the program serves disadvantaged workers and promotes EE skills among Spanish-speaking construction workers. However, 3C-REN views the building industry as a core part of the program's target audience. Local architects and engineers drive much of the market and their influence is especially important considering the ongoing shifts in the energy landscape. 3C-REN recognizes that the core building industry needs these education activities to help meet state goals, and that there is an active demand for these types of activities since they help professionals earn continuing education credits to stay competitive in the market. Since the program delivers significant value to a broader range of customers than just disadvantaged workers, 3C-REN ultimately chose to segment the program as market support. During in-depth interviews, 3C-REN leadership indicated they do not feel limited by the segmentation rules because they can continue to have services that target HTR disadvantaged workers through the program. Accordingly, 3C-REN plans to track select equity-oriented goals for the program even though it is not technically within the equity segment.

3C-REN leadership indicated the most difficult segmentation decision was not specific to any one program, but rather whether it would be appropriate to forego having any resource acquisition programs. After internal debate regarding the merits of having and not having a resource acquisition program, 3C-REN engaged Energy Division staff to better understand the CPUC's priorities since whether the CPUC wanted the RENs to have resource programs was not clear in D.21.05.031. 3C-REN's take away from their discussion with Energy Division staff was that these are proposed program segmentations, and that if the CPUC would like a specific program designated as resource acquisition, it will direct 3C-REN to switch before final approval. The 3C-REN leadership indicated they felt relieved by this since they felt their current set of programs best aligned with the tenets of equity and market support. Based on the evaluation team's in-depth interviews and a review of the

3C-REN business plan applications, the evaluation team finds the REN's proposal of only market support and equity programs to be reasonable given the policy priorities and portfolio gaps these programs fill and the CPUC's recognition in D.21-05-031 that "RENs, by their nature and primary purposes, are more likely to have a greater share of their portfolio devoted to market support and/or equity programs."[28]

Because 3C-REN launched their first programs in 2019, the REN only had about a year and a half of data collected when D.19-12-021 required the RENs to propose unique value metrics in their 2021 ABAL. Although this paucity of data made the initial process of drafting proposed unique value metrics more challenging, 3C-REN staff indicated that their subsequent experience drafting unique value metrics in turn made it easier to participate in the CAEECC WGs and to think through the logistics of collecting and reporting on new shard segmentation metrics. Figure 3 from 3C-REN's recent business plan application, lays out their principles, strategies and desired outcomes which were informed by their efforts thinking through the logistics of data collection and reporting.[29]

Figure 3. 3C-REN's Principles, Strategies, and Desired Outcomes

PRINCIPLES		
Provide equitable opportunities for hard-to-reach, disadvantaged and underserved communities to receive the many benefits offered by more energy efficient and resilient homes and buildings.	Be a trusted local resource and communication channel for energy efficiency and decarbonization to address the climate crisis and build regional resilience.	Enhance regional economic vitality by growing the market for energy projects and developing a local workforce with the expertise and resources needed to implement those upgrades.
Alignment		
3C-REN Strategic Plan Vision; Portfolio Strategies		
STRATEGIES		
Connect customers with 3C-REN programs as well as CCAs' and other PAs' offerings to deliver holistic, equitable outcomes.	Establish compelling, portfolio-wide marketing and education that catalyzes demand for energy efficiency services and building decarbonization.	Offer comprehensive services to provide the local workforce with the knowledge and skills needed to participate in the advanced energy economy.
Alignment		
Equity segment strategies; Sector strategies and tactics	*Market Support segment strategies; Sector strategies and tactics*	*C&S segment strategies; Cross-cutting WE&T strategies and tactics; all-sector coordination*
DESIRED OUTCOMES		
Participation in tailored and existing local energy efficiency programs for hard-to-reach and other audiences in the Tri-County Region.	Implementation of projects that result in measurable energy savings, accelerate achievement of State and local climate goals, and result in economic development benefits.	A well-trained, supported, and sustainable local workforce with the technical skills and knowledge to offer services in compliance with building codes and State goals.
Alignment		
Portfolio metrics; market support and equity segment metrics and outcomes; sector goals and objectives		

Source: Application of County of Ventura for Approval of 2024-2031 Strategic Business Plan, 2024-2027 Portfolio Plan, and Budget. March 4, 2022. Page 20.

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[28] D.21-05-031, page 23
[29] Application of County of Ventura for Approval of 2024-2031 Strategic Business Plan, 2024-2027 Portfolio Plan, and Budget. March 4, 2022, page 20.

Despite this preparation, 3C-REN staff reported that there remains much work to complete because the CAEECC WG reports and the new metrics and indicators will create a substantial amount of additional data collection and customer filtering. Some of the questions and categories under which customers and projects need to be reported will require considerable time and resources to develop the tracking protocols and methodologies necessary to comprehensively calculate these metrics/indicators. For instance, each metric will require 3C-REN, as well as other PAs, to determine the data they need to collect from customers, when/where within their existing program processes this information is going to be gathered, and which software and/or CRM systems each metric will impact. For some metrics in particular, 3C-REN is concerned that they may require personally invasive questioning of customers, especially when compared to the relevance and value of the services customers are receiving in exchange for sharing this personally sensitive data. The evaluation team agrees with this observation and recommends that the PAs work jointly to investigate and test potential solutions.

3C-REN's recognition of the potential difficulty of tracking certain metrics influenced their selection of segmentation metrics by making the feasibility of reporting a core guiding principle. The REN used the CAEECC reports and recommendations as the baseline for both the market support and equity metrics. For the market support metrics, 3C-REN attempted to select the segmentation metrics best aligned with each program. For the equity metrics, they focused on those that they perceived as trackable, achievable, and those that were not potentially flawed due to the potential for double counting. This process resulted in 3C-REN prioritizing metrics they consider consistently trackable, non-onerous, and able to deliver the highest return on investment (i.e., ratio of how valuable the data collected is relative to the amount of time and effort required to track it). Among all mandatory metrics listed in the reporting workbooks included with the 2024–2027 Portfolio Applications, 3C-REN indicated 47% were applicable to its programs (Table 10). Of these, 49% of the business plan metrics were applicable, as well as 36% of equity metrics and 50% of market support metrics. This is a substantial increase in the number of metrics and indicators for their programs to track; 3C-REN only had five value metrics previously.

Table 10. 3C-REN Applicable Statewide Shared Metrics

Segment	Total Count	Applicable	% Applicable
Business Plan	336	164	49%
Equity	50	18	36%
Market Support	50	25	50%
Total	**436**	**207**	**47%**

When the evaluation team conducted the Year 2 study, we noted that 3C-REN planned to determine its value metric targets and timelines after establishing baselines. During the in-depth interviews 3C-REN staff indicated that because they have been thinking about metrics and measurements since the outset of their programs, they already have much of the data needed to set baselines for their existing programs for both their unique value metrics and many of the new shared metrics. For instance, 3C-REN's WE&T and C&S programs have two full years of data, as well as a partial year of data for 2019. For these programs in particular, 3C-REN staff feel that this is the first time they are really starting to see patterns emerge for metrics that have historically been collected and reported on (e.g., the number of people attending events). They are also self-identifying minor adjustments to improve their reporting processes and enable them to compile and report on their existing program data more easily.

Having just recently finished preparing a business plan application, the REN is now beginning to think more closely about setting baselines and collecting the requisite data required for newly proposed programs. However, 3C-REN leadership stated they do not yet have an authorized budget to use for baseline data collection. Since 3C-REN is launching programs in new sectors, 3C-REN is unable to set baselines or data

collection expectations using historical sector level program data. The evaluation team agrees that until budgets for these new programs are authorized, it is unreasonable to spend ratepayer funding to establish baseline data.

Having just recently finished preparing a business plan application, the REN is now beginning to think more closely about setting baselines and collecting the requisite data required for these new programs. Based on the evaluation team's review of 3C-REN data and our interviews, we find that it is making sufficient progress towards setting baselines where possible. We also note that 3C-REN appears to have made substantial progress regarding the Year 2 evaluation recommendation to think holistically and begin building the systems and process required to track and measure their efforts, which will enable 3C-REN to achieve desired outcomes and demonstrate wise custodianship of ratepayer dollars.

3.6 Evaluability of Segmentation Strategies and Metrics

According to the proposed program segmentations from the RENs' business plan applications, Table 11 shows a plurality of REN programs are segmented into equity (38%) and market support (38%) programs, while resource acquisition (18%) and C&S (7%) combined make up approximately a quarter of REN programs. The evaluation team's review of business plan filings and in-depth interviews found that this is the result of the RENs' pursuit of opportunities to fill gaps in the IOUs' portfolios and to serve HTR customers. It also aligns with the CPUC's expectation in D.21-05-031 that "RENs, by their nature and primary purposes, are more likely to have a greater share of their portfolio devoted to market support and/or equity programs."

Table 11. Segmentation of REN Programs

REN	Program (n=45)	Resource Acquisition	Market Support	Equity	Codes & Standards
BayREN	BayREN Business	✓			
	Water Upgrades $aves		✓		
	Green Labeling		✓		
	Targeted Decarbonization Services		✓		
	Integrated Energy Services		✓		
	Single Family (Home+)			✓	
	Bay Area Multifamily Building Enhancements (BAMBE)			✓	
	BayREN Refrigerant Replacement (BRRR)			✓	
	Climate Careers			✓	
	Codes & Standards				✓
3C-REN	Agriculture Technical Assistance		✓		
	Building Performance Training		✓		
	Energy Assurance Services		✓		
	Single Family Home Energy Savings			✓	
	Multifamily Home Energy Savings			✓	
	Commercial Marketplace Program			✓	
	Energy Code Connect				✓
SoCalREN	Metered Savings	✓			
	Streamlined Savings Pathway	✓			
	Water Infrastructure	✓			
	Whole Building MF	✓			
	Small HTR MF DI	✓			

REN	Program (n=45)	Resource Acquisition	Market Support	Equity	Codes & Standards
	Kits4Kids	✓			
	Ag-Retrofit	✓			
	EE Project Delivery Program		✓		
	Energy Resiliency Action Plan		✓		
	Regional Partner Initiatives		✓		
	Water & Wastewater SEM		✓		
	SMB Energy Advisory		✓		
	CA Green Business Network		✓		
	Agriculture Project Delivery		✓		
	Agriculture Finance		✓		
	E-Contractor Academy		✓		
	WE&T Opportunity Hub		✓		
	DER DAC Program			✓	
	Rural-HTR Public Rural- HTR Public Agency DI			✓	
	Underserved Schools SEM			✓	
	Small Commercial Direct Install			✓	
	Food Desert EE Equity			✓	
	Local Agricultural Direct Install			✓	
	Public Agency Revolving Loan Fund			✓	
	WE&T Agriculture			✓	
	Green Path Careers			✓	
	Architecture Construction Engineering Students (ACES)			✓	
	C&S Compliance Enhancement				✓
	Total	**8**	**17**	**17**	**3**

The evaluation team's in-depth interviews revealed widespread implementer praise for the new portfolio segmentation scheme and associated metrics. The close alignment between the CAEECC WG recommended metrics and many of the previously stated REN value metrics validates efforts undertaken by the RENs since their inception. Moreover, the implementers were pleased that the new segmentation approach and metrics provide a way to align their non-resource activities with those offered by other PAs in a manner that demonstrates collective progress for the state of California. In some cases, the new statewide metrics also afforded a new way of measuring progress. Of course, the praise was neither universal nor one-sided.

The same implementers who were generally pleased also pointed out that the new metrics "look like they were created by a committee." While some were straightforward, others were difficult to discern what the metric was intended to inform, and still others made it difficult to determine how to collect the data. Moreover, the CAEECC WGs "did not address all definitions or methodologies for the metrics,"[30] giving each PA considerable latitude to interpret the metrics. While the evaluation team understands and commends this decision, we also point out the potential challenges involved in interpreting composite shared metrics reporting across all PAs if individual PAs with different interpretations of a given metric allow those interpretations to influence their data collection in the first place.

The evaluation team finds the RENs have succinctly articulated their initial segmentation strategies and metrics in their business plan filings. The team also notes that all the RENs are actively working to collect the

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[30] CAEECC Equity Metrics Working Group and Market Support Working Group Final Reports. Principle #2: Guidelines to Setting Metrics.

necessary baseline data and refine their data collection protocols and practices to ensure they can capture the required data to set segmentation metric targets and report on their resource acquisition, market support and equity metrics by 2024. In future years, the REN programs listed in Table 11 should be measurable and assessable by third-party evaluators. Any segmentation metric evaluation efforts starting in 2023 would likely be limited to an assessment of what data the respective RENs have collected since their filings. Once the RENs have had the chance to finish collecting baseline data in 2022 and 2023, a full evaluability assessment of their baselines and ongoing data collection protocols will be feasible and should be conducted. Upon concluding our assessment of the RENs' segmentation strategies and metrics, the evaluation team offers the following key observations regarding metrics creation, data collection and reporting that apply to the RENs as well as other PAs.

- **Metrics Creation**

  - Metrics should focus on a program's most important activities and outcomes and tie performance to statewide goals. Moreover, they should provide direction, demonstrate progress, and hold implementers and PAs accountable for performance. However, collecting data points because they have been collected in the past and/or seeking additional data to satisfy curiosity or support policy necessarily comes at the cost of money, time, and opportunity.

  - While shared statewide metrics and REN unique value metrics may both be quantitative measures, they serve somewhat different purposes. Shared portfolio metrics are designed to show compliance and contributions toward statewide goals and objectives. By intention, the RENs' value metrics tend to reflect more REN-centric activities and outcomes since they are intended to demonstrate the RENs' unique contributions. Having both allows the RENs greater reporting flexibility and more opportunity to showcase their niche gap filling activities than would be possible if their contributions were simply subsumed into portfolio roll up metrics or statewide numbers.

  - Although unique value metrics are a meaningful way to track and demonstrate the RENs' unique contributions, in some cases they still do not demonstrate the full value of the RENs' activities because at this time there is no CPUC-approved way to quantify the non-energy benefits arising from the ways the RENs are filling gaps in the marketplace. Neither the statewide shared equity metrics nor the RENs' unique value metrics effectively capture the economic development effects and other non-energy benefits that arise from REN activities. Until such time as the CPUC creates a formal framework to capture these benefits, the evaluation team suggests that the RENs continue to document and illustrate these additional benefits in their annual reports.

- **Data Collection**

  - While the RENs were unanimously supportive of the portfolio segmentation and metrics development process, they also made note of the fact that data handling and tracking necessarily requires appropriate software and hardware systems. The program managers we spoke with asked us to remind the CPUC that REN programs are run by local governments, non-profits, and energy consultants and not software developers. Consequently the RENs often need to hire specialists to create or change systems, which takes time and costs money. The evaluation team agrees that it will be cumbersome and time-consuming to gather data for some new metrics and we recommend the CPUC keep these limitations in mind when approving metrics and setting expectations for data reporting so that the PAs are only required to capture the most meaningful data. The evaluation team recommends that the CPUC consider formally recognizing distinctions within the required statewide metric categories to differentiate between (1) those the PAs can readily collect from project data, customers, and participating trade allies or other professionals,

and (2) those requiring external data from third parties (e.g., public agencies or partnerships with outside organizations such as air quality management districts), and/or extensive data collection efforts such as surveys of populations that span multiple PA service territories.

- While participating trade allies appreciate the rebates offered by the programs in which they operate and they accept the bureaucratic requirements that go along with them, they are businesspeople first. Consequently, they must always consider the tradeoffs between a program's ability to help them generate additional business compared to the time lost on paperwork that they could instead spend pursuing business elsewhere. It is with this well understood dynamic in mind that multiple implementers and trade allies we spoke with wanted to convey the importance of balancing the insights gained from any new metrics with the burden of providing additional data. As one trade ally noted, "You need to decide if you want do the best good or the most good." The "best good" may mean new insights from new metrics, but if people are not willing to comply with providing the requisite data, then they will not participate, and fewer projects will be completed. Consequently, requiring less information may mean completing more projects and delivering more energy savings–and hence doing "more good" overall.

- Another issue that the evaluation team uncovered is the lack of training provided to the people asked to collect sensitive personal data. While the RENs and implementers we interviewed all reported providing training regarding PII and their protocols for data handling and data security, none mentioned any training regarding how to appropriately ask people for sensitive information. While in many cases, simply encouraging someone to complete a form need not require special training, equity-related data can be sensitive and program participants may be reluctant to share. As such, the CPUC may wish to consider having the CAEECC WGs draft best practices for how to speak with and encourage program participants to share the requisite personal information necessary to comply with reporting new statewide equity metrics.

- Data Reporting

  - Many open questions remain about the new metrics, which is understandable as the new metrics have only recently been adopted and because the CAEECC WGs did not have time to attend to the myriad details associated with the metrics they established, including the issue of how to avoid double counting participants, activities, or other items quantified in the metrics. While this may not be an issue when reporting at the individual program level, it will be important for any aggregated statewide metrics. Thus, the evaluation team recommends the CPUC consider requiring each implementer and each PA to document in their filings how they have addressed the issue of double counting until the CAEECC WGs reconvene to resolve these issues.

  - While standardization brings notable benefits, including a means to consistently quantify and compare programs administered by multiple PAs, it also risks losing the ability to recognize and track important nuances that PAs may pursue in unique goals across different programs, communities, and approaches to supporting the EE market and to providing equitable opportunities for environmental and social justice. While the RENs have a CPUC-approved mechanism to capture such nuance through their unique value metrics, the IOUs and other PAs do not have a similarly recognized mechanism. Consequently, the evaluation team suggests the CPUC consider having the CAEECC metrics WGs revise the framework to enable an option for all PAs to provide additional customized reporting if they find it appropriate to do so.

  - A few metrics and indicators may be best tracked by an overarching entity for all PAs. These include the AKAB market support metrics, which are most useful when collected at the state level

because participant knowledge often comes from multiple sources. Collecting such data may require an evaluator to sample across all PAs that provide market support segment programs.

4.　　Data Management Assessment

4.1　　Methodology

The evaluation team began our data management assessment by determining the activities documented in each worksheet of the Microsoft Excel workbooks the RENs provided for their programs. Our review found a wide variety of data collection and reporting structures, which differed not only across the three RENs, but also across programs run by the same REN since different program implementers employ different data management systems. Some of the spreadsheets contained data exported from CRM systems, while others appeared to be standalone Excel files. Most of the spreadsheets contained multiple worksheets of data. Accordingly, the evaluation team reviewed each program database worksheet to understand the totality of data tracked, as well as to identify the key data fields collected for each program. The evaluation team then counted the number of unique participants contained within each program database by consolidating the list of participants found among each database's worksheet and removing any duplicative records in the combined participant tracking data. Some databases did not have duplicative records across worksheets, and thus did not require data scrubbing to calculate the unique number of program participants.

For each database worksheet, the evaluation team assessed the following attributes:

- **Data completeness.** This attribute covers the extent to which all data fields in a database are sufficiently populated for each record in the dataset. If an entire column of data within the spreadsheet was found blank, we assumed the REN was not tracking this information. Thus, we did not count those fields towards data completeness.

- **Data quality.** This attribute refers to the quality of the data within each field. Data quality considers data uniformity and standardization of format across all records, including spelling, consistency in entries within each field, etc. Examples of commonly identified data quality issues include, but are not limited to, having a record with multiple items in the same cell (e.g., two email addresses) and having formatting variations among records (e.g., extra spaces between text, different methods to delineate extension numbers among records, etc.).

- **Mergeability with CPUC program data.** This attribute indicates whether there are fields in the REN program database that match those in the CPUC program database, and if it is possible to merge the REN program data with CPUC program data. If REN program data is mergeable with CPUC program data, it means that it is feasible to identify the customers who participated in a REN program activity and then went on to participate in a resource program. To be mergeable, a dataset must contain some combination of unique utility account or project identification number, customer name, customer address (i.e., address, city, zip), phone number, email, and participation date. Utility account or project identification numbers essentially guarantee mergeability with CPUC program data. However, non-resource datasets often do not contain unique utility account or project identification numbers as they are difficult or even impossible to collect for many types of activities. The mergeability of datasets without utility account or project identification numbers depends on the number of mergeable fields available (i.e., customer name, address, city, zip code, phone, email, and participation date).

The evaluation team assessed and quantified the data completeness, quality, and mergeability of each database (i.e., incomplete fields, different formatting within the same field, and missing key fields necessary for merging with CPUC data). For data completeness and quality attributes, we calculated the percentage of worksheets in each program database with complete data and consistent data entry among the most relevant fields. For data mergeability with CPUC data, the evaluation team calculated the percentage of possible

mergeable fields provided in the program database. Mergeable fields include customer name, address, city/zip code, phone, email, and participation date. For example, if a customer database provided customer name, phone number and email the evaluation team assigned a mergeability score of 50% (3/6). The addition of any one of the three missing fields including address, city/zip code or participation date would raise this score to 66% (4/6), while adding all three of these missing fields would result in a score of 100% (6/6). Databases containing a unique utility account or project identification number were assigned a score of 100% regardless of the other mergeable fields provided since these records can typically be matched to the full list of customer contact information found in CPUC data.

The following subsections discuss the evaluation team's assessment of each REN's non-resource and resource tracking data. This includes an analysis of the robustness of their data collection activities and identification of areas for further refinement of data collection practices and protocols. See Tables for details behind our assessment of all program tracking data provided.

4.2 BayREN Tracking Data

4.2.1 Overview

In response to the data request from the evaluation team, BayREN provided two spreadsheets for one program and a spreadsheet apiece for its other five programs. Table 12 below lists each BayREN program along with an overview of the respective tracking database and an assessment of the number of unique customers captured in each database. Details about each program database are provided in Appendix B. Overall, the dataset BayREN submitted for this year's study represents a notable continuous improvement on those submitted in prior years, especially regarding data completeness, quality and mergeability of program tracking data.

Table 12. Overview of BayREN Tracking Data

Program	Tracking Database Overview	# of Unique Customers Served
BayREN Business – Primary Program Data	This Business data tracking database contained only a data dictionary and legend. No actual program data was received.	No participation reported at time of data request
BayREN Business – Microloan Subprogram Data	The Microloan program is a subprogram in the Business Program. This tracking database includes a separate worksheet for each year tracked. Customer and loan information is also tracked in this database.	4 completed loans
Green Labeling – Home Energy Score[a]	The Home Energy Score tracking data comprises a single file that includes a readme worksheet, "HEScore Data," and "Assessor Data" worksheets. This database tracks HES scores with associated property information, as well as assessor information.	5,524 participants
Water Upgrades $aves	The Water Upgrades $ave Program tracking database includes two worksheets with company profile data and stakeholder profile data. At the time of the data request no active program participants had been any enrolled.	No participation reported at time of data request
Single Family (Home+)	BayREN's Home+ Tracking Database consists of a single workbook with 15 worksheets breaking out various aspects of the program such as rebates, EE Kit recipients, CRM participant leads, participating contractors, and customer surveys.	10,745 participants

Program	Tracking Database Overview	# of Unique Customers Served
Bay Area Multifamily Building Enhancements (BAMBE)	BayREN's BAMBE tracking database is comprised of a single spreadsheet containing 39 worksheets. This database includes participant information, measure details, and CRM information.	108 multifamily buildings
Codes & Standards	The C&S tracking database spans 16 worksheets with activities disaggregated by year. C&S tracked data includes participation, dates, contact information, and other details for such activities as Quarterly Forum, Trainings, Municipal ZNE Assistance, Permit Guide, ePermit, Code Cycle and Open Reach Code & Policy WG Call.	1,107 quarterly forum attendees 1,457 C&S training attendees 12 ZNE projects

[a] BayREN did not provide data on real estate professionals for the Green Labeling.

4.2.2   Data Tracking Assessment

Table 13 shows the results of our assessment of BayREN's program tracking data. Based on our data review and interviews with BayREN staff, the evaluation team finds the REN's data to be of high quality, reasonable mergeability and moderate completeness, except for phone numbers, which are not consistently entered. Notably, the evaluation team found BayREN's program tracking data regularly includes a high percentage of mergeable fields necessary to match their program data with CPUC and other PA resource data. This finding represents the efforts BayREN has taken in response to the Year 1 and Year 2 study recommendations regarding data tracking and collection processes. These improvements demonstrate that BayREN is now better positioned to receive full credit for its programs' many achievements.

Table 13. BayREN Program Data Assessment Summary

BayREN Program Tracking Dataset	Segmentation	Data Completeness	Data Quality	Mergeable with Resource Data
BayREN Business [a]	Resource Acquisition	100%	100%	100%
Green Labeling Program – Home Energy Score	Market Support	50%	100%	83%
Water Upgrades $aves [b]	Market Support	N/A	N/A	N/A
Single Family (Home+)	Equity – Claims Savings	53%	100%	100%
BAMBE	Equity – Claims Savings	79%	89%	100%
Codes & Standards	C&S	80%	100%	47%

[a] Scores shown are for the Microloan subprogram only because the BayREN Business program did not have any participation at the time of the data request. The Business Primary Database included only a data dictionary and legend for their Salesforce data fields.
[b] The Water Upgrades $aves program did not have any participation at the time of the data request.

To further build upon and refine BayREN's data collection and reporting efforts, the evaluation team identified the following incremental improvements that BayREN can make to its discrete program tracking databases:

■ BayREN's Home+ Tracking Database contains 15 worksheets covering various program activities. While dividing data into separate worksheets according to topic or activity type is logical, in some cases the same data is also separated into worksheets differing only by year. This made it difficult to evaluate the presence and completeness of relevant data for an individual record without having to search through multiple worksheets. More importantly, such a distributed data structure can make it more difficult to identify data trends over time, which may be important for proactive program management. The evaluation team suggests BayREN consider simplifying and consolidating its program data tracking, where possible, to increase insights into program management and improve

data accessibility for future evaluators and the CPUC. Alternatively, BayREN should consider adding a summary table for each program's data collection tracker to condense the dataset into the key fields, metrics and indicators that evaluators and/or the CPUC require. An optimum summary worksheet should contain all mergeable fields, including customer name, address, city/zip code, phone, email, and participation date, as well as any key metrics or performance indicators that BayREN uses to measure the program's progress towards its goals. Other findings include multiple worksheets with incomplete data fields for Claim ID, Site ID, Project ID, Contact ID, email address, city, and zip code. The evaluation team recognizes these can be difficult datapoints to collect depending on the activity. Nonetheless, we encourage BayREN to continue to work with its implementers to improve the completion of these fields.

■ For the BAMBE program, the evaluation team found the most common incomplete data fields were participant address, city, email, and phone number. Phone number data quality was also a minor issue because no standardized data entry format for phone number extensions exists and there are multiple instances of two phone numbers entered in a single cell. Based on the evaluation team's experience merging program and CPUC data, phone numbers are typically matched on an exact basis and thus require a highly standardized format. The evaluation team recommends standardizing the method for inputting phone number extensions into the database and adding a secondary phone number field to reduce the potential for error and minimize the amount of data cleaning required.

■ The Water Upgrades $aves tracking database provided in response to the data request did not contain any participation data because BayREN had launched the program's customer services just prior to our data request. As sufficient data collection had yet to occur, BayREN provided their database of water company and stakeholder profile data that was being used to inform their program launch. Based on in-depth interviews, the evaluation team understands the program implementer now has a robust database. The team recommends the program incorporate standardized data collection protocols to ensure the program implementer collects as many mergeable fields as possible (i.e., customer name, address, city, zip code, phone, email, and participation date).

■ The Green Labeling HES database demonstrates overall good data quality and completeness, only missing contact data for some assessors. This tracking database consists of only two worksheets and serves as a good example of a highly accessible database that can be easily understood and assessed.

■ At the time of the data request, the BayREN Business program did not have any participation data for their pay-for-performance activities due to the COVID-19 pandemic. However, based on our review of their program's Salesforce data dictionary and data legend, as well as their use of an NMEC methodology to calculate savings, the evaluation team is confident this program will have high quality data completeness, quality and mergeability. The evaluation team also received a limited amount of data pertaining to BayREN's Microloan subprogram. We find this subprogram data to be complete and consistent, although we note the limited number of data fields tracked in this database.

■ The BayREN C&S tracking database includes tracking data for seven non-resource activities including quarterly forums, C&S training, municipal ZNE, permit guides, ePermit tool, Code Cycle, and open policy calls. The evaluation team notes that four worksheets in the program tracking database related to the quarterly forum and C&S Training activities have incomplete data for the "Agency" data field. Additionally, the email, jurisdiction, last name, and date fields in three of the C&S Training worksheets are incomplete. We recommend the program focus on collecting agency, last names, and emails in these worksheets since they are essential for merging program data with CPUC data.

See Appendix B to access the evaluation team's assessment workbook that provides in-depth analysis and observations from our assessment of BayREN's program tracking data.

4.2.3   Data Handling and Security

BayREN provided 48 files documenting their data handling practices and protocols, including examples of data collection forms, flow charts, templates, and data handling and security protocols. As expected, data handling and security standards vary by implementer. Overall, BayREN's data handling and security protocols are comprehensively discussed in the 14 protocol documents we reviewed. BayREN consistently requires that all program implementers who handle, transfer, or store sensitive information must pass and maintain compliance with PG&E's Third-Party Security Review (TSR). The TSR is a detailed risk assessment that ensures "PG&E data assets are protected in compliance with PG&E information security standards and appropriate regulatory requirements."[31] Select examples of BayREN data management are discussed below.

Although program implementers have a choice of CRM software, three of BayREN's programs use Salesforce, including BayREN Business, the Home+ program, and the BAMBE program. The C&S, Green Labeling, Water Upgrades $aves, and Home+ programs use SharePoint to store tracking spreadsheets and other shared documents. Other software and systems used by BayREN and their program implementers include Zoom, Survey Monkey, HESReport, Green Rope, SmartSheets, Eetility, HubSpot, Rising Sun Runner, JouleSmart, and Recurve. With so many different systems, understanding their diverse uses is a complicated endeavor. However, based on our in-depth interviews with the program implementation teams, the evaluation team finds all programs have appropriate methods for documenting and explaining data flow and data management. Figure 4 provides a good example of how the BayREN Business Program demonstrates the data flow across the five different databases necessary to track program data.

Figure 4. BayREN Business Data Flow

Data Flow DiagramBayREN Business– REV03, LC– 04/28/21
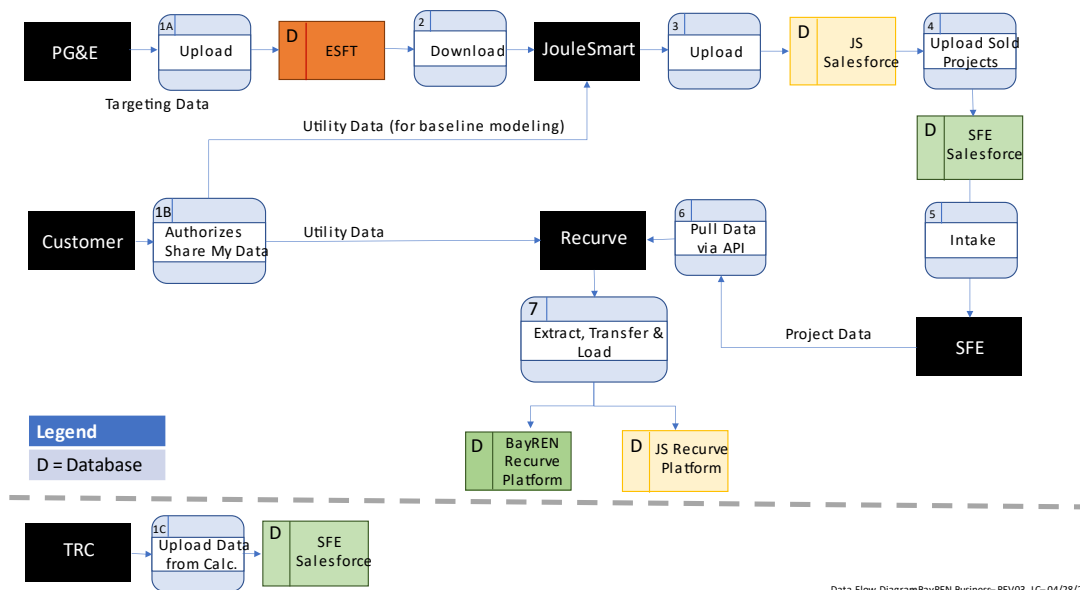
Source: BayREN document included in Data Request, BayREN Business Diagram Data Flow, 4/28/21.

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[31] https://www.pge.com/pge_global/common/pdfs/for-our-business-partners/energy-efficiency-solicitations/TSR_FAQ_Third_Parties_170825.pdf

With so many different platforms used to administer BayREN's programs and with the large volume of data collected by BayREN and its implementers, consistent data handling and data security are essential. BayREN provided examples of 27 data collection forms, applications, interest forms, and templates used. Program staff, project implementers and program participants enter data via these forms, online web forms, and CRM data entry screens. BayREN staff and project implementers maintain detailed data handling policies for each system to guide employees and prevent erroneous or inconsistent data. Although BayREN staff and project implementers are trained and required to follow these policies, data that is self-reported by participants varies in completeness and consistency. Data validation and other QC protocols help improve participant data consistency.

BayREN also reports using secure file transfer protocols when transferring data between BayREN, their contracted consultants, IOUs, and the CPUC. Security protocols for the differing platforms implemented by BayREN's program implementers vary according to the standards with which each implementer complies. For example, HESReport.com, a database built and maintained by Frontier Energy, maintains a high level of information security through compliance with System and Organization Controls 2 (SOC-2) Type 1 standards. Meanwhile, Eetility, the implementer of the Water $aves program, complies with the International Organization for Standardization's (ISO) 27002 information security standards through its use of Azure cloud computing. Ultimately, all of BayREN's program implementers and any data systems that handle sensitive information must pass PG&E's TSR and maintain all utility and regulatory standards.

Two implementers that work with BayREN, StopWaste and Frontier, maintain good data security practices such as individual logins, limited access to only required information, secure SharePoint and CRM access, and required non-disclosure agreements (NDAs). The Association for Energy Affordability, which supports the implementation of the BAMBE program; however, has somewhat less rigorous standards. For instance, while requiring unique logins for their technical assistants, they do not provide a specific training on how to handle PII, despite its centrality to data handling. The evaluation team recommends the RENs conduct a data security review across all programs to ensure all implementers and others with access to PII and other customer records maintain industry best practice standards.

Any employees who use a data platform belonging to BayREN or a BayREN program implementer must undergo required training before they are provided with individual access to files and data systems. For example, BayREN's Water Upgrades $aves program implementer requires their staff to attend the Department of Defense's free cyber awareness training before providing access to their Smartsheet CRM platform. Once the staff receive their certificate for the training, they are provided with their user login credentials. To maintain security of user credentials, policies are enforced to meet security standards on staff devices and security updates are applied regularly. Additionally, simulated attacks on users identify liabilities and allow for correction through additional training to prevent real threats from gaining access. Overall, BayREN and their program implementers limit access to their systems with user-specific credentials and proactively mitigate liabilities to prevent attacks and intrusions.

4.3   SoCalREN Tracking Data

4.3.1   Overview

SoCalREN provided 11 databases covering nine programs. Each program's tracking database consisted of a single worksheet within an Excel workbook file containing key customer contact information, including customer name, primary address, city, zip code, phone number, email address, and date of initial participation for each SoCalREN program. Table 14 below describes SoCalREN's programs, the associated database, and the number of unique participants recorded for each program. Additional details about each program

database are provided in Appendix B. SoCalREN's single comprehensive tracking datasets are a notable improvement from the disparate databases or datasets with ten plus worksheets typically seen for non-resource activities, such as those the evaluation team reviewed from SoCalREN in the Year 1 study. These single worksheet workbooks improved the evaluation team's ability to assess the data completeness, quality and mergeability of their program tracking data, as well as SoCalREN's ability to gain insights into the management of their programs.

Table 14. SoCalREN Tracking Data Descriptions

Program	Tracking Database Description	# of Unique Customers Served
Metered Savings Program (MSP)	SoCalREN provided two spreadsheets for the MSP program. The first spreadsheet shows a Salesforce report of projects by year. The second spreadsheet provides the same information ungrouped. Details captured include tracking, incentive, participant, and resource data.	26 projects
Whole Building Multifamily	SoCalREN provided one spreadsheet with all Multifamily claims and records from 2019 to 2021. Included in this database are tracking information, participant data, measure data, and resource data.	95 projects
EE Project Delivery Program (PDP)	SoCalREN provided four spreadsheets for both DER DAC and PDP programs combined that include the following: incentives and claims by year, incentives and claims ungrouped, projects by year, and projects ungrouped. Tracked data includes participant information, incentive progress, and project details.	185 projects
DER DAC Program	SoCalREN provided four spreadsheets for both DER DAC and PDP programs combined that include the following: incentives and claims by year, incentives and claims ungrouped, projects by year, and projects ungrouped. Participant and measure data were also collected in this database.	18 projects
Kits4Kids	The Kits4Kids program was launched in the 2021 program year. , No database was sent because tracking data was not available at the time of the data request.	No participation reported at time of data request
Public Agency Revolving Loan Fund	This tracking database provides project and tracking information contained in one worksheet that tracks project data and participant data.	2 projects
Green Path Careers	SoCalREN provided a database with all information in one spreadsheet worksheet that tracks applicant information, enrollment tracking and support services.	30 participants
Architecture Construction Engineering Students (ACES)	One spreadsheet with all ACES student data from 2019 to 2021 was provided. It contains information about participating students and their parents or guardians.	187 participants
E-Contractor Academy	One spreadsheet shows all students of the E-Contractor Academy and their attendance at each of the 11 training sessions.	149 participants

4.3.2   Data Tracking Assessment

Table 15 summarizes the SoCalREN databases we received and the results of our review. The majority of SoCalREN's tracking data fields are sufficiently populated and of good quality, except for phone numbers which lacked consistency. The evaluation team recommends standardizing the method for inputting phone

number extensions into the database and adding a secondary phone number field to minimize the amount of data cleaning required to reduce the potential for error. Additionally, SoCalREN's tracking datasets generally include most of the mergeable fields (e.g., customer name, full address, phone number, and email address) that enable traceability of market support activities to CPUC program data. The improvements in the quality of SoCalREN's non-resource activity tracking data compared to what the evaluation team has received for previous study years now places the REN in a better position to receive full credit for these tracked activities, including those associated with their DER DAC Program, Public Agency Revolving Loan Fund, Green Path Careers program, Architecture Construction Engineering Students (ACES) program, and EE Project Delivery Program (PDP).

Table 15. SoCalREN Program Data Assessment Summary

SoCalREN Program Tracking Dataset	Segmentation	Data Completeness	Data Quality	Mergeable with Resource Data
Metered Savings Program	Resource Acquisition	100%	100%	100%
Whole Building MF	Resource Acquisition	100%	100%	100%
EE Project Delivery Program (PDP)	Market Support	100%	100%	100%
Kits4Kids	Market Support	N/A	N/A	N/A
DER DAC Program	Equity	100%	100%	100%
Public Agency Revolving Loan Fund	Equity	100%	100%	100%
Green Path Careers	Equity	100%	100%	100%
Architecture Construction Engineering Students (ACES)	Equity	0%[a]	0%[a]	84%
E-Contractor Academy	Equity	0%[a]	0%[a]	100%

[a] The 0% score is due to the evaluation methodology and how each dataset is scored by worksheet. See explanation below.

Based on our review of SoCalREN's program tracking data, the evaluation team found no data completeness, quality or mergeability issues in five program databases: the Public Agency Revolving Loan Fund, Green Path Careers, EE Project Delivery, Metered Savings, and Whole Building Multifamily programs. In addition, SoCalREN provided no tracking database for the Kits4Kids program because it was a new program at the time of the data request in 2021.

The evaluation team identified some records with incomplete and low-quality data in the ACES and E-Contractor Academy program databases. It is important to note that the finding of zero percent data completeness and data quality score in Table 15 is reflective of the tracking assessment methodology and not indicative of the amount of data in the database. The ACES tracking database contains student information, parent or guardian contact information, and program participation. Some records in the ACES tracking database only contain a student's name and school but do not have any contact data for the student or guardian. Phone numbers in the tracking database also have inconsistencies in formatting. For example, numerous records have multiple phone numbers entered. In terms of mergeability, five of the six minimum required tracking data fields are tracked in the ACES database, thereby rendering a mergeability score of 84%. Although the ACES dataset is less populated and of lower quality relative to SoCalREN's other program tracking databases, the evaluation team recognizes that while some parental or guardian details are collected, information pertaining to adolescents remains subject to more stringent requirements for data release. The E-Contractor Academy has similar data completeness issues as the ACES program, with many of the fields sparsely populated. The E-Contractor Academy fully contains participant names and email address; however, as well as all six mergeable data fields. Accordingly, the evaluation team finds the completeness and quality of the data collection for these programs adequate for demonstrating the programs' progress towards their goals.

4.3.3 Data Handling and Security

SoCalREN provided ample program documentation regarding protocols, tools, and practices. In total, SoCalREN provided 24 files, which the evaluation team reviewed. The documentation showed that SoCalREN is committed to protecting the data within its data systems, as well as the systems used by its program implementers. While data handling and data security protocols differ by program implementer, SoCalREN requires compliance with the CCPA if PII is involved. Select examples of SoCalREN data management are discussed below.

SoCalREN contracts with program implementer ICF for its residential programs, the Energy Coalition for its public sector programs, and Emerald Cities for its WE&T programs. Because SoCalREN contracts with a limited number of program implementers, relatively few tracking systems are used across all its programs. SoCalREN uses Salesforce for its CRM and Google Workspace (formerly G Suite) for email, calendar, forms, and data storage. Using the Salesforce app extension, SoCalREN integrated Gmail communications and Google Calendar scheduling with Salesforce. SoCalREN also uses Google Drive for secure document storage. Emerald Cities and the Energy Coalition also use Salesforce and Google Workspace for administering SoCalREN's public sector and WE&T programs. ICF maintains its own proprietary platform called Sightline that is used for the residential multifamily program. Sightline hosts a Trade Ally Portal where contractors and customers enter information and upload files for the Whole Building Multifamily program. To document its data flows and record type relationships, SoCalREN provided eight process flow charts for their programs. The relationship flow chart for TEC's Salesforce CRM is shown in Figure 5.

Figure 5. SoCalREN Public Sector Customer Relationship Management Data Flow
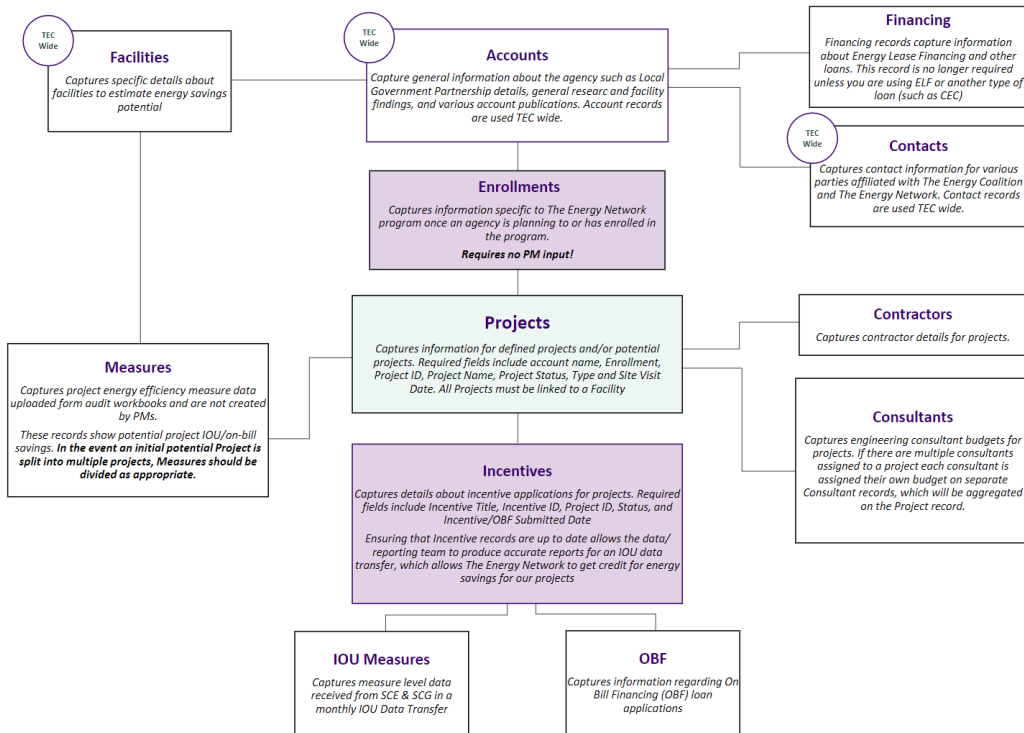
Source: SoCalREN document included in Data Request, SoCalREN Public Sector CRM Data Flow, 2021.

Data handling begins with data input. As such, the evaluation team reviewed the 12 data collection forms SoCalREN provided as part of the data request. These documents include fillable and hardcopy intake forms, reporting templates, project templates, an Effective Useful Life (EUL) calculator, and an IOU data transfer authorization. Most are digital forms, some feature built-in data validation. For example, the EUL calculator provided an example of presenting user instructions in an "Info" worksheet with nine cells formatted to require data validation to only accept valid entries. This helps ensure data consistency by preventing erroneous entries. Additionally, SoCalREN also minimizes errors by requiring staff to follow detailed data handling protocols. For instance, SoCalREN's public sector CRM manual specifies detailed instructions and includes data validation rules, as well as a well-documented change management tracking process.

Because resource savings have been reported by SoCalREN for years, the REN has long since standardized its procedures, systems, and quality control (QC) processes to eliminate potential errors from all levels of data entry to ensure an accurate final input into CEDARS. SoCalREN's non-resource program reporting processes are not as systematic as those of its resource programs. Consequently, its non-resource programs require notably more effort on the part of the implementers to report program activities, and this requires additional REN oversight to catch any inconsistencies that may happen to make it through the implementers' quality control processes.

Data security protocols for ICF's Sightline include compliance with the CCPA to protect PII. Additionally, the ICF Tier IV data center that operates Sightline receives annual third-party certification audits to ensure compliance with the American Institute of CPAs (AICPA) information security SOC-2 standard. Both Salesforce and Google Workspace have been in use for a long time and any common issues have been addressed. Training is performed during onboarding of new staff, and individual credentials are used alongside two-factor authentication. User lists are purged regularly and staff who no longer need access are offboarded. Data stored on Google Workspace and Salesforce are encrypted and access is limited as much as possible. That said, Emerald Cities mentioned during the program implementer interviews that they are deploying a new CRM for the ACES program in 2022 called Jobseeker. The Jobseeker system has been in use by other jurisdictions and has proven to be reliable and secure. Even so, because the Jobseeker system is new to SoCalREN, it should be closely monitored during initial rollout and early months of use to identify any unforeseen issues.

Lastly, it is worth noting here that individual credentialed access as used across all SoCalREN systems is an important security protocol whereby limiting access to only individuals who have been properly trained and onboarded will maintain the system's security. Data handling protocols are also essential to the security of these systems to ensure sensitive data is handled properly. ICF noted during interviews with the evaluation team that all staff and contractors are subject to the same data handling and security protocols.

4.4   3C-REN Tracking Data

4.4.1   Overview

3C-REN provided four databases for its three programs. This included one database each for the Home Energy Savings and Building Performance Training programs, as well as two databases for the Energy Code Connect program, one of which tracks data for Code Coach and the other tracks Training and Quarterly Forums data. Table 16 describes each 3C-REN program tracking database and the evaluation team's assessment of the number of unique customers captured for each program. See Appendix B for more details about each program database. Overall 3C-REN's datasets demonstrate progress developing and populating its program data collection systems and protocols.

Table 16. 3C-REN Program Tracking Data Descriptions

Program	Tracking Database Description	# of Unique Customers Served
Building Performance Training (BPT)	The Building Performance Training Tracking Database includes a spreadsheet with nine worksheets that captures project information, participant data, measure and resource tracking data.	2,323 training participants
Home Energy Savings (HES)	3C-REN provided a database with 11 worksheets for the Home Energy Savings Programs that captures project information, participant data, measure and resource tracking data.	633 single family participants 67 multifamily properties
Energy Code Connect (ECC)	3C-REN provided two databases for Codes & Standards. One database contains information for Code Coach and the other contains information for Training and Quarterly Forums. Both databases track participant data for each subprogram.	787 training participants 739 forum participants 117 Code Coach cases

4.4.2   Data Tracking Assessment

Table 17 shows the results of our assessment of 3C-REN's program tracking data. The tracking datasets 3C-REN provided include the most common fields necessary to merge program data with CPUC data (e.g., customer name, full address, phone number, and email address). However, we identified gaps in the data completeness of key mergeable fields, which reduces the likelihood that these activities will be traceable to resource acquisition records. As recommended in the Year 1 and Year 2 reports, the evaluation team continues to encourage 3C-REN to focus on improving the consistency of the names, email addresses, and phone numbers it collects for its event attendees. The evaluation team also observed poor data quality for phone numbers and zip codes across 3C-REN's program tracking databases. This lack of standardized data formatting for phone numbers and zip codes is likely attributable to the data collection originating from event attendee inputs. The evaluation team recommends 3C-REN and its implementers consider adopting data validation protocols at the point of data entry. For online registrations, this would consist of setting character length requirements for zip codes, as well as pre-populated dashes and parenthesis for phone numbers in their online forms. For in-person registrations, 3C-REN should consider adding post-processing of all physically collected customer contact information, including a data validation step to check the integrity, accuracy, and structure of key mergeable data before it is submitted into the program database. The evaluation team's assessment workbook, which provides in-depth analysis and observations from our assessment of 3C-REN's program tracking data, is provided in Appendix B.

Table 17. 3C-REN Program Data Assessment Summary

3C-REN Activity Tracking Dataset	Segmentation	Data Completeness	Data Quality	Mergeable with Resource Data
Building Performance Training	Market Support	56%	67%	92%
Home Energy Savings	Equity	64%	55%	100%
Codes & Standards and Energy Code Connect	Codes & Standards	40%	60%	100%

Based on our in-depth interviews and review of 3C-REN's databases, the evaluation team finds that 3C-REN continues to make progress building out its program data collection systems and protocols. In general, the robustness of its data tracking and reporting is significantly better than the evaluation team observed in its past studies of RENs and LGPs that perform similar non-resource activities. Nonetheless, the evaluation team

has identified the following outstanding areas of improvement 3C-REN can take to continue refining its program tracking and reporting:

- The tracking database for 3C-REN's Home Energy Savings program includes tracking data for both single family participants and multifamily properties. We found incomplete fields in the account, contact, lead and opportunity worksheets. Incomplete data is most often found in the names, email, phone numbers, electric account number, and gas account number fields. Account numbers are often difficult to collect from non-resource activities. While they are not strictly necessary for non-resource data collection, they can greatly improve the mergeability of program data with CPUC or IOU data. The data completeness of 3C-REN's tracking data is much improved, but we continue to recommend 3C-REN works to further improve the consistency of its data. On a related note, the evaluation team also observed the program's phone number data quality has inconsistent use of spaces, dashes, and parenthesis. Additionally, some records contain numeric values that do not resemble phone numbers (e.g., "549.76"). The evaluation team recommends 3C-REN and its implementers consider the addition of data validation protocols to check the integrity, accuracy, and structure of key mergeable data before it is submitted into the program database.

- The database for the Building Performance Program had incomplete data in the account, contact, event attendee, and user worksheets. Most incomplete data occur in the name, address information, and email fields. As with the Home Energy Savings program, the evaluation team acknowledges the database is more streamlined and complete than other non-resource activity tracking databases we have reviewed in the past; however, a significant percentage of attendee contact information remains uncollected for these activities. For example, on the event attendee worksheet 20% (474 out of 2343) of participant records are missing both name and email. In line with our previous recommendations, 3C-REN should continue to work with its program implementers to identify existing barriers and potential solutions to collecting customer contact information for these activities. This should also include implementation of additional data validation protocols, such as limiting the types and/or length of characters entered in online registration sheets, as both phone numbers and zip codes are currently entered in multiple formats.

- Like the Home Energy Savings and Building Performance Program's databases, the databases provided for 3C-REN's C&S program had incomplete data in the account, contact, event, user, and Code Coach worksheets. For example, some records in the venue worksheet lack an address, while some records in the event attendees worksheet are missing participant contact data such as name, email, or zip code. Many zip codes in the event attendee worksheet also have an incorrect number of characters (i.e., not 9 or 14 characters). Examples of poor zip code data entry include zip codes containing state abbreviations (e.g., CA93009), random letters, and county name. We recommend 3C-REN implement the same recommendations proposed for the Home Energy Savings and Building Performance Program's databases: a standardized approach to data entry and validation across its programs for these key mergeable fields.

4.4.3   Data Handling and Security

3C-REN provided the evaluation team with 18 files to document their data handling and security practices. Included in this submission were data collection forms, process flow charts, program policies, and data handling protocols. All 3C-REN's programs use Salesforce for CRM and data tracking, and they use SharePoint to store data and collaborate across the different agencies and program implementers. While 3C-REN did not provide specific data security documentation for their programs, during our interview process their REN staff explained they ensure the security of their data by limiting access, using two-factor authentication, and transferring files through secure file protocols. Additionally, because HES program data contains PII and

resource data, it is separated from other 3C-REN data in Salesforce for increased security. Moreover, among the 18 files submitted, a 2020 residential workplan Gantt chart mentions requiring IOU Third-Party Security Reviews for program implementers who need access to sensitive data. More specifically, the Community Action Partnership of San Luis Obispo (CAPSLO), the program implementer for the HES program, has met TSR requirements for PG&E and SCG, but did not appear to have met the TSR requirements for SCE at the time of the document's writing.

Since training events for the C&S and WE&T programs require marketing and promotion, this necessitates the use of other systems such as Eventbrite, Constant Contact, WordPress, Google Sheets, Microsoft 365 Calendar, and Make (formerly Integromat). Because 3C-REN's process is complex and it uses multiple services, the REN opted to use Make to automate the process and reduce manual data entry into each system. 3C-REN program staff indicated they would like to further simplify the event creation process by potentially eliminating Eventbrite, if WordPress proves capable of collecting participant registration data. The evaluation team's review of the systems used in the automation process found a Google Sheet containing meeting data and potentially participant data as well. Because the participant worksheet in the file was not populated with any data the evaluation team could not discern if this worksheet was populated or used at all. This Google Sheet did not require a login or password to access, and this risks data exposure. Consequently, the evaluation team recommends the addition of access controls to this file as a best practice. Additionally, 3C-REN should ensure participant data is not populated or exposed during the automation process.

The evaluation team also received samples of 3C-REN's data collection forms and process flow charts for review. Data collected through the 3C-REN website generates a record in Salesforce, while attendance spreadsheets are imported into Salesforce. Energy Code Connect case phone calls and hardcopy leads collected by HES program implementers are manually added to Salesforce. Manual data entry is guided by 3C-REN's HES and ECC Salesforce Process documentation that thoroughly defines the process and data fields.

In conclusion, the evaluation team finds that 3C-REN data systems are secure as identified through interviews, but 3C-REN's data security policy has not been laid out in any of the program documentation. 3C-REN should clearly define its security policies to show how participant data under its control is secured.

5. Findings and Recommendations

This section summarizes key findings and recommendations from the research and evaluation activities conducted during the Year 3 Assessment. Note that not all findings have an associated recommendation.

Findings Related to Portfolio Segmentation and Metrics

- **Finding #1:** Based on the segmentation tasks of this study, the evaluation team finds the RENs have articulated their initial segmentation strategies and metrics in their business plan filings. The evaluation team also notes that all three RENs are actively working to collect the necessary baseline data and refine their data collection protocols and practices to ensure they can capture the required information to set segmentation metric targets and report on their resource acquisition, market support and equity metrics by 2024. In future years, the REN programs should be measurable and assessable by third-party evaluators. Any segmentation metric evaluation efforts starting in 2023 would likely be limited to an assessment of any data the respective RENs have been able to collect since their filings.

    - **Recommendation:** Once the RENs have had the chance to finish collecting baseline data in 2022 and 2023, a full evaluability assessment of their baselines and ongoing data collection protocols will be feasible and should be conducted to determine if metrics and targets are set appropriately and if data collection and reporting are yielding meaningful data and insights.

- **Finding #2:** The evaluation team's in-depth interviews revealed widespread implementer praise for the RENs' new portfolio segmentation schemes and the associated metrics. The close alignment between the CAEECC Market Support and Equity WGs recommended metrics and many of the REN unique value metrics proposed in the RENs' 2021 ABALs, validates the many efforts undertaken by the RENs since the evaluation team began evaluating them in 2019. Moreover, the implementers were pleased that the new metrics provide a way to align their equity and market support program activities with those offered by other PAs in a manner that demonstrates collective progress for the state of California. In some cases, the new statewide equity and market support metrics (statewide metrics) also afforded a new way of measuring progress.

- **Finding #3:** Metrics should focus on a program's most important activities and outcomes and tie performance to annual PA goals and cumulative statewide targets across all PAs. Additionally, both statewide and the RENs' unique value metrics and indicators should provide direction, demonstrate progress, and hold implementers and PAs accountable for performance. However, the desire for more metrics should be weighed against the effort required to gather the data.

- **Finding #4:** Multiple implementers and trade allies expressed an interest in conveying the importance of balancing the insights gained from any new statewide or unique value metrics with the burden of providing additional data. As stated by one trade ally, "You need to decide if you want do the best good or the most good." The 'best good' may mean new insights from new metrics, but if people are not willing to comply with providing the requisite information, then they will not participate, and they will complete fewer projects. Requiring less information may result in completing more projects and delivering more energy savings—potentially doing "more good" overall.

    - **Recommendation:** While the CPUC should allow the RENs and their implementers discretion in their selection of which metrics best apply to their programs, it should simultaneously maintain requirements regarding data collection for a minimum number of shared metrics to ensure adequate data to assess program performance and to ensure meaningful contributions to any

aggregated statewide totals from all PA programs. The dynamic tension between latitude of choice and necessity of measurement may encourage creative solutions regarding new ways of collecting data that minimize operational overhead while still yielding meaningful data from EE program participants. For instance, program implementers might require customers to complete an online or paper form to submit the extra data before their rebates are processed. This would bypass the need for customers to share information prior to the start of the project and any subsequent delay in rebate processing would be attributable to the customer's timely submittal of their own paperwork.

■ **Finding #5:** While shared statewide metrics and REN unique value metrics may both be quantitative measures; they serve different purposes. Shared statewide metrics are designed to show compliance and contributions toward statewide goals and objectives. In contrast, the RENs' value metrics reflect somewhat different activities and outcomes since they are intended to demonstrate the RENs' unique contributions to the PAs' EE portfolios. Having both types of metrics allows the RENs greater reporting flexibility and more opportunity to showcase their gap-filling activities that might otherwise be lost when individual program performance numbers are combined with overall PA portfolio metrics or aggregate statewide numbers that reflect contributions from all PAs.

■ **Finding #6:** Although unique value metrics are a meaningful way to track and demonstrate the RENs' unique contributions to PAs' EE portfolio, in some cases they still do not demonstrate the full value of the RENs' activities because there is currently no CPUC-approved way to quantify the non-energy benefits arising from the ways the RENs are filling gaps in the marketplace. Neither the statewide shared metrics nor the RENs' unique value metrics effectively capture the economic development benefits and other non-energy benefits that arise from some REN activities.

   ■ **Recommendation:** Until such time as the CPUC approves a formal framework to determine non-energy benefits, the evaluation team suggests the RENs do their best to document and illustrate these additional benefits in their annual reports, such as quantifying the number of jobs or newly educated/credentialled workers added within their service territories.

■ **Finding #7:** Some statewide metrics/indicators may require personally sensitive information from customers. Customers may be reluctant to share such information when compared to the relevance and value of the services that they are receiving in exchange for sharing this personally sensitive data. A related issue is the seemingly insufficient training provided to the people who are asked to collect sensitive personal data. While the RENs and implementers we interviewed all reported providing training regarding personally identifiable information (PII) and their protocols for data handling and data security, none mentioned any training regarding how to appropriately ask people for sensitive information. While in many cases simply encouraging someone to complete a form need not require special training, program participants may be reluctant to share equity-related data.

   ■ **Recommendation:** The CPUC, PAs, and/or a CAEECC WG should draft best practices for how implementers can collect PII and other sensitive information and how to speak with program participants to encourage them to share the requisite personal information necessary to comply with reporting new statewide metrics.

■ **Finding #8: Finding #8:** Some statewide metrics call for information that could be better provided by third parties with better access to existing data or with the ability to gather primary data from multiple sources. For instance, air quality improvements may be best addressed by an air quality management district. Similarly, because PA service territories overlap and customers are exposed to information

from multiple sources, surveys to assess awareness, knowledge, attitudes and behaviors (AKAB) may be better conducted by a third-party capable of assessing the broader population.

- ■ **Recommendation:** The CPUC should consider delineating distinctions within the required statewide metric categories to differentiate between (1) those that can be readily collected from project data, customers, and participating trade allies or other professionals; and (2) those that require external data from third parties such as public agencies, partnerships with outside organizations like air quality management districts, and/or extensive data collection such as surveys of populations that span multiple PA service territories.

- ■ **Finding #9:** The evaluation team found that in some cases segmentation metrics "fit," but they did not "make sense" for certain programs. For example, the CAEECC WGs developed metrics to document the percentage of program participants out of a larger group. While this may make sense for large scale programs run by the IOUs, it may make more sense for the RENs to report actual participant counts. For instance, the BayREN Green Labeling programs trains 200 to 300 real estate professionals each year, but there are more than 200,000 realtors[32] working in California, including tens of thousands in the Bay Area alone. Because a few hundred participating professionals per year represents a tiny fraction and that number is not likely to grow substantially given the program's budget, in instances such as these, participant counts may be more appropriate than percentages. Because metrics must ultimately produce meaningful insights, they must necessarily be crafted to consider the scope, scale, and budget of the program being measured. The evaluation team finds that in such cases, it is reasonable for the RENs to use their unique value metrics to report on program activities rather than using statewide metrics.

- ■ **Finding #10:** The new statewide market support metrics call for tracking participants in various activities. While this is straightforward at the level of an individual person, it becomes more complicated when identifying commercial and public sector participants or contractors since these organizations and businesses can have multiple individuals working at the same firm or agency (e.g., facility managers, sustainability coordinators, energy managers, HVAC installers, etc.). This can confuse participation counts and percentages, especially considering the likelihood that different events could conceivably count participants at different levels (e.g., counting the number of organizations in attendance regardless of the number of personnel attending or counting each individual person singularly when multiple participants are with the same organization).

  - ■ **Recommendation:** The CPUC should consider requiring PAs to include definitions for the units of measure (e.g., training participants, contractors, requests for information, etc.) and the qualifications for inclusion (e.g., 100% vs. more than 50% attendance) used within their reporting metrics. PAs should also be required to point out any heterogeneous counts (e.g., individuals + facilities + agencies) included in their final singular portfolio wide number being reported for a given metric.

- ■ **Finding #11:** Because the statewide metrics have only recently been proposed, the CAEECC WGs have not had time to attend to the myriad of details associated with the metrics they established and open questions remain, such as how to avoid double counting of participants, activities or outcomes due to overlapping PA programs or inconsistent definitions. While this may not be an issue on an individual program reporting level, it is important for any aggregated statewide metrics.

  - ■ **Recommendation:** Until such time as the CPUC approves specific rules regarding reporting and the avoidance of double counting, the CPUC should consider requiring each implementer and each PA

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[32] National Association of Realtors, https://cdn.nar.realtor/sites/default/files/documents/monthly-membership-05-2022.pdf

to document in their filings how they have quantified their program performance and what they have done to prevent double counting, such as providing definitions of the units counted (e.g. contractors vs employees) and the eligible groups from which those units were drawn (e.g. within a geographic boundary, customer class, etc.).

Findings Related to the Data Management Assessment

BayREN

- **Finding #12:** Based on the data review and interviews with BayREN staff, the evaluation team found BayREN's data to be of high quality, reasonable mergeability and moderately complete, except for phone numbers, which could be entered more consistently.

- **Finding #13:** Based on in-depth interviews with the BayREN program implementation teams, the evaluation team found all BayREN programs have well-established methods for documenting and explaining data flows and data management.

- **Finding #14**: While all BayREN implementers appear to maintain adequate data security protocols, an implementer who supports BayREN's multifamily program has less rigorous data security standards than the others. For instance, while this multifamily implementer requires unique logins for their technical assistants, they do not provide specific training regarding how to handle PII, despite its centrality to data handling.

  - **Recommendation:** The evaluation team recommends that BayREN, as well the other RENs, conduct a data security review across all programs to ensure all implementers and any others with access to PII or other customer records maintain industry best practice standards.

SoCalREN

- **Finding #15:** The evaluation team found the majority of SoCalREN's tracking data fields to be sufficiently populated and of good quality, except for phone numbers which were inconsistent. Additionally, SoCalREN's tracking datasets generally include most of the mergeable fields that allow for traceability between market support activities and CPUC program data. The evaluation team found no significant data completeness, quality or mergeability issues in five program databases, while two showed issues with data completeness. Upon investigation, the evaluation team found that the implementer for SoCalREN faced challenges regarding accessing data pertaining to underage students and this explained much of the issue.

- **Finding #16** SoCalREN provided ample program documentation regarding protocols, tools, and practices. SoCalREN's resource data processes and procedures are well honed to minimize errors.

- **Finding #17:** SoCalREN demonstrates a commitment to protecting the data within its data systems, as well as the systems used by its program implementers. While data handling and data security protocols differ by program implementer, SoCalREN requires compliance with the California Consumer Privacy Act (CCPA) wherever PII is involved.

3C-REN

- **Finding #18:** The robustness of 3C-REN's data tracking and reporting is significantly better than observed in past studies of RENs and LGPs. However, while the tracking datasets 3C-REN provided include the most common fields necessary to merge program data with CPUC data (e.g., customer name, full

address, phone number, and email address), we identified gaps in the data completeness of 6 key mergeable fields including name, address, city or zip code, phone, date of participation, and email.

- **Recommendation:** 3C-REN should continue to work with its program implementers to identify existing barriers and potential solutions to collecting better customer contact info for their activities by requiring a minimum of at least one way to contact the customer, and to implement a standardized approach to data entry and validation across its programs, particularly with respect to key mergeable fields.

- **Finding #19:** All 3C-REN's programs use Salesforce for customer relationship management (CRM) and data tracking, and SharePoint for data storage and collaboration across agencies and implementers. While these systems have built-in data security, 3C-REN did not provide specific data security documentation. However, when asked during in-depth interviews 3C-REN staff explained that they ensure the security of their data by limiting access, using two-factor authentication, and transferring files through secure file protocols. They also require implementers to pass IOU Third-Party Security Reviews.

- **Finding #20:** The evaluation team finds that 3C-REN data systems are secure as identified through interviews, but 3C-REN's documentation did not discuss its data security policy.

  - **Recommendation:** 3C-REN should clearly define its security policies to clearly articulate how participant data under its control is secured.

Appendix A. In-Depth Interview Guides

CPUC Energy Efficiency
Program Oversight and Evaluation of the Group B Sectors
Deliverable 22-B –Year 3 Assessment of Regional Energy Networks In-Depth Interview Guide

The question sets below represent the range of inquiry we are investigating. Multiple interviews will be conducted to address all the topics from the most appropriate individuals including REN senior management and staff, implementation contract staff, as well as trade allies and other parties.

Portfolio Structure and Segmentation

Decision 21-05-031 calls for collecting data to report on the new single metric called the "Total System Benefit (TSB), which is an expression, in dollar terms, of the lifecycle energy, capacity, and GHG benefits, expressed on an annual basis."

The decision also calls for a new approach to segmenting energy efficiency program portfolios into programs whose primary purposes are:

- **Resource acquisition:** Programs with a primary purpose of, and a short-term ability to, deliver cost-effective avoided cost benefits to the electricity and natural gas systems

- **Market support:** Programs with a primary objective of supporting the long-term success of the energy efficiency market by educating customers, training contractors, building government partnerships, or moving beneficial technologies towards greater cost effectiveness

- **Equity:** Programs with a primary purpose of providing energy efficiency to hard-to-reach or underserved customers and disadvantaged communities in advancement of the CPUC's Environmental and Social Justice (ESJ) Action Plan. Improving access to energy efficiency for ESJ communities may provide corollary benefits such as increased comfort and safety, improved indoor air quality, and more affordable utility bills, consistent with Goals 1, 2 and 5 in the ESJ Action Plan.

  - Under these new requirements, how do you plan to deliver resource savings? How will you channel customers into EE programs (your own as well as other PAs' offerings)?

  - Please explain how you plan to gather the data to calculate total system benefits.

  - What changes are you making (if any) to ensure appropriate tracking, calculation, and reporting of TSB?

  - Have you made any internal adjustments to account for the change to TSB? What was the process for this transition?

CAEECC has defined various metrics for equity reporting, and we would like to get your views on how these might be collected, tracked and reported:

- How do you plan to collect, track and report these metrics? How do you plan to show the Commission that these metrics add value?

- Are there other equity metrics you think are important? If so, how do you plan to collect, track and report them and how would you make the case to the Commission that these additional metrics add value?

CAEECC has defined various metrics for market support reporting, and we would like to get your views on how these might be collected, tracked, and reported:

- How do you plan to collect, track and report these metrics? How do you plan to show the Commission that these metrics add value?

- Are there other market support metrics you think are important? If so, how do you plan to collect, track, and report them and how would you make the case to the Commission that these additional metrics add value?

While PA programs may serve multiple purposes in more than one category, ultimately a program must be assigned to only one category.

- How have you decided to apportion your portfolio? [Please share a list showing which programs you have opted to assign to which category.]

- What led you to apportion the programs the way you did? Why was this advantageous?

- What considerations or trade-offs did you need to consider in doing so?

- What drawbacks or benefits do you find arise from the need to assign programs to a single category?

- What recommendations do you have for improving the program categorization process?

- Please tell us about the primary activities for your REN that will be contributing to each of the three categories.

- For instance, have you made any changes to how you pursue energy efficiency and demand savings through your resource programs or by contributing to IOU resource programs?

- What are the main activities you are pursuing to demonstrate and quantify market support?

- What are the main activities you are pursuing to demonstrate and quantify your efforts to address equity?

- What types of targets have you established, or do you plan to establish, for each of these categories?

- What other metrics have you identified to measure your programs' contributions toward the goals in each of these categories?

- How well do these three new categories align with your previous proposed unique value metrics? Why do you say that?

- To date, what changes have you made, or do you plan to make to your goals and metrics to better address the new requirements? Going forward, what additional changes are you planning to make?

- What do you see as the consequences of these changes?

Unique Value Metrics

D.12-11-015 defines three specific criteria for the RENs to ensure their offerings are unique, including conducting activities that IOUs cannot or do not intend to undertake, piloting activities where there is no IOU program and where there is potential to scale, or offering programs to hard-to-reach markets even if there is overlap with other PA programs. In D.19-12-021, the CPUC requested that RENs "state their desired outcome from activities that fill gaps of other program administrators […] and propose savings goals and metrics associated with their unique value, as well as a methodology for measuring progress toward their metrics."

- Now that a year has passed since we last discussed your value metrics, what are the key unique metrics that you plan to report to the CPUC? Please reiterate for us why you selected them. Have you changed them since last year?

- How do your value metrics align with/support/contribute to the new CPUC categories for resource acquisition, market support and/or equity? Please describe that alignment including what works well and what does not. What, if any, adjustments have you made as a result of the new decision?

- How do your unique values support your overall mission as a REN? How do your unique values relate to your PTLMs? How do they relate to the key outcomes of your program offerings?

- What are the goals that you are striving for that will demonstrate the delivery of your unique value? Why were these selected? Have you changed them since last year?

- Tell us about the metrics you are using to measure your progress. How are they tracked and measured? Have you changed them since last year?

- Have you finalized your baseline data? What time period does it cover?

- How are you measuring your progress, gathering feedback, and course correcting based on your progress toward achieving your goals?

- When do you plan to reassess your metrics?

- How do you plan to report the metrics you have collected?

- How has Covid-19 impacted or shifted your goals and value metrics?

Data Handling and Reporting

We are interested in understanding how your REN and your implementing partners handle customer information and other relevant resource and non-resource data. Please help us to understand your data collection efforts and the steps that you take to ensure you are properly capturing and reporting on these metrics.

- Please describe your REN's systems for tracking, storing, and managing customer information, such as CRM systems, spreadsheets, email, social media, and other marketing and communication systems, etc.

- How do you envision the CRM to be used to support the following segments?

  - Resource acquisition: Do you plan to use the CRM to track resource acquisition metrics?

  - Market support: Do you plan to use the CRM to track educating customers, training contractors, building government partnerships, or moving beneficial technologies towards greater cost effectiveness?

  - Equity: How would the CRM be used to track equity metrics, including hard-to-reach or underserved customers and disadvantaged communities in advancement of the Commission's Environmental and Social Justice Action Plan?

- Please describe your data collection processes including relevant forms, databases, software programs, hardware and other tools that are used.

- Please describe your data handling protocols.

- Please describe your data storage systems.

- Please describe and enumerate the organizations, groups, and individuals accessing this database

- Please describe methods used to flag or track errors in the data.

- Please describe your data security systems and practices.

  - How might these things be improved?

- In the past resource acquisition has been driven primarily through non-resource activity such as marketing, education, and outreach (ME&O) initiatives. Our view is that data collection on these ME&O initiatives was limited only to collecting information on who participated in events but did not typically include follow-up to confirm who had gone on to participate in resource activities. Do you agree with this general assessment?

  - [If No] can you provide examples of how non-resource participants were engaged after an MEO event to track resource program participation. Was this activity recorded in CRM?

- Do you envision that a CRM will allow you to better track resource, market support and equity impacts?

  - [If no] Why? [If yes] How?

- Do you use the same or different systems for tracking different types of customers, such as low income, single-family residential, multifamily residential, small business, commercial and industrial, local governments, etc.? If not, please describe.

- Do you use the same or different systems for tracking trade allies and other third-party entities who are interacting with your programs and customers? If not, please describe.

- [For RENs and third-party implementers] Please describe your third-party program implementers' data handling, tracking, and transfer practices with customers, trade allies and any other external third parties.

- How do you envision the third-party program implementers' CRMs will be used to support the following segments?

  - Resource acquisition: Do you plan to use the CRM to track resource acquisition metrics?

  - Market support: Do you plan to use the CRM to track educating customers, training contractors, building government partnerships, or moving beneficial technologies towards greater cost effectiveness?

  - Equity: How would the CRM be used to track equity metrics, including hard-to-reach or underserved customers and disadvantaged communities in advancement of the Commission's Environmental and Social Justice Action Plan?

- Please describe your data collection processes including relevant forms, databases, software programs, hardware and other tools that are used.

  - Please describe your data handling protocols.

  - Please describe your data storage systems.

  - Please describe and enumerate the organizations, groups, and individuals accessing this database

  - Please describe methods used to flag or track errors in the data.

  - Please describe your data security systems and practices.

    - How might these things be improved?

■ Please describe the data handling, tracking, and transfer practices between your REN and your program implementers.

   ■ Please describe your data handling protocols.

   ■ Please describe your data transfer protocols including timing and frequency.

   ■ Please describe your data storage systems.

   ■ Please describe your data security systems and practices.

      ■ How might these things be improved?

■ Please describe the data handling, tracking, and transfer practices between your REN and other PAs.

   ■ Please describe your data handling protocols.

   ■ Please describe your data transfer protocols including timing and frequency.

   ■ Please describe your data storage systems.

   ■ Please describe your data security systems and practices.

      ■ How might these things be improved?

■ Please describe the data handling, tracking, and transfer practices between your REN and the CPUC.

   ■ Please describe your data handling protocols.

   ■ Please describe your data transfer protocols including timing and frequency.

   ■ Please describe your data storage systems.

   ■ Please describe your data security systems and practices.

      ■ How might these things be improved?

Appendix B.   Complete Data Assessment Tables

The evaluation team assessed each program database for data completeness, quality and mergeability, which are defined below. The following tables provide details regarding the scoring of each worksheet contained in each program database for BayREN, SoCalREN, and 3C-REN. The data completeness, quality and mergeability was assessed as follows.

- ■ **Data completeness.** This attribute covers the extent to which all data fields in a database are sufficiently populated for each record in the dataset. If an entire column of data within the spreadsheet was found blank, we assumed the REN was not tracking this information. Thus, we did not count those fields towards data completeness.

- ■ **Data quality.** This attribute refers to the quality of the data within each field. Data quality considers data uniformity and standardization of format across all records, including spelling, consistency in entries within each field, etc. Examples of commonly identified data quality issues include, but are not limited to, having a record with multiple items in the same cell (e.g., two email addresses) and having formatting variations among records (e.g., extra spaces between text, different methods to delineate extension numbers among records, etc.).

- ■ **Mergeability with CPUC program data.** This attribute indicates whether there are fields in the REN program database that match those in the CPUC program database, and if it is possible to merge the REN program data with CPUC program data. If REN program data is mergeable with CPUC program data, it means that it is feasible to identify the customers who participated in a REN program activity and then went on to participate in a resource program. To be mergeable, a dataset must contain some combination of unique utility account or project identification number, customer name, customer address (i.e., address, city, zip), phone number, email, and participation date. Utility account or project identification numbers essentially guarantee mergeability with CPUC program data. However, non-resource datasets often do not contain unique utility account or project identification numbers as they are difficult or even impossible to collect for many types of activities. The mergeability of datasets without utility account or project identification numbers depends on the number of mergeable fields available (i.e., customer name, address, city, zip code, phone, email, and participation date).

Table 18. BayREN Program Data Review Summary

Activity Tracking Data Worksheet Names	Data Completeness [a]	Data Quality [b]	Mergeability [c]
Single Family Home+			
BayREN Home+ Projects Data	Claim ID, Site ID, ProjectID, Contact ID	✓	100%
Contact Claims Data	✓	✓	100%
Claims Data	Rebate: ID	✓	100%

Activity Tracking Data Worksheet Names	Data Completeness [a]	Data Quality [b]	Mergeability [c]
BayREN Home+ EE Kit Data	Contact ID, Site ID, AID (Billing Account), EID (SA ID), GID (SA ID), Customer Name, Email	✓	100%
Home+ Project Custom Data	✓	✓	100%
Home+ HPWH CCA Project Data	✓	✓	100%
BayREN Home+ Cust Eval Data	✓	✓	100%
BayRenRising Sun GHC 2020	Contact ID, Site ID, AID (Billing Account), EID (SA ID), GID (SA ID), Customer Name, Email address	✓	100%
RS CLAIMS 2020 Data	✓	✓	100%
Rising Sun GHC 2019	✓	✓	100%
RS CLAIMS 2019 Data	✓	✓	100%
Home+ Energy Advisor CRM Accts	City, Zip Code	✓	100%
Home+ Energy Advisor CRM Leads	City, Zip Code	✓	100%
Participating Contractor	Contractor Name, Phone Number, Email, Zip Code	✓	100%
Customer Survey Responses	✓	✓	100%
BAMBE			
Account	Address, City, Zip, Phone Number	Phone Number	100%
Campaign	✓	✓	100%
CampaignMember	✓	✓	N/A
Contact	Address, City, Zip, Phone Number, Email	Phone Number	100%
ContentDocumentLink	✓	✓	N/A
ContentVersion	✓	✓	100%
EntitySubscription	✓	✓	N/A
Event	✓	✓	100%
EventRelation	AccountId	✓	100%
FiscalYearSettings	✓	✓	N/A
FlowInterview	✓	✓	N/A
HelloSign__HelloSign_Batch_Queu	✓	✓	N/A
HelloSign__HelloSign_Signature_	✓	✓	100%
HelloSign__HelloSign_Signature2	✓	✓	100%

Activity Tracking Data Worksheet Names	Data Completeness [a]	Data Quality [b]	Mergeability [c]
HelloSign__Log__c	✓	✓	N/A
HelloSign__Template__c	✓	✓	N/A
HelloSign__SignerRole__c	✓	✓	100%
Lead	Address, City, Zip, Phone Number, Email	Phone Number, Email	100%
Opportunity	Address, City, Zip, Phone Number, Email	Phone Number	100%
OpportunityContactRole	✓	✓	N/A
OpportunityHistory	✓	✓	100%
OpportunityLineItem	✓	✓	100%
OrgWideEmailAddress	✓	✓	N/A
Period	✓	✓	100%
Pricebook2	✓	✓	100%
PricebookEntry	✓	✓	100%
Product2	✓	✓	100%
PromptAction	✓	✓	N/A
RecordType	✓	✓	N/A
Referral__c	✓	✓	100%
Site__c	Address, Zip, Utility Account Number	✓	100%
Task	Utility_Account_Number__c	✓	N/A
TaskRelation	AccountId	✓	N/A
TodayGoal	✓	✓	N/A
User	✓	✓	N/A
UserRole	✓	✓	N/A
WorkAccess	✓	✓	N/A
WorkBadgeDefinition	✓	✓	N/A
Business – Primary Data [d]			
Data Dictionary	N/A	N/A	N/A
Data Dictionary Legend	N/A	N/A	N/A
Business - Microloan			
2021	✓	✓	100%

Activity Tracking Data Worksheet Names	Data Completeness [a]	Data Quality [b]	Mergeability [c]
2020	✓	✓	100%
Codes & Standards			
Forum-2019_Attendees	✓	✓	33%
Forum-2020_Attendees	Agency	✓	33%
Forum-2021-Q1_Attendees	✓	✓	33%
Forum-2020-2021_Survey	✓	✓	33%
Forum-Jurisdiction_Summary	✓	✓	N/A
Training-2019_Tracker	✓	✓	N/A
Training-2019_Attendees	Agency, Email Address	✓	50%
Training-2020_Tracker	✓	✓	N/A
Training-2020_Attendees	Agency, County, Last Name, Location, Series, Date, Email Address	✓	50%
Training-2020-Eval	✓	✓	50%
Training-2021_Tracker	✓	✓	N/A
Training-2021_Attendees	Agency, County, Jurisdiction	✓	50%
Training-Jurisdiction_Summary	✓	✓	N/A
Training-2021-Eval	✓	✓	50%
Muni_ZNE_Summary	✓	✓	67%
Muni_ZNE_Survey1	✓	✓	67%
Permit_Guides	✓	✓	50%
ePermit_Tool	✓	✓	N/A
Code_Cycle	✓	✓	N/A
Open_Policy_Calls	✓	✓	N/A
Green Labeling			
HEScore Data	✓	✓	83%
Assessor Data	Phone, Address, City, Email	✓	N/A
Water Upgrades $aves [e]			
Company_Profile_Data	Name, Address	✓	N/A
Stakeholder_Profile_Data	Email, Company	✓	N/A

[a] A check (✓) indicates that the data field is populated sufficiently for each participant record in the dataset. Otherwise, the incomplete data fields will be listed.

b Refers to the quality of data in each field (i.e., standardized format across all records, spelling, consistency in entries within each field, etc.). A check (✔) indicates that the data is of generally good quality for each participant record in the dataset. We list fields with any with consistency issues in this column.

c Mergeability is a percent score out of six for the minimum tracking data fields: Name, Address, City/Zip Code, Phone, Email, and Date. Either Name or Address is required, otherwise the score is 0%. If AccountID, Meter Number or other unique account identifiers are found, the mergeability score is 100%.

d The Business Primary Database provided a data dictionary and legend for their Salesforce data fields as there was no participation in the program at the time of the data request. The Microloan program Completeness, Data Quality, and Mergeability score was used for the Business program due it is a subprogram of the overall Business program.

e The Water Upgrade $aves program did not have any participation at the time of the data request.

Table 19. SoCalREN Program Data Review Summary

Activity Tracking Data Worksheet Name	Data Completeness a	Data Quality b	Mergeable with Resource Data c
Metered Savings Program			
MSP Projects and Claims	✔	✔	100%
MSP Incentives and Claims Ungrorouped	✔	✔	100%
Whole Building MF			
Data Request	✔	✔	100%
SoCalREN Public Agency Revolving Loan Fund			
Revolving Loan Fund Projects	✔	✔	100%
EE Project Delivery Program (PDP)			
Non-resource Incentives and Claims(Ungrouped)	✔	✔	100%
Non-resource Incentives and Cla (Grouped)	✔	✔	100%
Non-resource Projects	✔	✔	100%
report1623277984972	✔	✔	100%
Kits4Kids			
No Database Provided at time of Data Request	N/A	N/A	N/A
DER DAC Program			
Non-resource Incentives and Claims (Ungrouped)	✔	✔	100%
Non-resource Incentives and Claims (Grouped)	✔	✔	100%
Non-resource Projects	✔	✔	100%
report1623277984972	✔	✔	100%
Public Agency Revolving Loan Fund			

Activity Tracking Data Worksheet Name	Data Completeness [a]	Data Quality [b]	Mergeable with Resource Data [c]
Revolving Loan Fund Projects	✓	✓	100%
Green Path Careers			
Green Path Careers Applicant Data	✓	✓	100%
Architecture Construction Engineering Students (ACES)			
ACES Participants	Address, City/Zip Code, Phone, Email	Phone Number, Email Address	83%
E-Contractor Academy			
E-Contractors	Address, City/Zip Code, Phone	Phone Number	100%

[a] A check (✓) indicates that the data field is populated sufficiently for each participant record in the dataset. Otherwise, the incomplete data fields will be listed.

[b] Refers to the quality of data in each field (i.e., standardized format across all records, spelling, consistency in entries within each field, etc.). A check (✓) indicates that the data is of generally good quality for each participant record in the dataset. The data fields will be listed for any with consistency issues.

[c] Mergeability is a percent score out of six for the minimum tracking data fields: Name, Address, City/Zip Code, Phone, Email, and Date. Either Name or Address is required, otherwise the score is 0%. If AccountID, Meter Number or other unique account identifiers are found, the mergeability score is 100%.

Table 20. 3C-REN Program Data Review Summary

3C-REN Activity Tracking Data Worksheet Name	Data Completeness [a]	Data Quality [b]	Mergeable with Resource Data [c]
Building Performance Training			
Account	Name, Email, Address, City/Zip	Phone Number	100%
Contact	✓	✓	100%
Lead	Name, Email, Address, City/Zip	Phone Number	100%
Opportunity	✓	✓	100%
OpportunityHistory	✓	✓	100%
OpportunityLineItem	Name, Email, Address, City/Zip, Phone	Zip Code	50%
Pricebook2	Phone Number	✓	N/A
PricebookEntry	✓	✓	N/A
Product2	✓	✓	N/A
User	Name, Email, Address, City/Zip	Phone Number	100%
UserRole	✓	✓	100%
Home Energy Savings			

3C-REN Activity Tracking Data Worksheet Name	Data Completeness [a]	Data Quality [b]	Mergeable with Resource Data [c]
Account	Phone Number, Email Address, Electric Account Number, Gas Account Number,	Phone Number	100%
Contact	Address, City/Zip Cide, Phone Number, Email Address	Phone Number	100%
Lead	Address, City/Zip Cide, Phone Number, Email Address, Electric Account Number, Gas Account Number	Phone Number	100%
Opportunity	Zip Code, Electric Account Number, Gas Account Number	✓	100%
OpportunityHistory	✓	✓	100%
OpportunityLineItem	✓	Quantity	100%
Pricebook2	✓	✓	100%
PricebookEntry	✓	✓	100%
Product2	✓	✓	100%
User	✓	Phone Number	100%
Codes and Standards			
Account	Address, City/Zip Code	Phone Number	100%
Certification__c	✓	✓	N/A
Contact	Address, City/Zip Code, Email	Phone Number	100%
Course__c	✓	✓	N/A
Event__c	✓	✓	100%
Event_Attendee__c	Name, Address, Zip Code, Email Address	Zip Code	100%
User	Phone Number, Address, City/Zip Code, Email Address	Phone Number	N/A
UserRole	✓	✓	N/A
Venue__c	Address, City/Zip Code	✓	N/A
Energy Code Connect			
report1621014631355	Email Address, Zip Code	✓	100%

[a] A check (✓) indicates that the data field is populated sufficiently for each participant record in the dataset. Otherwise, the incomplete data fields will be listed.

[b] Refers to the quality of data in each field (i.e., standardized format across all records, spelling, consistency in entries within each field, etc.). A check (✓) indicates that the data is of generally good quality for each participant record in the dataset. The data fields will be listed for any with consistency issues.

[c] Mergeability is a percent score out of six for the minimum tracking data fields: Name, Address, City/Zip Code, Phone, Email, and Date. Either Name or Address is required, otherwise the score is 0%. If AccountID, Meter Number or other unique account identifiers are found, the mergeability score is 100%.

Appendix C.   Response to Public Comments

Comment #	Commenter	Page	Comment/Feedback	Evaluation Team Response
1	3C-REN	Exec Sum	The study has provided various findings and recommendations of value to 3C-REN data collection and tracking activities, including the following key suggestions which 3C-REN aims to integrate into future efforts: • Documenting and illustrating non-energy benefits in annual reports. • Continue working with implementers to identify existing barriers and potential solutions to improve customer contact information completeness, while also being sensitive to participants' preferences regarding sharing their personal data • Consider adopting data validation protocols for participant-entered data • Further defining security policies around participant data	The evaluation team is pleased to hear 3C-REN has found the recommendations useful and is already taking steps to integrate them into their current efforts.
2	3C-REN	Exec Sum	In addition to integrating the above recommendations, 3C-REN is currently exploring several process changes that should improve data quality and completeness. Over the past year, 3C-REN has worked with a Salesforce specialist to explore alternatives to its current automation software, with the goal of improving data quality. Implementation is targeted for Q1 2023. This would most directly improve WE&T and C&S data. As well, 3C-REN has relaunched the Single-Family Home Energy Savings program with a new program model, new program implementer and new data collection processes.	Noted
3	3C-REN	Exec Sum	Additional clarification could be helpful for understanding the evaluation team's intent behind the recommendation for Finding #4. That recommendation mentions "requirements regarding data collection for a minimum number of shared metrics," however, metrics would still need	The evaluation team agrees with 3C-REN that metrics would still need to be relevant to each PA's portfolio to be reportable. The intent of this recommendation is that selection of statewide metrics and data collection for these metrics must be balanced among the following: 1) requiring a minimum number of metrics to enable the CPUC to

Comment #	Commenter	Page	Comment/Feedback	Evaluation Team Response
			to be relevant to each PA's portfolio in order to be reportable.	adequately assess program/portfolio value; 2) giving PA's the flexibility to choose which metrics are most relevant and reportable based on their portfolio, and; 3) minimizing operational overhead while still yielding meaningful data from EE program participants.

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