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Year 4 Assessment of Regional Energy Networks - Final

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Contributors



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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).

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 at least one of the following three criteria:

- “Activities that utility or community choice aggregator (CCA) program administrators (PAs) 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

At the outset of the fourth year of this research, the CPUC and the evaluation team agreed to focus this study on the REN’s non-traditional performance metrics, which differ from the usual energy and demand savings typically used to measure the performance of energy programs. Table 1 below summarizes the key terms and definitions for the different types of metrics discussed in this report. The RENs included in this study are those that have been operational for many years, including 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) that serves the counties of San Luis Obispo, Santa Barbara and Ventura.

Table 1. Key Terms and Definitions

Key Term	Definition
Metric	As defined in Decision 18-05-041 (D.18-05-041), “a metric is a measure of progress towards achieving desired market effect(s). For example, required portfolio metrics include savings metrics and cost-effectiveness metrics. Metrics are valueless. That is, the wording of the metric itself does not quantify the baseline or target. [...] For metrics to have a functional purpose, baselines and targets associated with each metric must also be provided. Baselines are the minimum or starting point used to compare the metric’s progress to achieving the stated target values with baselines and targets.” ²
Indicator	As defined in D.18-05-041, these are measures of performance that do not include baselines or targets. ³

¹ D.19-12-021, page 89.

² D.18-05-041, page 22-23.

³ Ibid.

Key Term	Definition
Value Metrics/Indicators	In the discussion section of D.19-12-021, the CPUC 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.” These are the metrics/indicators that the RENS originally proposed in their 2021 Annual Budget Advice Letter filing but have recently revised and included in their applications (applications filed by each REN in March 2022 consist of a 2024-2031 Business Plan, 2024-2027 Portfolio Plan, and Budget).
Statewide Market Support and Equity Metrics/ Indicators (Statewide Metrics/ Indicators)	These are the new metrics that originated from the California Energy Efficiency Coordinating Committee (CAEECC) market support and equity working groups. CAEECC was instructed to develop and vet new reporting metrics for the Market Support and Equity program categories by the CPUC in D.21-05-031. The RENS recently proposed their Market Support and Equity metrics for consideration in their applications submitted to the CPUC (applications filed by each REN in March 2022 consist of a 2024-2031 Business Plan, 2024-2027 Portfolio Plan, and Budget). The evaluation team uses the term “Statewide Metric/Indicator” when referring to both the Market Support and Equity metrics.
Common Metrics/Indicators	These are CPUC required metrics and indicators that all PAs are required to track. These metrics/indicators are used to track business plan progress and are reported in their annual reports. The full list of metrics/indicators can be found in Attachment A of D.18-05-041.
Shared REN Performance Metrics	These are a set of performance metrics that the RENS have been collaboratively developing in response to the June 24, 2022, Assigned Commissioner’s Scoping Memo and Ruling that asks “which performance metrics and associated targets should regional energy networks (REN) be held accountable to?” ⁴ The RENS have not yet come to a consensus on a shared metric, but each REN provides their concept for such metrics in their November 21, 2022, Energy Efficiency 2024-2027 Portfolio Plan Prepared Rebuttal Testimonies.

The first non-energy savings performance metrics for the RENS originated from the discussion section of D.19-12-021. As described in Table 1 above, this decision directed the RENS to demonstrate to the CPUC the unique value that they provide. The RENS subsequently proposed value metrics in their 2021 Annual Budget Advice Letters (ABALs), 2022-2023 Biannual Budget Advice Letters (BBALs), and in their application filings.⁵ Each REN’s value metrics demonstrate their unique value proposition and are intended to be measured over time.

The second of the RENS’ non-traditional performance metrics originated in D.21-05-031. This Decision acknowledged that programs supporting equity goals or long-term market success serve an important

⁴ Assigned Commissioner’s Scoping Memo and Ruling, Application 22-02-005 page 3.

⁵ The applications filings refer to the REN applications for approval of the RENS’ 2024-2031 Strategic Business Plan, 2024-2027 Portfolio Plan, and Budget filed in March 2022. The 2024-2031 Business Plan and Application documents for each REN are available at <https://www.caeecc.org/2022-business-plan-application-documen>

function, but their high costs tend to weigh down portfolio-level cost effectiveness.⁶ To reduce the conflict between cost effectiveness and other important policy objectives, D.21-05-031 adopted a new approach to segmenting the EE program portfolio into programs with primary purposes of Resource Acquisition (RA), Market Support (MS), or Equity.⁷ The decision defines these three 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 (HTR) or underserved customers and disadvantaged communities (DACs) 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.⁸

In the absence of strict cost-effectiveness limitations, the CPUC directed all PAs, including RENs, to develop metrics and criteria for evaluating the progress of their Market Support and Equity programs, as well as to utilize CAEECC to develop and vet these statewide metrics for Market Support and Equity programs.⁹ For the RENs, these statewide metrics are in addition to the value metrics they developed in response to D.19-12-021. In March 2022, the RENs proposed their statewide metrics in their applications which were under review by the CPUC at the time we prepared this report. It is worth noting that D.21-05-031 ordered changes to the portfolio process adopted in D.15-10-028, which called for a rolling portfolio of energy efficiency programs approved on a 10-year basis. D.21-05-031 adopted recommendations developed by CAEECC, whereby the ten-year budget cycle was replaced in favor of a four-year budget cycle. Instead of the ten-year portfolio and business plan filings, PAs now file four-year portfolio applications accompanied by eight-year business plans that detail their proposed portfolio strategies.¹⁰

The primary objective of this study was to assess the progress of the RENs in setting, measuring, and tracking their value and statewide metrics to inform forthcoming CPUC processes regarding the setting of REN performance metrics. Accordingly, this assessment includes an analysis of REN value and statewide metrics including all available baselines, targets, and achievements. The purpose of this analysis is to assess the degree to which the existing performance metrics are reasonable and achievable. Based on this analysis and the cumulative knowledge gained from previous REN studies, this study provides recommendations and best practices for the RENs to make value and statewide metrics actionable through improved baseline and target setting.

The original workplan for this report also included multiple study objectives regarding whether the RENs set measurable targets for their unique value metrics and statewide equity and market support metrics for years

⁶ D. 21-05-031, page 11. Available at <https://docs.cpuc.ca.gov/PublishedDocs/Published/G000/M385/K864/385864616.PDF>.

⁷ D.21-05-031, page 52-53

⁸ D. 21-05-031, page 14

⁹ 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.

¹⁰ D. 21-05-031, section 5

2022 and 2023 using baselines collected in 2020-2021. However, the study objectives¹¹ associated with metrics for these years proved to be premature because all REN targets were set for 2024-2027 to align with the RENs' business plan filings submitted in March of 2022. In addition, this report does not cover the I-REN related objectives listed in the workplan as the evaluation team is preparing a separate memo during 2023. This memo will discuss I-REN's preparedness to report on CPUC metrics, value metrics, and statewide Equity and Market Support metrics, as well as making recommendations as to how I-REN can best position its programs to be evaluated. The memo will also include a data evaluability assessment to assess I-REN's data collection processes to ensure consistent and appropriate collection of necessary data for tracking, managing, and reporting on activities.

1.2 Methodology Overview

The evaluation team employed multiple research methods to conduct this evaluation, including reviewing PA regulatory filing documents, such as advice letters, business and portfolio plans, annual reports, and rebuttal testimonies; as well as analyzing primary and secondary program data provided by the RENs; and conducting in-depth interviews with REN staff, their key implementers, and/or consultants. First, we reviewed the RENs' responses to a recent Energy Division (ED) data request seeking information regarding the REN's value and statewide metrics. The ED data request stemmed from its staff's analysis of the REN's 2022-23 BBALs¹², application filings¹³, and the annual report business plan metrics tables.¹⁴ ED staff sought to confirm that they were correctly interpreting the metrics provided in the REN applications and to clarify any changes in common metrics, the status of value metric targets/forecast values, and adoption of statewide metrics.

On November 14, 2022 the evaluation team submitted a data request to the RENs that sought additional information from the REN's beyond their previous responses to the ED data request. This data request called for all available program data relating to the value and statewide metrics, and any changes made to metrics since the RENs' latest application filing in March 2022. For those value metrics that did not yet have established targets or baseline data, the evaluation team also asked the RENs to provide timelines for establishing those targets and baselines.

We conducted in-depth interviews with REN staff to assess REN baselines, target setting, and data collection of their value metrics and statewide metrics, as well as to determine how effectively the RENs are implementing relevant tracking and measuring systems. The team aimed to determine if the three RENs had set clear and measurable annual targets, and if those targets had been met. For those targets yet to be achieved, the team sought to determine why. Additionally, the evaluation team used the interviews to inquire whether the RENs' quantitative targets for their unique value and statewide metrics were achievable and reasonable from their perspective, and asked if the RENs were aware of any value metrics that could not be quantitatively assessed with confidence. In-depth interview guides were approved by ED and are provided for reference in Appendix A and Appendix B of this report.

¹¹ Study objectives not covered because of premature timing include: Did all RENs set clear and measurable targets for their unique value metrics and statewide equity and market support metrics for years 2022 and 2023 using baselines collected in 2020-2021? Why or why not?

Did RENs that proposed targets with their unique value metrics meet their forecasted targets? By what margin? If the targets were not met, what was the cause? Is any action being taken to get back on track to meet the original forecasted unique value metrics? Why or why not?

¹² With the exception of Inland-REN and Rural REN

¹³ With the exception of Inland-REN

¹⁴ With the exception of Inland-REN and Rural REN

1.3 Key Findings and Recommendations

This section summarizes key findings and recommendations from the research and evaluation activities conducted during the Year 4 Assessment.¹⁵ Note that not all findings have an associated recommendation.

Readers interested in additional relevant findings and recommendations regarding metrics that were originally included in previous REN research studies conducted by this evaluation team can find them in Chapter 5 Metrics Considerations beginning on page 73.

Overarching Findings

- Finding #1: The table below provides an overview of REN metrics and indicators.** Currently, the quantity and complexity of value and statewide metrics/indicators, as well as the nuanced differences in the way these metrics/indicators are reported by the RENs, make it difficult for stakeholders to understand the RENs' progress with collecting, setting, and reporting on their metrics/indicators. This complexity notwithstanding, Table 2 condenses the REN's progress on value and statewide metrics/indicators into a simplified table for stakeholders.

Table 2. REN Metrics/Indicators Progress at a Glance

Metric/Indicator Activity	SoCalREN	3C-REN	BayREN
Collect Value Metric Baseline Data	●	●	●
Set Value Metric Baselines	●	●	●
Set Value Metric Targets	●	○	○
Report 2022 Value Metric/Indicator Achievements	○	○	○
Collect Statewide Metrics Baseline Data	○	○	○
Set Statewide Metric Baselines	○	○	○
Set Statewide Metric Targets	○	○	○
Report 2022 Statewide Metric/Indicator Achievements	○	○	○
Develop a Shared REN Metric	○	○	○
Document and Demonstrate Unique Value	●	●	●

Key: ● Completed ○ In Progress ○ Not Yet Started

As shown above, the RENs have successfully collected baseline data and set baselines for their value metrics. The exception being those value metrics that are also statewide metrics or those metrics that are associated with a program that has yet to launch or has recently undergone substantial program design modifications. The RENs also continue to document their unique values through their annual reports, and they plan to demonstrate their value when reporting the 2022 value metric/indicator achievement data to be reported later this year. As of this report, SoCalREN currently stands as the only REN to have finalized targets for these value metrics in its application.¹⁶ 3C-REN and BayREN

¹⁵ Please see section 5 for additional past findings and recommendations regarding REN segmentation strategies and metrics that were noted in our Year 2 REN Assessment and Year 3 REN Assessment.

¹⁶ 2024-2027 Portfolio Plan and 2024-2031 Business Plan submitted March 2022

expect to set targets for their value metrics in approximately April of 2023. Once the RENs receive CPUC approval of their applications and the statewide metrics, they will start to collect baseline data and prepare targets. Meanwhile, the RENs are considering the most effective means and sources for collecting this new data. All three RENs point out the necessity of additional research and coordination across all PAs to appropriately collect data, establish baselines, and set targets for the full suite of statewide, CAEECC-proposed metrics. Moreover, the RENs are now coordinating on a shared REN metric as mentioned in their recent rebuttal testimonies. However, this shared metric remains in the conceptual phase and the RENs have not yet agreed on a final methodology.

Value Metric/Indicator Findings

- **Finding #2: REN metrics demonstrate their core values¹⁷.** The evaluation team finds that the RENs' value metrics/indicators continue to be clearly linked to their core values, as demonstrated in their respective process evaluations and data. Furthermore, the RENs recent modifications to their value metrics have resulted in alignment with not only their core values but also the statewide segments of RA, MS, and Equity. By aligning each value metric to a given market segment the RENs have positioned themselves to succinctly demonstrate the unique value they provide to each segment of their portfolios.
- **Finding #3: SoCalREN has set clear and measurable targets for their value metrics.** Based on a review of SoCalREN's proposed baseline and targets, the evaluation team concludes that this REN has set clear and measurable targets for their value metrics as evidenced by clearly delineated value metric baseline years and values, as well as by the presence of individual targets for all currently approved sectors for program years 2024 through 2027. Based on our review of SoCalREN's data, internal dashboards, and in-depth interviews, the evaluation team also finds that all proposed value metrics appear to be suitable for quantitative assessments once final targets and baselines are approved by the CPUC. This conclusion is also evident based on SoCalREN staff stating in interviews that they will be including 2022 value metrics achievements in their 2022 annual report.

In addition, SoCalREN staff indicated a high degree of confidence that their proposed targets for 2024-2027 are reasonably achievable, assuming corresponding budgets are approved. However, because SoCalREN has not established targets for 2022, it is premature for the evaluation team to assess the extent to which they have met or fallen short of such targets in this study. Future studies that start in 2025 to evaluate the 2024 program year should be better positioned to assess REN performance to determine the margin by which they outperform/underperform compared to their associated targets and to determine the cause of any over/under performance.

- **Finding #4: BayREN's approach to metric setting emphasizes indicators and has not yet clarified measurable targets.** Based on our review of BayREN's value metrics/indicators data, and in-depth interviews, most of BayREN's value metrics/indicators proposed in their application are classified as indicators, rather than metrics, and thus will not require baselines or targets. Furthermore, all but two of their value metrics are also designated as statewide Market Support or Equity metrics. The evaluation team finds that while BayREN has set baselines for the two non-statewide value metrics, BayREN has not yet set clear and measurable targets for them. For their other value metrics that are

¹⁷ SoCalREN's core values are: delivering energy and climate impacts; building energy capacity and economic resilience; and expanding access to energy efficiency benefits. BayREN's core values are: building human and organizational infrastructure; obtaining energy savings locally while also supporting local difficult to serve (LDTs) populations; and testing innovative solutions. 3C-REN's core values are: diversity, equity and inclusion; service; climate action; and economic impact. More information on each of the RENs' core values can be found in chapter 3.

also statewide metrics, they have not yet set baselines or targets because statewide metrics remain to be approved by the CPUC.

- **Finding #5: 3C-REN established three of four baselines for its value metrics but has not yet set clear targets.** Based on the evaluation team’s review of 3C-REN’s value metrics/indicators and on our in-depth interviews, we find that 3C-REN has established clear baselines for three of four value metrics, but 3C-REN has not yet set clear targets for these value metrics. 3C-REN expects to fully release its targets for these three-value metrics in April 2023, shortly after the finalization of this report. In addition, the evaluation team finds it reasonable that due to its recent program design modifications, 3C-REN does not have enough information to set a target for metric 330_3C_VM in their upcoming annual report. Metric 330_3C_VM measures the “number of Tri-County member jurisdictions receiving annual 3C-REN data that informs member jurisdictions achievements toward climate action plans GHG emission reduction goals.” All proposed value metrics appear to be suitable for quantitative assessments once final targets and baselines are approved. We base this conclusion in part on 3C-REN’s preparedness to release baselines and targets for the majority of their value metrics in their upcoming 2022 annual report.

In addition, during interviews 3C-REN staff indicated that they are confident targets for the Workforce, Education and Training (WE&T) and Codes and Standards (C&S) value metrics will be reasonably achievable, assuming corresponding budgets are approved. Since 3C-REN has not yet established targets for 2022, it is premature to assess the extent to which they have met or fallen short of targets in this study. Starting in 2025, future studies covering program year 2024 and beyond should be able to assess 3C-REN’s performance compared to their established targets and determine the margins by which 3C-REN outperforms/underperforms, as well as the cause of any over/under performance.

- **Finding #6: The three RENs believe that their previously filed and approved value metrics will be achievable on a yearly basis for 2024-2027.** REN leadership staff spoke with conviction that their program leads understand their associated metrics and the program objectives can be accomplished to meet these metrics/indicators. However, since the evaluation team was only able to review a limited number of value metric targets, we base our assessment primarily on the confidence the RENs expressed in their program leads rather than on a comprehensive assessment of REN value metrics.
- **Finding #7: The RENs’ statewide metrics will not be reasonably achievable until multiple challenges and issues are fully addressed.** The CPUC should convene a workshop for all PAs to resolve matters. Additional work remains before the RENs and other PAs can adequately report on all their statewide metrics and indicators. Accordingly, the evaluation team does not find the RENs’ statewide metrics to be reasonably achievable until these issues are fully addressed. Identified challenges related to data collection for statewide metrics and indicators include:
 - Uncertainty around data collection practices for some Equity and Market Support segment metrics. This includes 1) How to best ask customers for invasive or sensitive customer data, (e.g., customer income), or how to minimize the need to collect this type of data, and 2) How RENs can work with the IOUs to gain timely access to customer utility bills so that they can quantify bill savings, or alternatively develop, for CPUC-approval, an approach for estimating bill savings using proxy values. The RENs expressed particular concern regarding metrics/indicators related to bill savings because they do not have the same access to billing data as the IOUs. While proxies are one option, RENs are also concerned that it may be difficult to provide something accurate and they do not want bill savings-related metrics/indicators to be too far removed from the other types of data that RENs can reliably gather on a regular basis.

- Needing to coordinate among all PAs to finalize methodology and procedures for using survey responses to collect statewide metric/indicator data.
- Needing to conduct evaluation activities before reporting on select metrics/indicators. An example of these are the metrics/indicators where the methodology consists of estimating non-energy impacts regarding health and safety. Since these metrics/indicators require separate evaluation research, RENs and other PAs may have to expedite this research to provide this information starting in 2024. Conversely, they may need to seek data from outside entities such as air quality management districts, other government bodies, and/or industry groups, which gives rise to questions of whether such exogenous data would be reliably available, suitably accurate, and feasibly obtainable in a timely manner.
- **Recommendation:** The evaluation team recommends the CPUC convene a workshop for all PAs to discuss these outstanding issues, develop plans to address them, and establish a timeframe within which the issues should be resolved. The evaluation team suggests the CAEECC as the best mechanism for the PAs to coordinate and develop an agreed upon approach. In addition, the evaluation team recommends that as part of this process, the CPUC hold a workshop on the topic of collecting sensitive demographic information. As part of this workshop, organizers should bring in one or more experts well versed in collecting sensitive demographic information from program participants at the same level of detail as what is currently proposed in the statewide metrics/indicators. Key topics of this workshop should include:
 - Helping PAs to define a compelling reason for customers to provide this level of sensitive demographic information.
 - Evaluating the value of what programs offer customers compared to what is being asked for.
 - Assessing acceptable proxies to be used if it is not possible/reasonable to ask for some sensitive information (e.g., income information), particularly information that PAs may not be able to validate.
 - Identifying other governmental or utility programs that have successfully collected sensitive demographic data with minimum or no incentives.
- **Finding # 8: RENs and other PAs expressed interest in further discussing how the metrics data they collect will inform future CPUC oversight.** During interviews, REN staff expressed uncertainty about what is important to the CPUC. A critical part of metrics data collection lies in the level of detail that the CPUC requires for it to be useful for its purposes. To address this, RENs have asked questions such as:
 - At what level of detail does the CPUC desire these metrics to be reported?
 - Is the CPUC seeking a high-level overarching set of select metrics to judge Market Support and Equity performance?
 - Does the CPUC desire a way to roll up these metrics across PAs from a statewide reporting perspective?
 - Or does the CPUC want something else?
- **Recommendation:** Clarify the regulatory process of the Market Support and Equity metrics/indicators and how these metrics will be used to assess the performance of RENs and other PAs.

- **Finding # 9: The CPUC should consider providing clearer guidance on metrics, including timelines.** The RENs have generally been risk-adverse when it comes to setting metric targets and baselines, evident by their reluctance to set value metric baselines and targets, as well as by their insistence on two years of baseline data before any targets can be set. This stance is understandable because 1) it is difficult to forecast results for metrics with certainty, especially when dealing with a new set of metrics or when they pertain to a new or significantly changed program; and because 2) a lack of clarity regarding how metrics are intended to be used further incentivizes the RENs to approach baseline and target setting in a conservative manner. The evaluation team has also seen this risk-adverse stance reflected in the RENs' process for developing statewide metrics and shared REN performance metrics.
- **Recommendation:** While the RENs have made incremental progress preparing these metrics, the evaluation team suggests that CPUC consider the following:
 - Institute a grace or transition period for new MS, Equity, and shared performance metrics so the RENs can revise their metric baselines and targets without penalty while they and other stakeholders figure out how the metrics work in practice. This should give the RENs more confidence when setting initial baselines and targets despite it being difficult to forecast new metrics accurately. This should also help to prompt the RENs to establish baselines and targets more quickly than they have done in previous cycles.
 - Provide clear guidance on the desired timeline for RENs to finalize the creation and/or baseline and target setting of new metrics. This is particularly important for any metrics that require coordination among PAs, such as the shared REN performance metric, statewide Market Support metrics requiring surveying, and statewide Equity metrics that still need definitions that are agreed upon by all PAs.
 - Give direction regarding how any new metrics should be filed, such as via a Tier 1 or Tier 2 advice letter.

Improvements to Metrics Data Collection and Reporting Processes

- **Finding #10: The evaluation team recommends establishing a clear process and timeline for the RENs to receive CPUC feedback regarding targets and metrics.** REN staff reported that they have not received clear feedback from the CPUC on specific targets or achievements associated with their metrics/indicators, and thus the RENs have been under the assumption that the CPUC is satisfied with their metric/indicator related work to date. In addition, any major changes to metrics/indicators—particularly changes occurring mid-program year—could result in data inconsistencies and misspent efforts and program funds. Thus, it is best that any feedback is provided as early as is reasonably possible.
- **Recommendation:** Because accurate data collection necessarily relies on a confidence derived from CPUC approval of the REN's proposed metrics and targets, the evaluation team recommends the CPUC provide its feedback within one to two quarters with a particular sensitivity to the need for RENs to collect metrics consistently throughout a given program year. Additionally, if the CPUC determines it is unsatisfied with any REN metric/indicators or related work, then it would be beneficial to establish a process that enables the RENs to explain the nuances behind their value metrics, targets, and reasons why any reported values may have exceeded or underperformed expectations.

Finding #11: RENs and other PAs should consider opportunities to leverage external data sources to help fill gaps in their data used to establish targets. SoCalREN primarily relied on historical program

data when it established the baselines and targets for its portfolio. However, SoCalREN also identified external public data sources that could be used to accurately fill gaps when the requisite data does not exist. For example, SoCalREN's multi-family program team used real estate databases to supplement historical program data. The evaluation team identified this use of supplementary data sources as one reason why SoCalREN was able to set clear and measurable targets for most of their value metrics. Although such an approach may not be applicable for all sectors or programs, the evaluation team finds such efforts to be a creative and useful means to reduce the time needed to set targets for newly proposed programs.

- **Recommendation:** RENs and other PAs should consider opportunities to leverage external data sources to help fill gaps in their data used to establish targets. This is particularly relevant for new programs that will not be launched until 2024, since combining one year of historical data with external data may enable some targets to be set earlier than otherwise possible.
- **Finding #12: Reducing the number and complexity of metrics will make it easier to track, report, review and assess performance, while keeping PAs accountable for meeting their metrics.** The evaluation team feels concerned that once value, statewide and shared REN metrics are all approved and operational, there will be too many metrics for the CPUC to properly assess to inform CPUC decisions.
 - **Recommendation:** Narrowing the number of metrics and their associated baselines and targets will make it easier to track, report, review and assess performance, while keeping PAs accountable for meeting their metrics. We recommend reducing the complexity of the full set of value, statewide and shared REN metrics by:
 - Adopting BayREN's approach of treating all statewide metrics/indicators as simultaneous value metrics/indicators. This should help to simplify the structure of metrics. The evaluation team also recommends that if other RENs adopt this approach, that the RENs work together to develop and adopt a mutually agreed upon index nomenclature to establish a uniform syntax for labeling and reporting their statewide value metrics/indicators.
 - Limiting each program to a small number of value and/or statewide metrics (such as three to five) key performance indicators and then regarding any additional metrics beyond the primary ones as indicators. Limiting the number of metrics will make them more actionable by focusing attention on the key objectives of each program. Such an approach would also be beneficial for the CPUC and evaluators given the volume of tracking information, including the 300 plus common metrics, that already exists to inform decisions.
- **Finding #13: The RENs should align the six outstanding statewide indices as either metrics or indicators to ensure consistency in reporting and review processes.** For most statewide metrics/indicators, the RENs are aligned on whether a given index should be classified as a metric or indicator. However, the RENs differ in their positions on whether six proposed indices should be metrics or indicators. Five of these divergences occur in the Market Support segment; one lies in the Equity segment (See Table 31 in the body of the report for a full discussion.).
 - **Recommendation:** The evaluation team recommends the RENs align their classification of these six statewide indices as either metrics or indicators to make them consistent across RENs to simplify future statewide metric reporting and review processes.
- **Finding #14: The CPUC should encourage maximal alignment among the RENs when reporting their statewide metrics.** BayREN has seven Market Support and Equity metrics/indicators broken into sub-metrics/indicators in their application filing, whereas SoCalREN and 3C-REN did not appear to use any sub-metrics/indicators. BayREN's first sub-metric/indicator measures the number of single-family

equity targeted households, while the second measures the number of multifamily equity targeted households.

- **Recommendation:** For each of these metrics/indicators, the evaluation team recommends the RENs coordinate on whether these indices need sub-metrics/indicators to be reported separately or if the sub-metrics might be tracked separately but be rolled into a total value that is reported as a singular metric/indicator. The evaluation team's intent with this recommendation is to encourage maximal alignment among the RENs when reporting their statewide metrics.

2. Regional Energy Networks and Study Overview

2.1 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. Back in 2011-2012, RENs were initially intended to augment or supplement existing utility EE portfolios by leveraging and streamlining local governments' administration of EE programs funded by the American Recovery and Reinvestment Act.

2.1.1 RENs Covered in this Study

In D.12-11-015, the CPUC approved the creation of BayREN and SoCalREN to administer EE programs in northern and southern California. Later, D.18-05-041 approved 3C-REN, and D.21-11.013, approved the EE business plan of I-REN. Most recently, on March 4, 2022, a Motion for Approval of Energy Efficiency Portfolio Application was submitted to the CPUC on behalf of RuralREN.

This Year 4 study examines the RENs' non-traditional performance metrics and indicators, which differ from the energy and demand savings used to measure the performance of energy programs. These metrics include REN-specific value metrics¹⁸ and statewide Market Support and Equity metrics¹⁹ applicable to all PAs. The RENs included in this study are those that have been operational for many years and have had an opportunity to refine their performance metrics over time. This includes BayREN which serves the nine counties of the San Francisco Bay Area; SoCalREN whose service territory includes 12 counties in the Southern and Central California areas, and the 3C-REN which serves the counties of San Luis Obispo, Santa Barbara and Ventura. Table 3 below summarizes the counties served by these RENs, as well as the overlapping territories of other PAs.

Because neither I-REN nor RuralREN had active programs during the 2020 or 2021 program years, they are not discussed further in this report. The evaluation team is preparing a separate memo later during 2023 that discusses I-REN's preparedness to report on CPUC metrics, value metrics, and statewide Equity and Market Support metrics, as well as making recommendations as to how I-REN can best position its programs to be evaluated. The memo will also include a data evaluability assessment to assess I-REN's data collection processes to ensure consistent and appropriate collection of necessary data for tracking, managing, and reporting on activities.

¹⁸ Value metrics are REN specific metrics that are used to demonstrate to the CPUC the unique value that they are providing. Additional background on value metrics is provided in Section 2.1.3. Value Metrics Background.

¹⁹ Market Support and Equity metrics are a new set of metrics that PAs are required to report on for the Market Support and Equity program categories created by the CPUC in D.21-05-031. The California Energy Efficiency Coordinating Committee (CAEECC) market support and equity working groups developed and vetted these new reporting metrics, which have recently been proposed for consideration in PA applications submitted to the CPUC. The evaluation team uses the term "Statewide Metric/Indicator" when referring to both the Market Support and Equity metrics. Additional background on Statewide metrics is provided in Section 2.1.4. Statewide Metrics Background.

Table 3. Regional Energy Networks at the Time of the Study

REN	Counties Served	Overlapping IOU & REN 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, I-REN
Tri-County REN	San Luis Obispo, Santa Barbara, Ventura	PG&E, SCE, SCG
Inland REN	Riverside, San Bernardino	SCE, SCG, SoCalREN
Rural REN	Central Coast Region: Monterey, San Benito, Santa Cruz, San Luis Obispo North Coast Region: Humboldt, Lake, Mendocino San Joaquin Valley Region: Fresno, Kern, Kings, Madera, Merced, San Joaquin, Stanislaus, Tulare Sierra Region: Inyo, Mono, Alpine, Amador, Butte, Calaveras, El Dorado, Lassen, Mariposa, Nevada, Placer, Plumas, Sierra, Sutter, Tuolumne, Yuba	PG&E, SCE, SCG

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.

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's programs are divided into three sectors: Residential, Commercial, and Cross-Cutting (this includes the C&S, Water Upgrades \$ave, and Climate Careers programs) with plans to incorporate a public sector. BayREN continued to offer six programs in 2021²⁰ and 2022 with no new programs planned for 2023. However, BayREN's 2024-2027 Portfolio Plan proposes ten programs, with an extension of its six existing programs and the launch of four new programs: two of which will be in the public sector, one in the cross-cutting sector, and one in the commercial sector.²¹

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 SCE and SCG service territories. During 2021 and 2022, SoCalREN offered eight 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 WE&T. Program changes in 2021 included the launch of the Kits for Kids Program and the

²⁰ BayREN's commercial Microloan subprogram closed in September 2021 as reported in the 2021 Annual Report.

²¹ Application of Association of Bay Area Governments for Approval of 2024-2031 Strategic Business Plan, 2024-2027 Portfolio Plan, and Budget. March 4, 2022, page 8.

closure of the Multifamily Financing Program due to low participation.²² In 2022, SoCalREN began a new public sector program called the Streamlined Savings Pathway. SoCalREN's Portfolio Plan for 2024–2027 proposes continued delivery of services within its existing Public, Residential, WE&T, and Financing sectors, with proposed new services in the Commercial, Agricultural, and C&S sectors.²³

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 California Central Coast Region. 3C-REN is a collaboration between the three counties of Ventura, Santa Barbara, and San Luis Obispo with the intent of filling gaps left in WE&T, local government training, and full-service EE services for HTR markets. This REN is led by the County of Ventura. 3C-REN's service area is diverse and 'geographically isolated' from utility centers; has concentrated groups of rural and disadvantaged communities, and large Spanish-speaking populations that are underserved by EE programs. In 2021 and 2022, 3C-REN operated four programs across the WE&T, C&S, and Residential Sectors. In 2021 3C-REN launched the Home Energy Savings (HES) program for multifamily dwellings and closed the HES single family direct install program that had been active since 2019.²⁴ In 2022, a new iteration of the single-family HES program was launched as an NMEC offering. 3C-REN's 2024–2027 Portfolio Plan proposes to continue operating the four current programs and add three new programs, which will span four customer segments including Agricultural, Residential, Commercial, and Cross-Cutting (this includes the C&S and WE&T programs).

2.1.2 Regulatory Background

To evaluate REN proposals D.12-11-015 introduced specific criteria intended to ensure 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."²⁵ 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.
- Offering activities serving HTR markets, regardless of whether there is another utility or CCA program that may overlap.²⁶

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 establish 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 CPUC-regulated PA that offers ratepayer-funded EE programs in areas with geographically overlapping service territories. The JCMs are designed to address overlapping programs and customers to ensure activities are not duplicative and that they are appropriately coordinated across PAs. The decision further clarified that REN business plans must:

²² [SoCalREN 2021 Annual Report](#), page 9

²³ [SoCalREN Energy Efficiency 2024-2027 Portfolio Plan](#)

²⁴ [3C-REN 2021 Annual Report](#)

²⁵ D.19-12-021 page 30 <https://docs.cpuc.ca.gov/PublishedDocs/Published/G000/M385/K864/385864616.PDF>.

²⁶ D.19-12-021, page 32 <https://docs.cpuc.ca.gov/PublishedDocs/Published/G000/M385/K864/385864616.PDF>.

- Be vetted by stakeholders through the CAEECC;
- 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.²⁷

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, “[e]xisting 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 ABALs. Each REN’s 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, PAs 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 that, “[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 to weigh down portfolio-level cost effectiveness calculations.”²⁸ 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 RA, MS, or Equity.²⁹ 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.

²⁷ 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.

²⁸ D. 21-05-031, page 11

²⁹ 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 partnerships, or moving beneficial technologies towards greater cost-effectiveness.
- **Equity:** Programs with a primary purpose of providing energy efficiency to HTR or underserved customers and disadvantaged communities in advancement of the CPUC’s 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.³⁰

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.³¹ The CPUC will evaluate the PAs’ segmentation metrics in the 2024–2027 Portfolio Plans when deciding whether to approve the portfolio proposals.

Since the CPUC directed RENs to develop value metrics, the RENs have submitted their value metrics in a number of filings, including the 2021 ABALs, 2022-2023 BBALs, and recent applications filed in March 2022. Similarly, the RENs have also responded to the CPUC’s direction to all PAs to propose statewide metrics. In March 2022 the RENs proposed their selected statewide metrics in their application filings. These statewide metrics were developed through multiple CAEECC working groups, and ultimately each REN selected statewide metrics from the CAEECC working group reports. However, as of the writing of this report the CPUC has yet to approve, deny or modify any of the RENs’ proposed statewide metrics. The following two sections provide in-depth background for the value metrics and statewide metrics, as well as key developments and filings that have taken place for each set of metrics since D. 19-12-021 and D. 21-05-031.

2.1.3 Value Metrics Background

This section summarizes how the RENs’ developed their value metrics, and it provides important context for understanding the REN value metrics as they currently exist, as well as the RENs’ plans for their metrics going forward.

As the RENs began to develop their value metrics in response to D. 19-12-021, the evaluation team was simultaneously preparing our Year 2 REN study. As part of that work, ED asked the evaluation team to provide input on the RENs’ core values and supporting value metrics while they were still under development. Although CPUC-sponsored evaluation studies are typically retrospective, the value metrics assessment tasks of the Year 2 study took a prospective approach. The idea was to provide third party evaluator insights to help the RENs’ decision-making process in terms of complying with D.19-12-021. Thus, the evaluation team worked with BayREN, 3C-REN and SoCalREN prior to their 2021 ABAL submissions to review, identify gaps, and provide recommendations on their draft value metrics and methodologies for collecting data. The evaluation team’s involvement was limited to providing direct feedback to the RENs on their value metrics and suggesting

³⁰ D. 21-05-031, page 14

³¹ CAEECC working groups developed both statewide 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.

recommendations to the RENs to inform the types of tracking and performance information that would support future ED retrospective evaluations.

During this time the RENs took varied approaches to defining their value metrics. SoCalREN started by conversing with their third-party implementers about the unique activities they conduct, the metrics they already collect, and possible additional metrics to track. From there, they developed a set of value metrics that represented their gap-filling activities and core values. The evaluation team met with SoCalREN staff to review and discuss their unique activities, core values and proposed value metrics prior to their 2021 ABAL filing and then made recommendations on how SoCalREN could communicate their values and metrics to stakeholders, and align their value metrics with their goals and business plans. SoCalREN proposed their value metrics and described their unique value in their 2021 ABAL. In the filing they stated they intended to use 2020 as the baseline year for the value metrics and planned to develop targets in time for the next ABAL or application filing.³²

3C-REN took a similar approach to defining their value metrics. They took stock of the current metrics they had been collecting and documented potential opportunities to demonstrate value through existing programs. Then they brainstormed new potential metrics with REN staff, local government staff and implementers, and subsequently narrowed down the list to those that were feasible to implement. From the outset, 3C-REN emphasized the centrality of local government perspectives and alignment with the business plan goals to their decision-making process. 3C-REN staff and county representatives approved the unique values and associated metrics. This evaluation team then reviewed their draft proposed metrics. The evaluation team's feedback focused on recommendations for quantifying and collecting standardized information for the value metrics. Informed by the discussions with the evaluation team, 3C-REN provided their core values and associated value metrics/indicators in their 2021 ABAL.³³ 3C-REN stated in the filing that for its Climate and Economic Impact related metrics/indicators, it expects to report baseline values in 2020 reporting, while its Diversity, Equity and Inclusion related metric will have a baseline value reported in 2021 reporting.

BayREN initiated the process of defining its unique value by hiring a third-party evaluation firm, Grounded Research, to conduct a process evaluation that included defining the unique values that BayREN provides to its customers and communities beyond energy savings.³⁴ They then drafted a Core Value and Proposed Value Metrics Memorandum³⁵ detailing draft value metrics and showing how they are aligned with BayREN's core values. The memo outlines how BayREN's programs contribute in a unique way to its EE portfolio and how their metrics tie to Program Theory and Logic Models (PTLMs). When this evaluation team met with BayREN regarding its value metrics, it was evident that their core values and value metrics were enhanced by the formal process evaluation of gathering feedback from the CPUC, overlapping PAs, and stakeholders. Informed by this process evaluation, BayREN proposed its value metrics and described its unique value in its 2021 ABAL, stating that it was "proposing indicators (that is, values without specific targets) for the 2021 reporting year... [w]hether or not BayREN would select targets for future years will be revisited after the first year of collecting data, that is, once a baseline is established."³⁶ However, BayREN also noted that it would start to track select value metrics associated with building organizational infrastructure, building human

³² SoCalREN 2021 Annual Budget Advice Letter, October 5, 2020, pages 65-77/110 or attachment F-1 to F13. Document available at <https://www.caeecc.org/advice-letters>.

³³ 3C-REN 2021 Annual Budget Advice Letter. October 5, 2020, page 14. Document available at <https://www.caeecc.org/advice-letters>.

³⁴ BayREN 2019 Process Evaluation, Grounded Research and Consulting, March 1, 2020. This study is available on ED's Public Document Area. https://pda.energydataweb.com/api/view/2344/BayREN%202019%20Process%20Evaluation%202020_0305.pdf

³⁵ BayREN Core Value and Proposed Value Metrics Memo, July 2020.

https://pda.energydataweb.com/api/view/2399/Overview%20of%20BayREN%20Value%20Metrics_070620.pdf

³⁶ BayREN 2021 Annual Budget Advice Letter. October 5, 2020, Exhibit D, page 2 of 11.

infrastructure, and obtaining energy savings by supporting local difficult to serve populations when possible in 2020.

Upon completing our Year 2 evaluation, the team found BayREN, 3C-REN, and SoCalREN to be sufficiently prepared to track and report their value metrics. In one of our findings, we stated that “[o]nce the CPUC approves the metrics and baseline data has been collected by each REN, REN performance can be measured and assessed by third-party evaluators.”³⁷ Among other recommendations, the evaluation team recommended RENs follow a similar approach to BayREN and perform an in-depth process evaluation to better align their core values and value metrics.

Since the completion of the Year 2 REN study, the RENs have continued to collect input on their value metrics and are working to align their value metrics with their core values. For instance, SoCalREN conducted a comparable formal process evaluation that included assistance with core values and proposed value metrics. Those results were made public in 2021³⁸ and this evaluation team reviewed them in preparation for this year’s study.

The RENs also successfully filed their value metrics in their 2021 ABALs, and 2022-2023 BBALs.³⁹ In their respective 2021 ABALs, the RENs proposed unique value metrics, suggested timetables for preparing baselines, and identified metrics to measure their progress. In general, the RENs stated that some initial value metric baseline data might be available from 2020, but full baselines for target setting were not expected until at least 12 months of data can be collected for all value metrics. This implied that all REN value metric baselines detailed in the 2021 ABALs should be available at the end of 2021 and that the RENs could begin to report these baselines and set value metric targets as early as the 2022-2023 BBALs. The evaluation team’s most recent analysis of the RENs baselines and value metric targets is provided in Section 3 of this study.

2.1.4 Statewide Metrics Background

This section summarizes how the REN’s statewide metrics, including Market Support and Equity metrics, were developed. This section also provides important context for understanding the REN statewide metrics as they currently exist, as well as how the RENs are planning for their metrics going forward.

As described previously, D.21-05-031 directed all PAs to segment the programs in their portfolios according to primary purpose into one of three segments: Resource Acquisition, Market Support; or Equity. As part of this decision, the CPUC directed the CAEECC to form working groups to develop and vet new reporting metrics for the Market Support and Equity segments. Any newly proposed metrics identified by the RENs for CPUC consideration were to be included in the portfolio filings due from all RENs as part of the PAs’ applications filed in March 2022.⁴⁰ The decision clarified that although programs must be assigned to one of the Resource Acquisition, Market Support or Equity 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.⁴¹ However, the new Market Support and Equity metrics are intended to primarily capture outcomes arising from programs designated to those respective segments. In other words, secondary contributions from programs within the other market segments—such as Equity contributions arising within a Market Support program or vice versa—were not to be

³⁷ Assessment of Regional Energy Networks, CPUC Contract Group B: Deliverable 22B Year 2 Study, page 4

³⁸ https://www.calmac.org/publications/SoCalREN_Portfolio_Process_Evaluation_Report_FINAL.pdf

³⁹ D.21-05-031 directed PAs to combine both program years 2022 and 2023 into one Advice Letter

⁴⁰ D.21-05-031, page 86

⁴¹ D.21-05-031, page 17

tallied within the reported metrics for the other segment. Handling of details regarding how to best capture and reflect secondary programmatic contributions across multiple segments, such as reporting results from AKAB surveys, remained unresolved at the time of this report.

Market Support Metrics

The CAEECC-hosted Market Support Metrics Working Group (MSMWG) compiled a final report in October 2021 for the CPUC and PAs,⁴² that identified and defined key objectives and associated metrics for the Market Support segment. The report was completed prior to the PAs' application filings that were submitted in March 2022. This allowed the PAs to incorporate the MSMWG's recommendations into their filings. The report aimed to answer questions and provide detail on the following:

- In addition to the CPUC's defined objective for the Market Support segment, what are the sub-objectives of the segment (and programs within the segment)?
 - What are the associated key metrics for each sub-objective?
- Describe the primary purpose of each objective and associated key metric(s)
- What must all PAs include in their filings regarding objectives, associated key metrics, and targets for metrics?
- What are the conditions for PAs to propose additional objectives, metrics, and targets?

Per the language in D.21-05-031, the MSMWG proposed a high-level primary objective of "supporting the long-term success of the energy efficiency market" where the EE market is defined as "individuals or organizations participating in transactions around energy efficiency products or services including customers and market actors (which notably includes demand and supply side)." In addition to providing sub-objectives and metrics for the segment, the working group provided a set of principles to guide the process of formulating and operationalizing the sub-objectives and metrics. Consensus among the MSMWG members was reached on five out of the six principles. The non-consensus principle was regarding the approach for target-setting, where MSMWG members supported either option 1 or option 2.⁴³ Option 1, supported by all three RENs, proposed that "[t]argets will be set by the PAs for Market Support segment metrics following the collection of the first two program years of data (or a baseline has been set using reasonable proxy data)."⁴⁴ The full set of consensus and non-consensus principles established by the MSMWG are:

- Principle #1: Segment vs. Program
 - New Market Support metrics proposed by the MSMWG should focus on measuring performance of the overall segment, not of individual programs.
 - When developing metrics, the MSMWG should take a top-down approach to assess whether the Market Support segment is performing against the five sub-objectives.
- Principle #2: Guidelines to Setting Metrics
 - The recommendations of the MSMWG should not prevent program and portfolio design flexibilities, as this is important in the Market Support segment.

⁴² The Market Support Metrics Working Group final report, published on October 10, 2021, is available at: <https://www.caeec.org/market-support-metrics-wg>

⁴³ Option 2 for the MSMWG non-consensus principle on target setting requires that "[i]n their Budget Applications, PAs will propose targets and/or set a date certain by which they will propose targets for all MS segment metrics".

⁴⁴ MSMWG Final Report, page 10

- Sub-objectives, metrics, and indicators can be revisited in the future to adjust as needed, in a to-be-determined stakeholder process.
- The MSMWG did not address all definitions and methodologies for the metrics so PAs should pursue the most cost-efficient and feasible approaches to collecting data.
- Principle #3: Relationship between Programs and sub-objectives
 - MS programs must have a primary focus 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” and serve at least one Market Support sub-objective.
 - PAs may file [in a formal proceeding] additional or refined Market Support sub-objectives and associated Metric(s) if and when they have a program that they believe fits into the overall Market Support segment but does not clearly fit into one or more of the sub-objectives, after vetting through CAEECC.
- Principle #4: Program Portfolios
 - PAs (especially the Investor-Owned Utility PAs (IOU-PAs)) are encouraged, but not required, to offer a portfolio of programs that support all five of the Market Support segment sub-objectives.
 - PAs must propose Market Support program-level metrics with targets in their applications that demonstrate progress toward segment defined sub-objectives in accordance with Market Support principles. PAs may also propose Market Support program-level indicators as appropriate.
 - Although Market Support segment programs can contribute to Resource Acquisition program participation in the short and long term, Market Support segment programs are not required to do so.
 - Non-resource C&S activities should be segmented within C&S and not MS.
 - The Market Support segment should build and enable the foundation for future long-term energy savings that align with CPUC and California climate policy.
- Principle #5: Reporting
 - PAs should begin tracking all Market Support relevant metrics and reporting on all Market Support metrics during program years 2022-2023. Note if a particular metric is not being addressed by any PA program it wouldn't have a value in the reporting.
- Principle #6: Target-Setting (non-consensus)
 - The MSMWG members are divided on the target-setting approach for Market Support segment metrics. Two options are presented below for consideration.
 - Option 1: Targets will be set by the PAs for Market Support segment metrics following the collection of the first two program years of data (or a baseline has been set using reasonable proxy data).
 - Option 2: In their budget applications, PAs will propose targets and/or set a date certain by which they will propose targets for all Market Support segment metrics.

Equity Metrics

The CAEECC-hosted Equity Metrics Working Group (EMWG) prepared a separate report in October 2021 to the CPUC and PAs.⁴⁵ Its aim was “to identify and define the most important objectives and associated key metrics for the new Equity portfolio segment.”⁴⁶ The objectives and metrics identified in the report were intended to provide rationale for portfolio segmentation and program design, and for program value forecasting, tracking, and evaluation. The report was submitted prior to the PAs’ application filings⁴⁷, which allowed for the PAs to incorporate the working group recommendations into their filings.

The Equity and Market Support working groups were charged with asking the same questions regarding objectives, metrics, and target setting for their respective segments⁴⁸. Using the CPUC’s definition of the Equity segment as a foundation, the EMWG came up with the following objective for the Equity segment:

For hard-to-reach, disadvantaged, and/or underserved individuals, households, businesses, and communities: address disparities in access to energy efficiency programs and workforce opportunities⁴⁹; promote resilience, health, comfort, safety, energy affordability⁵⁰, and/or energy savings; and reduce energy-related greenhouse gas and criteria pollutant emissions.^{51 52}

The EMWG provided a set of principles to guide the process of coming up with and operationalizing the segment objectives and metrics. The EMWG members reached consensus on five out of seven principles. Similar to the MSMWG, the EMWG participants felt divided regarding target-setting, where members supported either Option 1 or Option 2. Option 1, supported by all three RENs, proposed that “[t]argets will be set by the PAs for Market Support segment metrics following the collection of the first two program years of data (or a baseline has been set using reasonable proxy data).”⁵³ Option 2, proposed that “[i]n their Budget Applications, PAs will propose targets and/or set a date certain by which they will propose targets for all Equity segment metrics.”⁵⁴ The other principle that the working group participants did not reach consensus on was in regards to community engagement, where Option 1 supported community engagement as an indicator and Option 2 supported it as a principle. SoCalREN supported Option 1⁵⁵, while 3C-REN and BayREN opted to support Option 2. Rationale for supporting each option is provided in the final report. The full set of the principles provided by the EMWG are:

⁴⁵ The Equity Metrics Working Group final report, published on October 10, 2021, is available at <https://www.caeec.org/equity-metrics-working-group-meeting>

⁴⁶ CAEECC-Hosted Equity Metrics Working Group Final Report, October 2021, page 5

⁴⁷ Filed in March 2022

⁴⁸ [CAEECC-Hosted Market Support and Equity Metrics Working Groups Draft Prospectus 6-24-2021](#)

⁴⁹ The EMWG clarifies the meaning of workforce opportunities on page 15 of the EMWG Final Report: “[t]he term “workforce opportunities” includes, but is not limited to, the energy efficiency supply chain, companies/non-profits that deliver efficiency services, as well as the workers who implement the work within equity segment programs. This language does not presume that PAs must create programs to address all or some of the items listed here, nor does it infer that we have consensus that this segment should have workforce specific programs.”

⁵⁰ The EMWG clarifies the meaning of energy affordability on page 15 of the EMWG Final Report: “[e]nergy affordability pertains to bill savings achieved through increased efficiency in energy use, delivering the same or improved level of service with a lower cost to the customer.”

⁵¹ The meaning of the term ‘criteria pollutant’ is clarified on page 15 of the EMWG Final Report: “[t]he term ‘criteria pollutant’ refers to: ground-level ozone, particulate matter, carbon monoxide, lead, sulfur dioxide, and nitrogen dioxide.”

⁵² CAEECC Hosted Equity Metrics Working Group Final Report, October 2021, page 14

⁵³ Ibid., page 10

⁵⁴ Ibid., page 10

⁵⁵ SoCalREN further clarifies their stance on community engagement in their 2024-2027 Portfolio Plan Prepared Rebuttal Testimony, stating that they support both options, and currently consider community engagement a guiding principle, but also plan to track it as an indicator.

- Principle #1: Segment vs. Program
 - New Equity metrics proposed by the EMWG should focus on measuring performance of the overall segment, not of individual programs.
 - When developing metrics, the EMWG should take a top-down approach meant to assess whether the Equity segment is performing against the primary Objective.
- Principle #2: Guidelines to Setting Metrics
 - The recommendations of the EMWG should not prevent program and portfolio design flexibilities as this is important in the Equity segment.
 - Metrics and indicators can be revisited in the future to adjust as needed, in a to-be-determined stakeholder process.
 - The EMWG did not address all definitions and methodologies for the metrics so PAs should pursue the most cost efficient and feasible approaches to collecting data.
 - PAs should collaborate and share methodologies for tracking and reporting metrics and indicators. The methodologies would be outlined as part of the regular reporting for all metrics and indicators.
- Principle #3: Program Portfolios
 - Equity programs must have a primary focus 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, as defined in the ESJ Action Plan, may provide corollary benefits such as increased comfort and safety, improved air quality, and more affordable utility bills, consistent with Goals 1, 2, and 5 in the ESJ Action Plan.”
 - Although Equity segment programs can contribute to Resource Acquisition program participation in the short and long term, Equity segment programs are not required to do so.
 - The Equity segment should build and enable the foundation for future long-term energy savings that align with CPUC and California climate policy.
 - PAs may file [in a formal proceeding] additional or refined Equity segment objective(s) and associated metric(s) if and when they identify an intervention that they believe fits into the overall Equity segment but does not clearly fit into the current framework of Equity segment objective and associated metrics, after receiving feedback through CAEECC.
 - PAs must propose program level metrics for all their Equity programs. Note: PAs may use common metrics, segment level metrics, or develop their own program level metrics.
- Principle #4: Best Practices for Program Development
 - The following principles for program design would be included in the forthcoming Program Implementation Plans and/or via annual reporting to enable ED and stakeholders to assess how these principles are being integrated into the Equity segment portfolios. Note: these principles should be applied when designing Equity segment programs, to the extent applicable.
 - Prioritize customers in most need.
 - Support concurrent equity efforts, such as those that align with related Social Determinants of Health (e.g., physical environment).

- Advance climate resiliency (e.g., keeping indoors cool during heatwaves and ensuring tight building shell to protect from wildfire smoke).
- Align with local grid reliability needs (e.g., focus efforts that reduce energy usage at critical times and locations).
- Principle #5: Reporting
 - PAs must propose Equity program-level metrics with targets in their applications that demonstrate progress toward segment defined objectives in accordance with Equity principles. PAs may also propose Equity program-level indicators as appropriate.
 - PAs should begin tracking all Equity relevant metrics and reporting on them during program years 2022-2023. Note, if a particular metric is not being addressed by any PA program it would be reported as such in the reporting. A consistent reporting format should be applied across PAs.
- Principle #6: Target-Setting (non-consensus)
 - The EMWG members are divided on the approach to target-setting. Two options are presented below for consideration.
 - Option 1: Targets will be set by the PAs for Equity segment metrics following the collection of the first two program years of data (or a baseline has been set using reasonable proxy data).
 - Option 2: In their Budget Applications, PAs will propose targets and/or set a date certain by which they will propose targets for all Equity segment metrics.
- Principle #7: Community Engagement (non-consensus)
 - The EMWG members are divided on the approach to community engagement. The two options are presented below.
 - Option 1: PAs should track and report the counts and types of community engagement activities targeted at disadvantaged, hard-to-reach, and underserved communities.
 - Option 2: Community engagement as a principle.⁵⁶

The final reports for both CAEECC working groups were released a few weeks before the RENs submitted their 2022-2023 BBALs. In their latest BBALs, the RENs address D.21-05-031 insofar as they provide the planned segmentation for the programs. No statewide metrics were included in the BBALs. However, the RENs did provide proposed statewide metrics in their latest business plans and application filings and, at the time of the writing of this report, they await CPUC to approve, deny or modify their proposed statewide metrics.

Since this decision and this evaluation team's previous Year 3 Assessment of RENs, the RENs have continued developing and planning their portfolios to align with the directed segmentation and statewide metrics. For instance, the RENs recently⁵⁷ submitted rebuttals to the CPUC regarding their Business & Portfolio Plans. The REN rebuttals detail their views regarding statewide metrics and portfolio segmentation that remain unclear. BayREN, in their rebuttal, states that they agree community engagement should be tracked and reported on, but not as an indicator. They argue that designating it as an indicator would oversimplify the engagement as

⁵⁶ The EMWG Final Report describes community engagement as a principle on page 33: "Community Engagement should be a stand-alone principle that indicates the importance of engaging community members (at the appropriate levels) when designing, implementing and evaluating programs." The rationale for this option is partially based on working group member input that they did not have sufficient time to discuss how to measure community engagement as an indicator.

⁵⁷ BayREN, 3C-REN, and SoCalREN submitted rebuttals regarding their 2024-2027 portfolio plans in November, 2022.

an aggregated number. BayREN prefers to report on community engagement in a devoted section of its annual report. SoCalREN clarifies their stance on community engagement as an indicator as well, stating that they support both Options 1 and 2⁵⁸ from the CAEECC EMWG Report. SoCalREN states that they have adopted community engagement as a guiding principle for all programs and segments and they believe it will lead to more qualitative reporting of the community engagement activities in the annual reports. However, SoCalREN plans to track community engagement as an indicator as well since they believe this will help support the prioritization of community engagement within the Equity segment. 3C-REN did not mention or modify their stance on community engagement as an indicator in their rebuttal, and thus it can be assumed that they remain in support of community engagement as a principle (Option 2 regarding Principle #7 in the EMWG Report).

The RENs each responded to how they may be held accountable to meet total system benefit (TSB) goals and cost-effectiveness metrics in their rebuttals. The Assigned Commissioner’s Scoping Memo dated June 24, 2022 contains the following prompt that asks: “As a corollary to how investor-owned utilities and MCE, as a community choice aggregator, are held accountable to meet TSB goals and cost-effectiveness thresholds (for RA), which performance metrics and associated targets should regional energy networks (REN) be held accountable to?”⁵⁹ The RENs state that they have been in ongoing discussions regarding a potential performance metrics and targets for which they would be prepared to be held accountable. They have not yet reached consensus, but “multiple ideas are being presented and discussed to be able to quantify community benefits beyond TSB.”⁶⁰ 3C-REN, in their rebuttal, outlined the criteria that the RENs are considering for a set of shared performance metrics or a single metric that:

- Demonstrates the unique value, including non-energy benefits, that RENs bring to the California EE landscape.
- Offers the CPUC a means for accountability, comparable to how TSB is applied to the IOUs and MCE.
- Creates consistency across RENs in metric(s) and methodology, while also allowing RENs to highlight unique attributes that result from serving the unique needs of diverse territories.

2.2 Key Research Questions

For this study the evaluation team assessed how effectively the RENs are setting, measuring, and tracking their unique contributions to California’s energy efficiency portfolio based on their unique value metrics and the statewide Market Support and Equity metrics. The assessment builds on the cumulative knowledge gained from the previous REN studies, while also incorporating new information, such as the data the RENs have collected on their value metrics. Research questions covered in this Year 4 assessment include the following:

- What quantitative targets or goals could the RENs reasonably achieve in 2024-2027 for their value metrics and their statewide Equity and Market Support metrics?⁶¹
- How is each REN documenting and demonstrating its unique value?

⁵⁸ Option 1 supports adoption of community engagement as an indicator, option 2 supports adopting community engagement as a principle.

⁵⁹ BayREN 2024-2027 Portfolio Plan Prepared Rebuttal Testimony, page 28

⁶⁰ SoCalREN 2024-2027 Portfolio Plan Prepared Rebuttal Testimony, page 37

⁶¹ Regarding common metrics, please see attachment A of D.18-05-041.

- What lessons learned from the REN’s value metrics can be applied to the statewide Equity and Market Support metrics?
 - Was it possible to quantitatively assess whether all the RENs’ value metrics were met?
 - What improvements need to be made to the REN value metrics, and statewide Equity and Market Support metrics data collection and reporting process?
 - How has the PA efforts to create metrics for the Market Support and Equity segments superseded the RENs previous value metrics efforts?
- Did all RENs set clear and measurable targets for their value metrics and statewide Equity and Market Support metrics for years 2022 and 2023 using baselines collected in 2020-2021? Why or why not?
- Did the RENs that proposed targets with their value metrics meet their forecasted targets?
 - By what margin?
 - If the targets were not met, what was the cause?
 - Is any action being taken by the RENs to get back on track to meet the original forecasted value metrics? Why or why not?

2.3 Research Tasks

To address the key research questions presented in Section 2.2 the evaluation team conducted the research tasks listed in Table 4 below.

Table 4. Research Tasks for RENs Fourth-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, statewide and common metrics; available program data, including baseline data and proposed targets for the metrics. Upon receipt, the team reviewed and assessed the materials to develop an understanding of the current state of REN value and statewide metrics.
Interview Guide Development and In-Depth Interviews	<p>The team used the data request materials to inform development of the interview guides. We conducted in-depth interviews with REN staff and discussed how they are implementing and documenting efforts to demonstrate their unique value, including various metrics and data to measure them. The evaluation team inquired about the extent to which the RENs had set clear and measurable annual targets, and if those targets had been met. For those targets that had not yet been met, the team sought to determine why.</p> <p>The evaluation team also followed-up with REN staff after the interviews to collect additional documents for the assessment, including program logic models, business and portfolio plan rebuttal testimonies, program surveys, etc. to fill any gaps in metrics data identified by the evaluation team during the initial materials review and initial round of interviews. Additional interviews were then held with the RENs a few weeks later to provide in-person feedback on how to improve the evaluability and reportability of their metrics.</p>

Evaluation Tasks	Description
Value & Statewide Metrics Assessment and Reporting	The team assessed the extent to which the three RENs had set baselines for their metrics, as well as clear and measurable annual targets. Additionally, the evaluation team sought to determine if the REN's quantitative targets for their value and statewide metrics were achievable and reasonable. Based on our evaluation activities and the cumulative knowledge gained from previous REN studies, this study concludes by providing recommendations and best practices for the RENs to make value and statewide metrics actionable through improved baseline and target setting processes, as well as improve metrics reporting.

2.4 Data Requests

Before submitting the evaluation team's data request to the RENs, the team reviewed their previous responses to a prior data request to the five approved RENs from ED. The ED data request was submitted on August 22, 2022 with REN responses due September 6, 2022. The ED data request stemmed from analysis of the RENs' 2022-23 BBALs⁶², application filings⁶³, and the annual report "BP Metrics" tables.⁶⁴ With the data request, ED staff sought to confirm that they were correctly interpreting the metrics provided in the REN applications and to clarify any changes in common metrics, the status of value metric targets/forecast values, and adoption of statewide metrics.

The evaluation team reviewed the RENs' responses to the ED data request, and in November 2022 the team submitted a separate data and materials request to BayREN, SoCalREN, and 3C-REN to support the Year 4 Assessment of RENs. This new data request included questions focused on how each REN is setting, measuring, and tracking their unique value metrics; the RENs' progress establishing baselines for statewide metrics (i.e., Market Support and Equity metrics); and on how the RENs have been meeting previously established targets for their unique value metrics. We requested the following information from the RENs:

- Applicable program staff and implementing partners contact information. Specifically, those who handle REN value metric or statewide metric data, so the evaluation team could set up in-depth interviews to discuss each REN's approach to their value and statewide metrics, metrics tracking, and baseline and target setting.
- Based on the REN responses to the ED's data request on August 22, 2022, the evaluation team put together tables for each REN that listed their value metrics. We asked the RENs to review the value metrics listed in the corresponding table and confirm their accuracy. If the metrics reflected in the tables were inaccurate, we asked the RENs to provide updated value metrics and indicators.
- Proposed or anticipated methodologies for calculating metrics/indicators. If the REN provided methodologies for its value metrics in their last application filing or in response to the ED's data request, the REN's needed to provide methodologies only for those metrics that had since changed.
- Any available baseline data and proposed targets for each of the REN's current value metrics. Where baseline data or proposed targets had not yet been established, we asked the RENs to explain any expected timeframe for establishing them.

⁶² With the exception of Inland-REN and Rural REN

⁶³ With the exception of Inland-REN

⁶⁴ With the exception of Inland-REN and Rural REN

- For each REN's current value metrics, they were asked to provide all available program data. If program data was not available for a given value metric, we asked the RENs to explain when or if this data would start being collected.
- An overview of any changes to the REN's statewide (MS and Equity) metrics since the REN's last application filing. This included any additional statewide metrics added, or changes to statewide metric methodologies. The evaluation team acknowledged that many of these metrics and indicators are based on recommendations by the CAEECC working groups and that they have not yet been approved by the CPUC.
- Any statewide data collected for the new statewide Market Support and Equity metrics. Because many of these metrics and indicators are based on recommendations by the CAEECC working groups that have not yet been approved by the CPUC, we did not anticipate the RENs to have collected much, if any, data. However, because some statewide metrics aligned with previously proposed REN value metrics or other REN internally tracked metrics, the evaluation team requested any data available.

To ensure that we were tracking REN responses thoroughly, the evaluation team assembled a set of tables combining data received from both the ED and evaluation team's data requests. The tables, arranged as crosstabs, identified the REN responses to each question and enabled us to analyze the responses together. Using tables to capture the responses also helped to consolidate the data and allowed us to assess the RENs' progress towards setting and achieving their value and statewide metrics.

3. Value Metrics Assessment

The following sections of this report summarize the RENs' progress toward establishing their core values and associated value metrics/indicators, as well as their setting of baselines and targets for these metrics. These sections also document select ways the RENs are demonstrating their value beyond metrics. Table 5 highlights high level similarities and differences among the REN's value metrics, as well as their progress setting and reporting on value metrics. As of the writing of this report, both BayREN and SoCalREN have completed internal process evaluations, conducted by Grounded Research, which helped them to align their value metrics with their core values as well as more recently the statewide segments of Market Support and Equity. Although 3C-REN hasn't conducted a formal process evaluation, given their relatively small number of programs, they were able to align their value metrics with their core values and statewide segments through internal dialogue and planning. While all three RENs have aligned their value metrics with the new statewide segments of Market Support and Equity by categorizing which segment each value metric is related to, all of SoCalREN and 3C-REN's value metrics are distinct from their statewide metrics. Meanwhile BayREN has some value metrics that are also designated as statewide metrics, as well as several value metrics that remain distinct from their statewide metrics. BayREN is also the only REN that has currently designated a large number of value indicators, which will have values reported on but which will not include baselines and targets.⁶⁵

The RENs have also successfully collected baseline data and set baselines for their value metrics. The exception being: 1) those value metrics that are also statewide metrics (only applicable to BayREN); 2) those metrics that are associated with a program that has yet to launch; or 3) those associated with a program that has recently undergone substantial program design modifications. The RENs continue to document their unique values through their annual reports, and they plan to demonstrate their value when reporting the 2022 value metric/indicator achievement data to be reported later this year. As of this report, SoCalREN currently stands as the only REN to have finalized targets for these value metrics in its application⁶⁶. While 3C-REN and BayREN expect to set targets for their value metrics in approximately April of 2023.

⁶⁵ Indicators are measures of performance that do not include baselines or targets. A metric is a measure of progress towards achieving desired market effect(s). For metrics to have a functional purpose, baselines and targets associated with each metric must also be provided.

⁶⁶ 2024-2031 Strategic Business Plan, 2024-2027 Portfolio Plan, and Budget filed in March 2022

Table 5. REN Value Metrics Similarities and Differences at a Glance

Metric/Indicator Activity	SoCalREN	3C-REN	BayREN
Complete Metrics Related Process Evaluation	●	○	●
Alignment between Value Metrics and Core Values	●	●	●
Alignment between Value Metrics and Statewide Segments	●	●	●
Overlap between Value Metrics and Statewide Metrics	○	○	●
Has Value Indicators	○	○	●
Collect Value Metric Baseline Data	●	●	●
Set Value Metric Baselines	●	●	●
Set Value Metric Targets	●	○	○
Report 2022 Value Metric/Indicator Achievements	○	○	○

Key: ● Yes ○ No

3.1 SoCalREN Value Metrics

Core Values

In 2020, SoCalREN filed its 2021 ABAL which included its originally proposed five core values, as well as a first draft of corresponding value metrics to demonstrate their unique value proposition. These original five core values, seen in Table 6, included Building Capacity, Economic Resilience, Climate Action Leadership, Equity, and Innovation. SoCalREN subsequently conducted a cross-cutting process evaluation of its entire portfolio in response to this evaluation team’s Year 2 REN study recommendation that other RENs conduct a process evaluation similar to BayREN’s “2019 Process Evaluation Study, 2020” to improve alignment among REN core values and metrics.

SoCalREN’s Portfolio-level Process Evaluation was conducted by Grounded Research. That effort sought to understand how to improve program coordination, provide more effective delivery of services, and maximize outcomes and customer benefits. SoCalREN used this study to fine-tune and improve their originally proposed value metrics. The recommendations proposed by this SoCalREN Portfolio-level Process Evaluation informed SoCalREN’s 2022-2023 BBAL filing and application filing submitted in March 2022. This resulted in two major changes to its core values and associated value metrics, including:

- Eliminating some originally proposed value metrics to reduce redundancy and to succinctly demonstrate SoCalREN’s unique strengths and compliance with the CPUC’s three REN-specific criteria.
- Reorganizing and re-categorizing SoCalREN’s core values as originally proposed in the 2021 ABAL to better align with the new CPUC-directed statewide segments of Resource acquisition, Market Support, and Equity.

SoCalREN’s re-categorization of their original five core values culminated in three new, more consolidated, core values that include:

- Delivering energy and climate impacts;
- Building energy capacity and economic resilience, and;
- Expanding access to energy efficiency benefits.

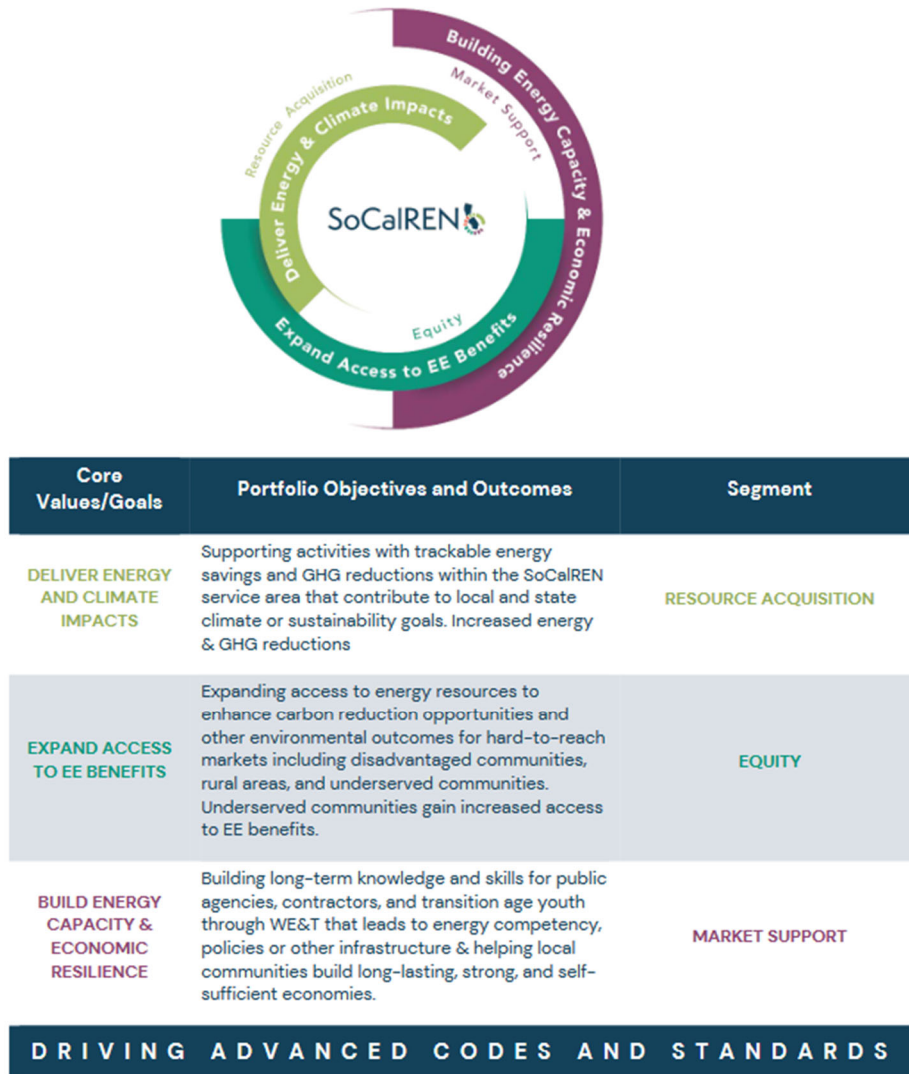
Four of the original five core values—Building Capacity, Economic Resilience, Climate Action Leadership, and Equity—were incorporated into these new core values. Meanwhile the original core value of innovation was dropped in recognition that “innovation” permeates all of SoCalREN’s programs and sectors and is better captured by documenting innovative activities in SoCalREN’s annual reports. Table 6 below shows how the original five core values were combined to create their current set of core values, as well as defines each of their current core values.

Table 6. SoCalREN Original Proposed Core Values

Original Core Values included in 2021 ABAL	Current Core Values	Current Description
Climate Action Leadership	Deliver Energy & Climate Impacts	Supporting activities with trackable energy savings and GHG reductions within SoCalREN service area that contribute to local and state climate or sustainability goals.
Building Capacity & Energy Competency	Build Energy Capacity & Economic Resilience	Building long-term knowledge and skills for public agencies, contractors, and transitional age youth through workforce education and training that leads to energy competency, policies or other infrastructure and local communities build long-lasting, strong, and self-sufficient economies
Economic Resilience		
Equity	Expand Access to EE Benefits	Expanding access to energy resources to enhance carbon reduction opportunities and other environmental outcomes for hard-to-reach markets including disadvantaged communities, rural areas, and underserved communities. Underserved communities gain increased access to EE benefits.
Innovation	N/A	N/A

During the evaluation team’s in-depth interviews, SoCalREN staff stated that they were pleased with the CPUC directive that placed the responsibility on the RENs to propose value metrics since it led to the formulation of their core values. Although prior to this process SoCalREN had similar themes and goals for the last 10 years, they had not documented and quantified them in the codified manner now reflected in their value metrics. SoCalREN staff indicated that this clarification made it easier to tie their new core values with one of the statewide segmentation area of Resource Acquisition, Market Support or Equity. SoCalREN’s modified core values and their alignment with the statewide segmentation segments are illustrated in Figure 1.

Figure 1. Mapping of SoCalREN Core Values and CPUC Proposed Segments⁶⁷



At the same time SoCalREN aligned their core values with the statewide segments, they also conducted an extensive review of their originally proposed metrics. SoCalREN found that because many of their originally proposed metrics were being tracked at the program level, they served as useful internal KPIs for program management, but they didn't necessarily align with a core value and thus some metrics didn't effectively demonstrate SoCalREN's efforts to fill gaps in the marketplace or otherwise provide something unique. Accordingly, SoCalREN eliminated 34 of their originally proposed 91 portfolio value metrics, bringing their total down to 57 value metrics. This count doesn't include numerous sector level value metrics that were also eliminated.

SoCalREN's remaining 57 value metrics are classified by both sector (i.e., agricultural, commercial, multifamily, etc.) and segment (i.e., Resource Acquisition, Market Support or Equity). SoCalREN's value

⁶⁷ Source: SoCalREN 2024-2027 Portfolio Plan. March 4, 2022, page 56.

metrics consist of 32 portfolio level metrics, nine WE&T metrics, six multifamily, four C&S, three agricultural and three commercial sector metrics. Table 7 shows eight (14%) value metrics aligned with SoCalREN's core value of "Delivering Energy & Climate Impacts." All value metrics in this category align with the Resource Acquisition segment and all are classified as portfolio level metrics that apply to all SoCalREN sectors. Table 8 shows the four value metrics (7%) relevant to SoCalREN's C&S sector activities. All of the value metrics assigned to "Delivering Energy & Climate Impacts" and C&S are classified as being portfolio level metrics applicable to all sectors.

Table 7. SoCalREN Value Metrics Aligned with the "Delivering Energy & Climate Impacts" Core Value

Index	Metric	Sector	Segment Alignment
SCR_UVM_01	GHG reductions - as well as kWh/therms/kW - claimed by SoCalREN	Portfolio Level - All Sectors	Resource Acquisition
SCR_UVM_02	GHG reductions - as well as kWh/therms/kW - claimed by SoCalREN	Portfolio Level - All Sectors	Resource Acquisition
SCR_UVM_03	GHG reductions - as well as kWh/therms/kW - claimed by SoCalREN	Portfolio Level - All Sectors	Resource Acquisition
SCR_UVM_04	GHG reductions - as well as kWh/therms/kW - claimed by SoCalREN	Portfolio Level - All Sectors	Resource Acquisition
SCR_UVM_05	GHG reductions - as well as kWh/therms/kW - from projects supported by SoCalREN	Portfolio Level - All Sectors	Resource Acquisition
SCR_UVM_06	GHG reductions - as well as kWh/therms/kW - from projects supported by SoCalREN	Portfolio Level - All Sectors	Resource Acquisition
SCR_UVM_07	GHG reductions - as well as kWh/therms/kW - from projects supported by SoCalREN	Portfolio Level - All Sectors	Resource Acquisition
SCR_UVM_08	GHG reductions - as well as kWh/therms/kW - from projects supported by SoCalREN	Portfolio Level - All Sectors	Resource Acquisition

Table 8. SoCalREN Codes and Standards Value Metrics

Index	Metric	Sector	Segment Alignment
SCR_UVM_54	# of jurisdictions receiving C&S services and assistance	Codes & Standards	Codes & Standards
SCR_UVM_55	% of increased code compliance and permit closeout in participating jurisdictions	Codes & Standards	Codes & Standards
SCR_UVM_56	# of local governments using SoCalREN data evaluation tools & assistance to enhance C&S activities and policies	Codes & Standards	Codes & Standards
SCR_UVM_57	# of local governments adopting advanced energy codes, standard, or policies	Codes & Standards	Codes & Standards

Table 9 shows the 19 (33%) SoCalREN value metrics that align with the core value of "Build Energy Capacity and Economic Resilience." All 19 also align with the Market Support segment. Among these energy capacity and economic resilience aligned value metrics, nine are classified as portfolio level metrics applicable to all SoCalREN sectors served, while six cover WE&T, two cover agriculture and two cover the commercial sector. Accordingly, the majority (66%) of SoCalREN's WE&T, agriculture, and commercial sector specific value metrics contribute towards their core value of building energy capacity and economic resiliency.

Table 9. SoCalREN Value Metrics Aligned with the “Build Energy Capacity and Economic Resilience” Core Value

Index	Metric	Sector	Segment Alignment
SCR_UVM_09	Cumulative # Ag Customers that receive energy coaching through SoCalREN	Agriculture	Market Support
SCR_UVM_10	Cumulative # SMBs that receive energy coaching through SoCalREN	Commercial	Market Support
SCR_UVM_11	Total number of contractors mentored – territory-wide	Portfolio Level – All Sectors	Market Support
SCR_UVM_12	# contractors trained through Level 1 (ALL and by diversity category), average training hours per participant, knowledge gain (from survey effort)	Workforce Education and Training (WET)	Market Support
SCR_UVM_13	# receiving skill certificates by type of certificate	Workforce Education and Training (WET)	Market Support
SCR_UVM_14	# of interns/internships; survey of interns to understand knowledge or competencies gained	Workforce Education and Training (WET)	Market Support
SCR_UVM_15	Career plans for transitional adults in Green Path Careers (from earlier outcome); Youth who express interest in future green career	Workforce Education and Training (WET)	Market Support
SCR_UVM_16	# of job placements	Workforce Education and Training (WET)	Market Support
SCR_UVM_17	Total Covered Participants	Workforce Education and Training (WET)	Market Support
SCR_UVM_18	# Ag Customer projects delivered for energy savings	Agriculture	Market Support
SCR_UVM_19	# SMB projects delivered for energy savings	Commercial	Market Support
SCR_UVM_20	Total Covered Projects	Portfolio Level – All Sectors	Market Support
SCR_UVM_21	Count of projects where a loan was used;	Portfolio Level – All Sectors	Market Support
SCR_UVM_22	Cumulative value of loans in dollars	Portfolio Level – All Sectors	Market Support
SCR_UVM_23	Total \$ leveraged from loans	Portfolio Level – All Sectors	Market Support
SCR_UVM_24	Source of external (non-IOU) financing – Private	Portfolio Level – All Sectors	Market Support
SCR_UVM_25	# projects where external (non-IOU) financing was leveraged by SoCalREN	Portfolio Level – All Sectors	Market Support
SCR_UVM_26	Total \$ leveraged from external financing	Portfolio Level – All Sectors	Market Support
SCR_UVM_27	Source of external (non-IOU) financing – State	Portfolio Level – All Sectors	Market Support

Table 10 shows the 26 (46%) SoCalREN value metrics aligned with the “Expand Access to Energy Efficiency Benefits” core value and with the Equity segment. Among these metrics, 15 are portfolio level metrics applicable to all SoCalREN sectors served, six cover multifamily, three cover WE&T, one covers agriculture, and one covers the commercial sector. This table demonstrates the importance of delivering equity within SoCalREN’s portfolio, as nearly half of SoCalREN’s value metrics are aligned with the “Expand Access to Energy Efficiency Benefits” core value, including at least one value metric from each sector SoCalREN serves.

Table 10. SoCalREN Value Metrics Aligned with the “Expand Access to Energy Efficiency Benefits” Core Value

Index	Metric	Sector	Segment Alignment
SCR_UVM_28	Count of Ag Customers that enroll in a SoCalREN Agricultural program that are categorized as HTR	Agriculture	Equity
SCR_UVM_29	# of participating properties - DAC	Multifamily	Equity
SCR_UVM_30	# of participating properties - Rural/HTR	Multifamily	Equity
SCR_UVM_31	# of tenant units served - DAC	Multifamily	Equity
SCR_UVM_32	# of tenant units served - Rural/HTR	Multifamily	Equity
SCR_UVM_33	Count of SMBs that enroll in a SoCalREN Commercial program that are categorized as HTR	Commercial	Equity
SCR_UVM_34	# partners and type of partner; description of benefits	Workforce Education and Training (WET)	Equity
SCR_UVM_35	# trained; # mentored	Workforce Education and Training (WET)	Equity
SCR_UVM_36	# receive new certifications as a result of SoCalREN support. These are "agency" certifications based on ownership structure. For example, contractors have to prepare financial docs for DVBE certification.	Workforce Education and Training (WET)	Equity
SCR_UVM_37	# of partnerships	Portfolio Level – All Sectors	Equity
SCR_UVM_38	# of participating contractors in HTR (rural) or underserved areas made aware of program due to the partner’s marketing	Multifamily	Equity
SCR_UVM_39	# of participating buildings in HTR (rural) or underserved areas made aware of the program due to the partner’s marketing	Multifamily	Equity
SCR_UVM_40	Total incentive payments - DAC	Portfolio Level – All Sectors	Equity
SCR_UVM_41	Total incentive payments - Rural/HTR	Portfolio Level – All Sectors	Equity
SCR_UVM_42	Total project costs - DAC	Portfolio Level – All Sectors	Equity
SCR_UVM_43	Total project costs - Rural/HTR	Portfolio Level – All Sectors	Equity
SCR_UVM_44	GHG reduced from equity targeted areas	Portfolio Level – All Sectors	Equity
SCR_UVM_45	kWh (net) reduced from equity targeted areas	Portfolio Level – All Sectors	Equity
SCR_UVM_46	kW (net) reduced from equity targeted areas	Portfolio Level – All Sectors	Equity
SCR_UVM_47	Therms (net) reduced from equity targeted areas	Portfolio Level – All Sectors	Equity
SCR_UVM_48	kWh, kW, therm, GHG savings supported excluding SoCalREN resource program savings. Gross 1st year Savings.	Portfolio Level – All Sectors	Equity
SCR_UVM_49	kWh, kW, therm, GHG savings supported excluding SoCalREN resource program savings. Gross 1st year Savings.	Portfolio Level – All Sectors	Equity
SCR_UVM_50	kWh, kW, therm, GHG savings supported excluding SoCalREN resource program savings. Gross 1st year Savings.	Portfolio Level – All Sectors	Equity
SCR_UVM_51	kWh, kW, therm, GHG savings supported excluding SoCalREN resource program savings. Gross 1st year Savings.	Portfolio Level – All Sectors	Equity
SCR_UVM_52	Estimated annual bill savings by DAC/HTR owner	Portfolio Level – All Sectors	Equity

Index	Metric	Sector	Segment Alignment
SCR_UVM_53	Estimated annual bill savings by the average DAC/HTR tenant	Portfolio Level – All Sectors	Equity

Upon reviewing SoCalREN’s modifications to its value metrics, the evaluation team finds that the changes clarified how each value metric aligns to the REN’s three core values. Furthermore, by aligning each value metric to a given market segment SoCalREN has positioned itself to succinctly demonstrate the unique value it provides to each segment of its portfolio. As previously discussed, we also find that SoCalREN’s decision to reduce the overall number of value metrics, from 91 portfolio value metrics to 57 total value metrics, not only improved its ability to track and report on its metrics but also improved the overall evaluability of its data by future evaluators and by the CPUC.

Baselines, Targets and Achievements

During the Year 2 evaluation of the RENs, we conducted a preliminary evaluability assessment of the initial REN value metrics that were developed in conjunction with their original core values. In that study we found the RENs to be prepared and capable of tracking and reporting their value metrics. As evidence of this, in their respective 2021 ABALs the RENs provided estimated timetables for preparing baselines and targets to measure their value metrics. SoCalREN’s 2021 ABAL states that it “intends to utilize 2020 as a baseline year (a year to collect 12 months’ worth of data). Once 2020 program year data is finalized and reported, SoCalREN will work to develop targets for the near, mid and long-term [...] SoCalREN aims to have targets established and included in either the next ABAL or application filing (whichever may occur first).”⁶⁸ After subsequently reviewing the data it collected in 2020, SoCalREN decided its 2020 data was not suitable as a baseline for setting realistic targets due to behavioral changes induced by the COVID-19 pandemic. By the time 2021 baseline data was collected, the 2022 BBAL had already been filed; SoCalREN went on to file its value metric baselines and targets for the first time in its application⁶⁹ filing. Accordingly, SoCalREN set 2021 as the baseline year for most of its value metrics and it set associated targets for 2024 through 2027.

SoCalREN primarily relied on historical program data when establishing the baselines and targets for its portfolio. However, SoCalREN also identified external public data sources that could be used to accurately fill gaps when the requisite data did not exist. For example, SoCalREN’s multifamily program team used real estate databases in addition to historical program data to estimate likely market size and customer participation when establishing program goals and metrics. The evaluation team identified this as one reason why SoCalREN was able to set clear and measurable targets for most of their value metrics. Moreover, SoCalREN staff indicated that if the CPUC approves certain newly proposed sectors and programs in its 2024-2027 Portfolio Plan, such as its Agriculture and Construction programs, the REN may be able to purchase external public data sources to help formulate targets earlier than otherwise possible. Although such an approach may not be applicable for all sectors or programs, the evaluation team finds such efforts to be a creative and useful means to reduce the time needed to set targets for newly proposed programs. As such, by using either solely external data or by using a year of historical data that is supplemented with external data, RENs and other PAs may be able to establish some targets to be set up to a year earlier than otherwise possible.

⁶⁸ SoCalREN 2021 ABAL, September 1, 2020, p. 70, Attachment F-6.

⁶⁹ 2024-2031 Strategic Business Plan, 2024-2027 Portfolio Plan, and Budget filed in March 2022.

SoCalREN’s 2024-2027 Portfolio Plan includes value metric targets for sectors with previously approved existing programs. The four proceeding tables (Table 11 through, Table 14) group SoCalREN’s value metrics by segment (i.e., RA, MS, Equity, and C&S) and summarize the key components of each metric, including:

- **Index number** used to easily identify and track metrics across filings and REN databases.
- **Value metric description** explaining what the metric is.
- **Unit of measurement** describing the standard quantity to be used to express a physical quantity.
- **Baseline year** showing the first year for which value metrics data is available.
- **Baseline number** representing the value recorded for the baseline year, against which future reported value metrics achievements will be contextually measured.
- **2024-2027 targets** proposed by SoCalREN based on the baseline year, baseline value, and expected results over time. These are the key values that future reported value metrics achievements will be measured against.

In these tables below, targets listed as “TBD” indicate that SoCalREN was unable to set targets because the related sectors and/or programs are not yet approved and thus the REN did not yet have historical and/or external data for that sector. SoCalREN anticipates collecting this requisite data once it receives program approval. Because achieving these targets relies upon certain tasks and strategies funded within the proposed programs’ associated budgets, SoCalREN’s targets could potentially need adjustment depending on the extent to which the budgets in SoCalREN’s application⁷⁰ differ from the final budgets authorized by the CPUC. Accordingly, a reduction or increase in authorized budgets should lead to a reasonable reduction or increase in associated targets.

Table 11. SoCalREN Resource Acquisition Value Metric Baselines and Targets

Index Number	Value Metric Description	Unit of Measurement	Baseline Year	Baseline Number	Target 2024	Target 2025	Target 2026	Target 2027
SCR_UVM_01	GHG reductions - as well as kWh/therms/kW - claimed by SoCalREN	Net annual kWh	2021	5,699,347	21,595,747	38,744,208	53,868,239	56,082,961
SCR_UVM_02	GHG reductions - as well as kWh/therms/kW - claimed by SoCalREN	Net annual kW	2021	911	8,700	17,726	26,730	29,231
SCR_UVM_03	GHG reductions - as well as kWh/therms/kW - claimed by SoCalREN	Net annual Therms	2021	214,720	365,450	436,084	590,807	584,818
SCR_UVM_04	GHG reductions - as well as kWh/therms/kW - claimed by SoCalREN	Net annual metric tons CO2e	2021	2,772	5,570	9,032	12,708	13,851
SCR_UVM_05	GHG reductions - as well as kWh/therms/kW - from projects supported by SoCalREN	Gross annual kWh	2021	10,399,029	14,735,252	8,353,437	3,376,426	8,243,051
SCR_UVM_06	GHG reductions - as well as kWh/therms/kW - from projects supported by SoCalREN	Gross annual kW	2021	478	1,474	835	338	824
SCR_UVM_07	GHG reductions - as well as kWh/therms/kW - from	Gross annual therms	2021	11,848	20,000	25,000	30,000	35,000

⁷⁰ 2024-2031 Strategic Business Plan, 2024-2027 Portfolio Plan, and Budget filed in March 2022.

Index Number	Value Metric Description	Unit of Measurement	Baseline Year	Baseline Number	Target 2024	Target 2025	Target 2026	Target 2027
	projects supported by SoCalREN							
SCR_UVM_08	GHG reductions - as well as kWh/therms/kW - from projects supported by SoCalREN	Gross annual metric tons CO2e	2021	2,201	3,135	1,850	853	1,880

Table 12. SoCalREN Market Support Value Metric Baselines and Targets

Index Number	Value Metric Description	Unit of Measurement	Baseline Year	Baseline Number	Target 2024	Target 2025	Target 2026	Target 2027
SCR_UVM_09	Cumulative # Ag Customers that receive energy coaching through SoCalREN	Count		N/A	125	150	200	250
SCR_UVM_10	Cumulative # SMBs that receive energy coaching through SoCalREN	Count		N/A	170	180	190	200
SCR_UVM_11	Total number of contractors mentored - territory-wide	Count		N/A	15	18	19	30
SCR_UVM_12	# of contractors trained through Level 1 (ALL and by diversity category), average training hours per participant, knowledge gain (from survey effort)	Count	2021	170	100	100	100	100
SCR_UVM_13	# receiving skill certificates by type of certificate	Count	2021	13	25	35	45	60
SCR_UVM_14	# of interns/internships; survey of interns to understand knowledge or competencies gained	Count	2021	23	TBD	TBD	TBD	TBD
SCR_UVM_15	Career plans for transitional adults in Green Path Careers (from earlier outcome); Youth who express interest in future green career	Count	2021	17	20	30	40	50
SCR_UVM_16	# of job placements	Count	2021	2	TBD	TBD	TBD	TBD
SCR_UVM_17	Total Covered Participants	Total Covered Participants	2021	280	455	513	594	690
SCR_UVM_18	# Ag Customer projects delivered for energy savings	Count		N/A	250	300	400	500
SCR_UVM_19	# SMB projects delivered for energy savings	Count		N/A	340	360	380	400
SCR_UVM_20	Total Covered Projects	Total Covered Projects		N/A	590	660	780	900
SCR_UVM_21	Count of projects where a loan was used;	Count	2021	4	3	3	3	4
SCR_UVM_22	Cumulative value of loans in dollars	Dollars	2021	4,912,192	TBD	TBD	TBD	TBD
SCR_UVM_23	Total \$ leveraged from loans	Dollars		N/A	126,696	140,370	141,332	210,924
SCR_UVM_24	Source of external (non-IOU) financing - Private	Count		N/A	3	3	3	4
SCR_UVM_25	# projects where external (non-IOU) financing was leveraged by SoCalREN	Count	2021	4	10	16	25	38
SCR_UVM_26	Total \$ leveraged from external financing	Dollars	2021	4,912,192	100,000	160,000	250,000	380,000
SCR_UVM_27	Source of external (non-IOU) financing - State	Count	2021	3	10	16	25	38

Table 13. SoCalREN Equity Value Metric Baselines and Targets

Index Number	Value Metric Description	Unit of Measurement	Baseline Year	Baseline Number	Target 2024	Target 2025	Target 2026	Target 2027
SCR_UVM_28	Count of Ag Customers that enroll in a SoCalREN Agricultural program that are categorized as HTR	Count	N/A	N/A	50	60	80	100
SCR_UVM_29	# of participating properties - DAC	Count	2021	30	41	52	61	105
SCR_UVM_30	# of participating properties - Rural/HTR	Count	2021	30	117	150	174	203
SCR_UVM_31	# of tenant units served - DAC	Count	2021	6,534	8,122	10,461	12,184	20,963
SCR_UVM_32	# of tenant units served - Rural/HTR	Count	2021	6,534	2,926	3,739	4,362	5,067
SCR_UVM_33	Count of SMBs that enroll in a SoCalREN Commercial program that are categorized as HTR	Count	N/A	N/A	16	21	24	42
SCR_UVM_34	# of partners and type of partner; description of benefits	Count	2021	12	12	12	12	14
SCR_UVM_35	# trained; # mentored	Count	2021	44	100	100	100	100
SCR_UVM_36	# receiving new certifications as a result of SoCalREN support. These are "agency" certifications based on ownership structure. For example, contractors have to prepare financial docs for DVBE certification.	Count	2021	19	25	25	25	25
SCR_UVM_37	# of partnerships	Count	2021	24	4	4	4	4
SCR_UVM_38	# of participating contractors in HTR (rural) or underserved areas made aware of the program due to the partner's marketing	Count	TBD	TBD	1	1	2	2
SCR_UVM_39	# of participating buildings in HTR (rural) or underserved areas made aware of the program due to the partner's marketing	Count	TBD	TBD	21	42	63	84
SCR_UVM_40	Total incentive payments - DAC	Dollars	2021	2,870,451	1,772,506	2,285,375	2,653,481	4,335,861
SCR_UVM_41	Total incentive payments - Rural/HTR	Dollars	2021	2,768,855	948,750	1,212,292	1,423,125	1,633,958
SCR_UVM_42	Total project costs - DAC	Dollars	2021	5,272,045	2,954,177	3,808,959	4,422,468	7,226,435
SCR_UVM_43	Total project costs - Rural/HTR	Dollars	TBD	TBD	948,750	1,212,292	1,423,125	1,633,958
SCR_UVM_44	GHG reduced from equity targeted areas	Net annual metric tons CO2e	2021	330	35	45	53	61
SCR_UVM_45	kWh (net) reduced from equity targeted areas	Net annual kWh	2021	680,191	35,641	45,542	53,129	61,716
SCR_UVM_46	kW (net) reduced from equity targeted areas	Net annual kW	2021	182	13	16	19	22
SCR_UVM_47	Therms (net) reduced from equity targeted areas	Net annual Therms	2021	79,949	1,904	2,432	2,859	3,274
SCR_UVM_48	kWh, kW, therm, GHG savings supported excluding SoCalREN resource program savings. Gross 1st year Savings.	Gross annual kWh	2021	8,231,040	8,800,000	9,600,000	10,000,000	10,400,000
SCR_UVM_49	kWh, kW, therm, GHG savings supported excluding SoCalREN resource program savings. Gross 1st year Savings.	Gross annual kW	2021	525	1,012	1,120	1,223	1,203

Index Number	Value Metric Description	Unit of Measurement	Baseline Year	Baseline Number	Target 2024	Target 2025	Target 2026	Target 2027
SCR_UVM_50	kWh, kW, therm, GHG savings supported excluding SoCalREN resource program savings. Gross 1st year Savings.	Gross annual therms	2021	11,165	42,972	51,990	105,842	66,340
SCR_UVM_51	kWh, kW, therm, GHG savings supported excluding SoCalREN resource program savings. Gross 1st year Savings.	Gross annual metric tons CO2e	2021	1,751	2,037	2,249	2,617	2,490
SCR_UVM_52	Estimated annual bill savings by DAC/HTR owner	Dollars	2021	2,153,915	3,400	3,400	3,400	3,700
SCR_UVM_53	Estimated annual bill savings by the average DAC/HTR tenant	Dollars	2021	55	200	200	200	180

Table 14. SoCalREN Codes and Standards Value Metric Baselines and Targets

Index Number	Value Metric Description	Unit of Measurement	Baseline Year	Baseline Number	Target 2024	Target 2025	Target 2026	Target 2027
SCR_UVM_54	# of jurisdictions receiving C&S services and assistance	Count	N/A	N/A	7	15	20	30
SCR_UVM_55	% of increased code compliance and permit closeout in participating jurisdictions	Count	N/A	N/A	0	0	0	0
SCR_UVM_56	# of local governments using SoCalREN data evaluation tools & assistance to enhance C&S activities and policies	Count	N/A	N/A	3	15	25	35
SCR_UVM_57	# of local governments adopting advanced energy codes, standard, or policies	Count	N/A	N/A	2	4	6	8

When SoCalREN initially developed their value metrics, they began with a review of the data collected in their customer relationship management (CRM) databases. During this process, they found that much of the data required was already being collected and thus it would not be an issue to report on many of the metrics. These internal metrics are tracked and reported via monthly or quarterly dashboards that SoCalREN program managers use to ensure programs are operating as intended and to manage the performance of the portfolio throughout the year. Due to the nuance and granularity of many of the program level data points and metrics that are not of much value for external stakeholder, SoCalREN rolls these internal metrics into calculations for more appropriate value metrics that are reported to the CPUC and others at the end of each year.

SoCalREN staff indicated that they intend to report on their updated value metrics for the first time in their upcoming 2022 annual report that will contain a dedicated value metrics section discussing the results and achievements for these metrics. Note that as mentioned previously, the proposed targets included in SoCalREN's application do not start until 2024. Accordingly, there will not be a preset target to compare with 2022 results. However, the reported 2022 results will provide a quantifiable illustration of SoCalREN's unique value. The evaluation team finds that this to be greatly beneficial as it will:

- Provide the CPUC with an opportunity to issue feedback to SoCalREN on the reporting process prior to the time when REN results will be measured against 2024 targets.
- Allow SoCalREN adequate time to adjust their reporting process and/or value metrics in response to any CPUC feedback.

- Enable SoCalREN to preemptively identify any weaknesses or challenges associated with meeting their proposed 2024 value metric targets and to adjust program delivery strategies as necessary to improve future results.

Based on a review of SoCalREN's proposed baseline and targets, the evaluation team concludes that the REN has set clear and measurable targets for their value metrics as evidenced by clearly delineated value metric baseline years and values, as well as by the presence of individual targets for all currently approved sectors for program years 2024 through 2027. Based on our review of SoCalREN's data, internal dashboards, and in-depth interviews, the evaluation team finds that all proposed value metrics appear to be suitable for quantitative assessments in future evaluations once final targets and baselines are approved. This conclusion is also evident based on SoCalREN's preparedness to release 2022 value metrics achievements in their 2022 annual report. In addition, during interviews SoCalREN staff indicated that they held a high degree of confidence that their proposed targets for 2024-2027 are reasonably achievable, assuming corresponding budgets are approved. However, because SoCalREN has not established targets for 2022, it is premature for the evaluation team to assess the extent to which they have met or fallen short of such targets. Future evaluations starting in 2025 to cover the program year 2024 will be better positioned to assess REN performance to determine the margin by which they outperform/underperform compared to their associated targets and to determine the cause of any over/under performance.

Demonstrable Value Beyond Metrics

SoCalREN's 2021 portfolio consisted of nine program offerings across four sectors: Public, Residential, WE&T, and Finance. Achievements and program results across these sectors are detailed in SoCalREN's 2021 Annual Report. The evaluation team sees the annual reports as a valuable filing that allows the RENs to document their unique value in ways that are not only quantitative, but also qualitative. Throughout our interviews with the RENs, their staff expressed that the annual reports provide an outlet to describe accomplishments that are not readily captured by metrics.

SoCalREN's 2021 Annual Report details accomplishments by the programs operating in each sector. Each section in the report includes a sector overview and program descriptions that include details such as program services, objectives, performance, and modifications. Table 15 contains select accomplishments, value, and contributions extracted from each section of the Annual Report to demonstrate values not captured by the metrics. Examples of demonstrable value beyond metrics, or accomplishments otherwise not measured by a metric include:

- Streamlining program processes and enrollment via new online tools.
- Incorporating feedback from stakeholders.
- Use of social media to increase program awareness.
- Partnerships forged with other organizations or agencies that increase program awareness.
- Partnerships forged with other organizations or agencies that increase economic value or employment opportunities for community members.
- Grants disbursed to program participants.
- Solutions to mitigate negative impacts of Covid-19, such as supply-chain disruptions or low program enrollment.

Table 15. SoCalREN Value Beyond Metrics Overview

Sector	Programs	Demonstrable value beyond metrics
Finance	Residential Loan Loss Reserve Program ⁷¹	<ul style="list-style-type: none"> ▪ Helped 30 multifamily property owners and 17 public agencies explore how financing could help them fund EE improvements to facilities and properties ▪ Provided key information to contractors on how to include financing into their conversations with MF property owners via one-on-one training sessions, training materials in the Contractor Portal, and additional training opportunities in the Energy Efficiency Learning Center (EELC) ▪ Unique marketing collateral pieces were developed by the MF program to help contractors offer financing to their customers ▪ Representatives from the lending institution and an external consultant for the program were available to contractors to assist with sales outreach and presenting financing options to MF property owners ▪ Streamlined application process for the RSF program based on public agency feedback
	Revolving Savings Fund (RSF)	
Public	Energy Efficiency Project Delivery Program	<ul style="list-style-type: none"> ▪ Coordination with 5 regional partners led to 23 new agencies enrolling in in public sector programs ▪ Public agencies downloaded 86 resources from SoCalREN's network toolkit, an online tool that registrants have access to that includes: tips on getting started with EE projects, marketing tools such as web-badges and social media posts, and access to webinars ▪ Prioritized expanding outreach & support to underserved communities in numerous ways, including: enhancing energy analysis by integrating agency CAP goals with CalEnviroScreen GIS mapping and CA high fire threat zones ▪ Continued to use external non-ratepayer funding to expand benchmarking support through Benchmarking Call to Action, a sub-program to the Pathway to Zero program
	Metered Savings Program	
	Pathway to Zero	
	Streamlined Savings Pathway	
Residential	Multifamily Program	<ul style="list-style-type: none"> ▪ Avoided additional multifamily project delays due to supply chain shortages caused by Covid-19 by moving forward with electric measures in 2021, and continuing gas measures in 2022 ▪ Introduced a new contest for MF program contractors called <i>Race to 500,000 kWh</i>, which offered bonuses to the first contractors to complete new project(s) or existing project(s) that delivered savings worth 500,000 kWh

⁷¹ This program was closed in September 2021.

	Kits for Kids	<ul style="list-style-type: none"> MF program began working with Regional Partners to increase program awareness—program provides regional partners with monthly social media posts, content for newsletters, and other cobranded marketing materials Kits for Kids served 250 classrooms and more than 6,500 students Teachers are eligible for a \$1,000 incentive grant through Kits for Kids if 65% of classroom students return information to their teachers on measures from their EE kit that were installed in their households
WE&T	WET Program with three pathways:	<ul style="list-style-type: none"> SoCalREN 2021 formed 19 WE&T Partnerships, expanding opportunities for WE&T program participants SoCalREN 2021 WE&T Partnerships included: NAACP Inglewood-South Bay Chapter, LA County Workforce Development Aging and Community Services, CSULB Institute for Innovation and Entrepreneurship More than 10 high schools have maintained a strong partnership with the (ACES) Engineering Pathway Program since 2015 ACES students have worked on the LAUSD \$27B school construction program, Metro’s \$120B transportation program, Los Angeles Community College District’s \$9B college campus construction program, and several other projects in SoCalREN’s territory ACES works with high school leadership to conduct outreach to middle schoolers for the program ACES established a college scholarship for students pursuing degrees in STEAM Streamlined enrollment in the GPC program by creating the online GPC online enrollment portal
	Architecture Construction Engineering Students (ACES) Pathway Program	
	E-Contractor Training Program	
	Green Pathways Careers (GPC)	

3.2 BayREN Value Metrics

Core Values Overview

In 2020 BayREN filed its 2021 ABAL which included three value pillars that are equivalent to the core values proposed by other RENs. BayREN’s value pillars include:

- **Building human and organizational infrastructure** within local jurisdictions so that Bay Area communities are better able to save energy and reduce greenhouse gas emissions. BayREN is suited to serve in this capacity because of the member agencies’ connections to local jurisdictions and their understanding of what is needed by local governments and their communities.
- **Obtaining energy savings locally while also supporting local difficult to serve (LDTS) populations.** Local governments have a deep understanding of the needs of their communities. Based on the member’s (i.e., local government’s) assessment of the needs in their communities, they have identified populations that need additional support, and they are designing program activities to better target these populations.

- **Testing innovative solutions** that have the potential to help local jurisdictions increase energy savings and reduce greenhouse gas emissions. The innovative solutions tested by BayREN have bubbled up from discussions with local governments and thus represent local needs. These innovative solutions are wholly designed and implemented by the BayREN members, which are themselves local governments, to fill gaps that the members (local governments) feel exist.

Furthermore, BayREN developed logic models for every program through extensive process evaluation and research activities. The evaluation team’s review of these logic models finds that they clearly show how, and which activities are expected to lead to specific outcomes, with the actual metric or indicator that is intended to reflect that specific outcome. BayREN also leveraged this work to inform the design of new programs for 2024 that were proposed in their recent application.

Unlike SoCalREN that maintains a distinction between its REN-specific value metrics and its statewide metrics, BayREN’s value metrics fall into two categories: those that are exclusively BayREN value metrics and those that also statewide metrics. In BayREN’s current index coding the value metrics that are also statewide metrics are denoted with the term “BVM” directly after the index number (e.g., MS_02_BVM or Equity_1_BVM). The BayREN specific value metrics that are not statewide metrics are distinguished in BayREN’s current index coding by the term “BVM” being directly before the index number (e.g., MS_BVM_01 or Equity_BVM_01).

In all, BayREN maintains 65 total value metrics, including sub-metrics that contain multiple parts (part a, part b, etc.). These metrics are classified by both sector (e.g., agricultural, commercial, multifamily, etc.) and segment (e.g., RA, MS, or Equity). BayREN’s value metrics consist of 25 portfolio level metrics, 12 cross-cutting, 11 residential, 8 commercial and 9 public sector metrics. Table 16 summarizes BayREN’s value metrics by sector and whether they are or are not also CAEECC proposed statewide metrics.

Table 16. BayREN Value Metrics/Indicators by Sector and Whether or not they are also Statewide Metrics

Sector	Value Metrics that are not Statewide Metrics	Value Metrics that are also Statewide Metrics	Total
Portfolio Level - All Sectors	13	12	25
Cross	4	8	12
Residential	2	9	11
Public	3	6	9
Commercial	7	1	8
Total	29	36	65

Table 17 below shows the five BayREN value metrics aligned with Resource Acquisition (8% of BayREN value metrics/indicators). All five of these metrics are also classified as portfolio level metrics that apply to all BayREN sectors served. It is important to note that these Resource Acquisition value metrics are estimated, non-claimed values from program details collected via program tracking or evaluation activities. An example of a program that contributes to these resource value metrics is the Water Upgrades \$ave program. The program is designated as a Market Support program because its primary purpose is to provide turn-key financing and project installation services to Bay Area municipal water utilities seeking to offer their customers easy access to water bill savings. Despite not being a Resource Acquisition program, Water Upgrades \$ave produces embedded lifecycle kWh, kW, and GHG savings as well as water savings that are not currently able to be claimed but can still be reported through these resource acquisition value metrics to better capture the full value being provided.

Table 17. BayREN Portfolio Level Resource Acquisition Value Metrics/Indicators

Index	Metric	Sector	Segment
RA_BVM_01	Lifecycle net kWh	Portfolio Level (PL)- All Sectors	Resource Acquisition
RA_BVM_02	Lifecycle net kW	Portfolio Level (PL)- All Sectors	Resource Acquisition
RA_BVM_03	Lifecycle net therms	Portfolio Level (PL)- All Sectors	Resource Acquisition
RA_BVM_04	Lifecycle net GHG	Portfolio Level (PL)- All Sectors	Resource Acquisition
Water_BVM_01	Gallons of water saved	Portfolio Level (PL)- All Sectors	Resource Acquisition

BayREN adopted 30 value metrics/indicators to demonstrate support of its “Building Human and Organizational Infrastructure” value pillar (46% of BayREN value metrics/indicators). All 30 metrics/indicators align with the market support segment. In addition, these 30 metrics/indicators represent an even split between those that are also statewide metrics/indicators and those that are not statewide metrics (Table 18). Among these metrics/indicators, eight are classified as portfolio level metrics/indicators that all BayREN sectors served, nine cover public, eight are cross-cutting, four cover residential, and one covers the commercial sector. Accordingly, BayREN maintains at least one value metric/indicator aligned with “Building Human and Organizational Infrastructure” for each sector. This shows how BayREN embedded this value pillar in each of their sectors, as well as indicating BayREN’s intention to collect data from each sector to demonstrate support of this value pillar. Table 19 below presents the full complement of 30 value metrics associated with BayREN’s “Building Human and Organizational Infrastructure” value pillar and how they align with different sectors.

Table 18. Count of BayREN Value Metrics/Indicators Aligned with the “Building Human and Organizational Infrastructure” Value Pillar by Sector and Whether or not they are also Statewide Metrics

	Portfolio	Residential	Commercial	Public	Cross	Total
Value Metrics that <u>are not</u> Statewide Metrics	8	1	1	3	2	15
Value Metrics that <u>are also</u> Statewide Metrics	0	3	0	6	6	15
Total	8	4	1	9	8	30

Table 19. BayREN Value Metrics/Indicators Aligned with the “Building Human and Organizational Infrastructure” Core Value

Index	Metric/Indicator	Sector	Segment
Value Metrics/Indicators that are <u>not</u> Statewide Metrics/Indicators			
C&S_BVM_01	Local Government (LG) staff knowledgeable of energy code requirements and best practices for code compliance [first part] Count of training attendees	All	Market Support
C&S_BVM_01-a	LG staff knowledgeable of energy code requirements and best practices for code compliance [second part] % increase in knowledge of energy code requirements and best practices for code compliance (% is of those who respond to survey)	All	Market Support
C&S_BVM_02	LGs use BayREN trainings, guides and tools to improve code compliance	All	Market Support
C&S_BVM_03	Municipal projects demonstrate feasibility of policy and reach code	All	Market Support
C&S_BVM_04	LG staff expand energy policy knowledge and/ or networks that enable future energy policy work [specifically by jurisdiction]	All	Market Support
C&S_BVM_05-a	LG staff expand energy policy knowledge and/ or networks that enable future energy policy work [first part] Number of Forum attendees	All	Market Support
C&S_BVM_05-b	LG staff expand energy policy knowledge and/ or networks that enable future energy policy work[second part-b] % who indicate increased energy policy knowledge (% of those who respond to survey)	All	Market Support
C&S_BVM_05-c	LG staff expand energy policy knowledge and/ or networks that enable future energy policy work [second part-c] % who indicate they expanded their networks in a way that can enable future energy policy work (% from those who respond to survey)	All	Market Support
MS_BVM_01	Competitive, diverse market of capable aggregators serving SMBs	Commercial	Market Support
MS_BVM_02	LGs have assistance they need to submit application(s) to applicable programs	Public	Market Support
MS_BVM_04	Program develops and shares decarbonization showcase case studies	Public	Market Support
MS_BVM_05	Clean Economy Firm Partners commit to providing internships and possibly full time employment	Cross	Market Support
MS_BVM_06	MF property owners / managers aware of EE and decarb opportunities	Residential	Market Support
MS_BVM_07	Amount of non-ratepayer capital available for customer-side energy/water efficiency programs [Access to capital through regional fund to support customer-side water/energy projects]	Cross	Market Support
MS_BVM_08	Amount of non-ratepayer capital invested in energy efficiency programs	Public	Market Support
Value Metrics/Indicators that are <u>also</u> Statewide Metrics/Indicators			

Index	Metric/Indicator	Sector	Segment
MS_02_BVM-a	Number and % increase/decrease of customers receiving information, education, or outreach on EE projects, products, and services through relevant Market Support programs [Local government staff are aware of the most current information on technologies, programs and incentives relevant to their agency's specific energy goals]	Public	Market Support
MS_02_BVM-b	Number and % increase/decrease of customers receiving information, education, or outreach on EE projects, products, and services through relevant Market Support programs [LGs receive: 1) actionable roadmaps with specific steps identified for achieving their energy goals and 2) tailored support for implementation]	Public	Market Support
MS_02_BVM	Number and % increase/decrease of customers receiving information, education, or outreach on EE projects, products, and services through relevant Market Support programs [LGs staff knowledgeable of decarbonization technologies and financing options]	Public	Market Support
MS_06_BVM	% of customer sample that has taken action towards obtaining EE product/service (behavior a)	Public	Market Support
MS_07_BVM	% of customers that have obtained EE products/services (behavior b) Home Energy Scores and referrals to Home+ EA as needed (everyone and follow up if low score, i.e., sites obtain an EE product/service)	Residential	Market Support
MS_10_BVM-a	% of market actors knowledgeable of energy efficient products and/or services that can be supplied to customers (knowledge) Local realtors and appraisers green certified and/or are trained and knowledgeable about how to evaluate energy efficiency and green homes (i.e., EE services that can be supplied to customers)	Residential	Market Support
MS_10_BVM-b	% of market actors knowledgeable of energy efficient products and/or services that can be supplied to customers (knowledge) Local lenders knowledgeable about the benefits of EE lending options and/or how to market green lending (i.e., EE services that can be supplied to customers)	Residential	Market Support
MS_17_BVM	Number of EE customers/market actors reached through partner networks and partner communications channels [Customers obtain/install EE products and water measures]	Cross	Market Support
MS_18_BVM	Assessed value of the partnership by partners	Cross	Market Support
MS_20_BVM-a	Number of partners by type and purpose (specifically, Number of partners by type)	Cross	Market Support
MS_20_BVM-b	Number of partners by type and purpose (specifically, Purpose of partnership)	Cross	Market Support
MS_23_BVM-a	Number of market support projects (outside of ETP) that validate the technical performance, market and market barrier knowledge, and/or effective program interventions of an emerging/under-utilized or existing energy efficient technology	Public	Market Support
MS_23_BVM-b	Number of market support projects (outside of ETP) that validate the technical performance, market and market barrier knowledge, and/or effective program interventions of an emerging/under-utilized or existing energy efficient technology	Public	Market Support

Index	Metric/Indicator	Sector	Segment
MS_31_BVM-a	Total projects completed/measures installed and dollar value of consolidated projects (specifically, Total projects completed)	Cross	Market Support
MS_31_BVM-b	Total projects completed/measures installed and dollar value of consolidated projects (specifically, Dollar value of consolidated projects)	Cross	Market Support

BayREN adopted 30 (46%) value metrics to demonstrate support of its “Local Difficult to Serve” value pillar. All 30 metrics align with the Equity segment. Among this group of metrics, nine are BayREN specific value metrics/indicators, while 21 are also statewide metrics/indicators (Table 20). Of these, 12 are portfolio level metrics that apply to all BayREN sectors served, while seven cover the residential sector, seven cover the commercial sector, and four are cross-cutting. BayREN’s adoption of multiple value metrics/indicators aligned with “Local Difficult to Serve,” and the large number of portfolio level metrics that cover all sectors except the public sector, demonstrate the importance BayREN places on serving equity priority communities. Table 21 below shows all 30 (46%) of BayREN’s value metrics that align with the “Local Difficult to Serve” value pillar.

Table 20. Count of BayREN Value Metrics/Indicators Aligned with the “Local Difficult to Serve” Value Pillar by Sector and Whether or not they are also Statewide Metrics

	Portfolio	Residential	Commercial	Public	Cross	Total
Value Metrics that <u>are not</u> Statewide Metrics	0	1	6	0	2	9
Value Metrics that <u>are also</u> Statewide Metrics	12	6	1	0	2	21
Total	12	7	7	0	4	30

Table 21. BayREN Value Metrics Aligned with the “Local Difficult to Serve” Core Value

Index	Metric/Indicators	Sector	Segment
Value Metrics/Indicators that are <u>not</u> Statewide Metrics/Indicators			
Equity_BVM_01	Contractors recruited to engage with HHs that speak languages other than English (companies and individual workers)	Residential	Equity
Equity_BVM_02	Youth gain clean economy career skills and job readiness	Cross	Equity
Equity_BVM_03	Youth placed into full time employment within clean economy	Cross	Equity
Equity_BVM_04	HTR or Underserved SMB lifecycle net kWh (claimed through Resource Acquisition or non-claimed and estimated in Equity)	Commercial	Equity
Equity_BVM_05	HTR or Underserved SMB lifecycle net kW (claimed through Resource Acquisition or non-claimed and estimated in Equity)	Commercial	Equity
Equity_BVM_06	HTR or Underserved SMB lifecycle net therms (claimed through Resource Acquisition or non-claimed and estimated in Equity)	Commercial	Equity
Equity_BVM_07	HTR or Underserved SMB lifecycle net GHG (claimed through Resource Acquisition or non-claimed and estimated in Equity)	Commercial	Equity
Equity_BVM_08	HTR SMB served (within the Resource Acquisition segment program)	Commercial	Equity
Equity_BVM_09	HTR SMB utility bill savings and/or non-energy benefits (within the Resource Acquisition segment program)	Commercial	Equity
Value Metrics/Indicators that <u>are also</u> Statewide Metrics/Indicators			
Equity_1_BVM	Total # residential (SF) equity-targeted households (HHs) served by the Equity programs	Residential	Equity
Equity_1_BVM	Total # residential (MF unit) equity-targeted households (HHs) served by the Equity programs	Residential	Equity
Equity_2_BVM	Single Family – equity market support (ex: education, information, training, technical support, etc.)	Residential	Equity
Equity_3_BVM	Single family – equity resource acquisition (ex: energy saving action, etc.)	Residential	Equity
Equity_5_BVM	Multifamily – equity resource acquisition (ex: energy saving action, etc.)	Residential-Multi-family	Equity
Equity_6_BVM	Total # MF equity-targeted buildings served by the Equity programs	Residential-Multi-family	Equity
Equity_17_BVM	Total # small and medium business (SMB) equity-targeted participants served by the Equity programs	Commercial	Equity

Index	Metric/Indicators	Sector	Segment
Equity_23_BVM	Total # of contractors/workers served by Equity segment Programs	Cross	Equity
Equity_24_BVM	Total # (indicator for all) [and % (metric for PAs with no relevant legal restriction)] of contractors and/or workers that are disadvantaged workers or otherwise underrepresented, who are directly involved in implementing Equity segment programs	Cross	Equity
Equity_24_BVM	Total # (indicator for all) [and % (metric for PAs with no relevant legal restriction)] of contractors and/or workers that are disadvantaged workers or otherwise underrepresented, who are directly involved in implementing Equity segment programs	Portfolio Level – All Sectors	Equity
Equity_26_BVM	Expected first-year bill savings in total \$ for equity-targeted program participants (metric)	Portfolio Level – All Sectors	Equity
Equity_27_BVM	GHG reductions (tons)_EquityAll	Portfolio Level – All Sectors	Equity
Equity_31_BVM	Total kWh savings_EquityAll	Portfolio Level – All Sectors	Equity
Equity_35_BVM	Total kW savings_EquityAll	Portfolio Level – All Sectors	Equity
Equity_39_BVM	Total Therm savings_EquityAll	Portfolio Level – All Sectors	Equity
Equity_43_BVM	Community engagement activities during program design and to identify community needs and solutions	Portfolio Level – All Sectors	Equity
Equity_44_BVM	Community engagement activities during program implementation	Portfolio Level – All Sectors	Equity
Equity_47_BVM	Health - “non-energy benefits” in “counts of participants receiving this benefit” until we can monetize. Reporting at least one of: Indoor air quality, Outdoor air quality (e.g., reduction in emissions from gas combustion appliances that vent to nearby outdoor air), Reduction in interior contaminants/biologics, other	Portfolio Level – All Sectors	Equity
Equity_48_BVM	Comfort - “non-energy benefits” in “counts of participants receiving this benefit” until we can monetize. Reporting at least one of: reduced drafts, quieter interior, managed interior temp, other	Portfolio Level – All Sectors	Equity
Equity_49_BVM	Safety - “non-energy benefits” in “counts of participants receiving this benefit” until we can monetize. Reporting at least one of: improved safety of appliances, other	Portfolio Level – All Sectors	Equity
Equity_50_BVM	Economic or other “non-energy benefits” (as proposed by the PAs or program) in dollars or “counts of participants receiving this benefit” until we can monetize	Portfolio Level – All Sectors	Equity

The evaluation team finds BayREN’s value metrics clearly explain how each value metric aligns with its three core value pillars. Furthermore, by calling out each value metric’s alignment to the statewide segments for resource acquisition, market support, or equity, BayREN succinctly demonstrates the unique value it provides throughout each segment of its portfolio. We also find that BayREN’s adoption of index numbers denoting the distinction between inclusive value metrics/indicators that align with statewide metrics/indicators and exclusive value metrics/indicators to be useful for CPUC staff and future evaluators who are reviewing REN metrics. The evaluation team recommends that all RENs work together to develop and adopt a mutually

agreed upon nomenclature to establish a uniform method for labeling and reporting REN-specific and statewide value metrics/indicators.

Baselines, Targets and Achievements

As mentioned previously, the evaluation team's Year 2 REN study included a preliminary evaluability assessment of REN value metrics that occurred while the RENs were developing their original value metrics. In the Year 2 study we found BayREN, SoCalREN and 3C-REN prepared and capable of tracking and reporting the value metrics documented in their 2021 ABALs that included estimated timetables for preparing value metric baselines and targets. In its 2021 ABAL BayREN proposed, "indicators (that is, values without specific targets) for the 2021 reporting year. Whether or not BayREN will select targets for future years will be revisited after the first year of collecting data, that is, once a baseline is established."⁷² BayREN also noted that beginning in 2020 they will "start to track" metrics associated with building organizational infrastructure, building human infrastructure, and obtaining energy savings by supporting local difficult to serve populations.⁷³ Shortly after filing its initial value metrics in the 2021 ABAL and in advance of filing its application in March 2022, BayREN began realigning their value metrics with the market support and equity segments created by D.21-05-031 to ensure that BayREN program managers agreed with the metrics and indicators associated with their programs and that program logic models were updated to reflect the new metrics and segments.

BayREN submitted its realigned value metrics and indicators in its application filing. Unlike SoCalREN which only filed value metrics, BayREN's filing consisted of a mixture of value metrics and indicators. As defined in Decision 18-05-041,⁷⁴ a metric is a measure of progress towards achieving desired market effects and must include a baseline as well as short to long term targets. The measurement of metric associated achievements against baselines and targets enables mid-course assessments of performance and the facilitation of program modifications when deemed necessary. An indicator does not include baselines or targets but does provide a way to track progress towards goals for which it is impossible, difficult, or undesirable to establish baselines or targets.

BayREN's application filing includes a substantial number of value indicators relative to the number of value metrics proposed. BayREN leadership staff explained that during discussions with program leads to set value metrics and indicators, it became apparent that limiting the number of metrics for each program was key to establishing clearly defined and achievable targets. When between one and three metrics were selected for a program, the program leads could then select additional indicators to provide relevant information to describe why programs are overachieving or underachieving in their selected metrics. The evaluation team finds this approach of limiting metrics to be logical in that it makes value metrics/indicators more actionable by focusing the attention of each program on its key objectives. This approach is also beneficial for the CPUC and evaluators since a fair amount of tracking information, such as the 300 plus common metrics, already inform program decisions. Narrowing the number of metrics and their associated baselines and targets makes it easier to track, report, review and assess targets, in addition to keeping PAs accountable to meeting their metrics.

The following three tables (Table 22 through, Table 24) group BayREN's value metrics/indicators by segment (i.e., resource acquisition, market support, equity) and summarize key components of each metric/indicator, including:

⁷² BayREN 2021 ABAL, September 1, 2020. p. 28 to 37/Exhibit D Page 2 to 11 of 11

⁷³ Ibid.

⁷⁴ Decision 18-05-041, page 22-23. https://www.caeecc.org/files/ugd/849f65_c07fb93fec5c4a0d9d8edc2f5d08defc.pdf

- **Index number** used to easily identify and track metrics across various filings and REN databases.
- **Metric/Indicator** designating whether it is a metric that will have baselines and targets or an indicator without baselines and targets.
- **Metric/Indicator description** explaining what the metric is.
- **Unit of measurement** describing the standard quantity to be used to express a physical quantity.
- **2021 and 2022 achievements** representing the value recorded in the given year. For 2022 achievements the below tables only represents data collected through the third quarter because of the timing of this study.

BayREN’s application⁷⁵ did not propose any baseline years, baseline values, or targets for their value metrics. The evaluation team finds this reasonable because only two of the value metrics/indicators that are not also statewide metrics/indicators are designated as metrics and because all of the value metrics/indicators that are also statewide metrics/indicators remain to be approved. Furthermore, BayREN expressed a strong preference to collect two years of program data to accurately establish baselines prior to setting targets. For the two value metrics that are not also statewide metrics (C&S_BVM_02 and C&S_BVM_04), BayREN had not yet collected two years of baseline data; thus baseline years, baseline values, and targets were not provided in their application. For many of the value metrics/indicators that are not also statewide metrics, BayREN possesses either a full year or a full year plus three additional quarters of achievement data. However, since the majority of these values are indicators, BayREN did not report 2022 targets to compare against their achievements. Nonetheless, BayREN’s reporting of 2021 and 2022 value indicator results, where available, do provide quantifiable illustrations of their unique value.

The tables below present 2021 and 2022 achievements where data was available. However, the far right column of the table does not include the fourth quarter achievements because none were available at the time of this study. The full span of achievements during the 2022 program year are thus not reflected in Table 22, Table 23, or Table 24 below. The achievements were sourced from an Excel workbook that BayREN uses to track program data/results on a quarterly basis from program managers. The workbook breaks out results by program. Because many of these metrics span programs and because results are listed disparately across programs, the evaluation team completed the task of rolling up the achievements to derive a preliminary snapshot of the data tracked to date for their value metrics/indicators. Some achievements are listed as not available (“N/A”). This classification applies when BayREN was unable to collect data for a given metric/indicator because the associated programs had not yet launched; because the programs have undergone significant design modifications; or because the data was not available in the tracking workbook. Other achievements are classified as TBD”. This indicates that data was not available at the time this report was written, but the data should be available at a later date.

Table 22. BayREN Resource Acquisition Value Metric/Indicator 2021 and 2022 Achievements

Index	Metric/Indicator	Metric/Indicator Description	Units of Measurement	2021 Achievements	2022 Achievements (Excluding Q4)
Value Metrics/Indicators that are <u>not</u> Statewide Metrics/Indicators					
RA_BVM_01	Indicator	Lifecycle net kWh	Lifecycle net kWh (non-claimed and estimated values)	N/A	N/A - 2/3 programs begin in 2024
RA_BVM_02	Indicator	Lifecycle net kW	Lifecycle net kW (non-claimed and estimated values)	N/A	N/A - 2/3 programs begin in 2024

⁷⁵ 2024-2031 Strategic Business Plan, 2024-2027 Portfolio Plan, and Budget filed in March 2022.

Index	Metric/Indicator	Metric/Indicator Description	Units of Measurement	2021 Achievements	2022 Achievements (Excluding Q4)
RA_BVM_03	Indicator	Lifecycle net therms	Lifecycle net therms (non-claimed and estimated values)	N/A	N/A - 2/3 programs begin in 2024
RA_BVM_04	Indicator	Lifecycle net GHG	Lifecycle net GHG (non-claimed and estimated values)	N/A	N/A - 2/3 programs begin in 2024
Water_BVM_01	Indicator	Gallons of water saved	Gallons	N/A	266,894

Table 23. BayREN Market Support Value Metric/Indicator 2021 and 2022 Achievements

Index	Metric/Indicator	Metric Description	Units of Measurement	2021 Achievements	2022 Achievements (Excluding Q4)
Value Metrics/Indicators that are <u>not</u> Statewide Metrics/Indicators					
C&S_BVM_01-a	Indicator	LG staff knowledgeable of energy code requirements and best practices for code compliance	Count	323	402
C&S_BVM_01-b	Indicator	LG staff knowledgeable of energy code requirements and best practices for code compliance	Percent	96%	TBD
C&S_BVM_02	Metric	LGs use BayREN trainings, guides and tools to improve code compliance	Count	54	128
C&S_BVM_03	Indicator	Municipal projects demonstrate feasibility of policy and reach code	Count	N/A	4
C&S_BVM_04	Metric	LG staff expand energy policy knowledge and/ or networks that enable future energy policy work [specifically by jurisdiction]	Count	70	135
C&S_BVM_05-a	Indicator	LG staff expand energy policy knowledge and/ or networks that enable future energy policy work	Count	144	551
C&S_BVM_05-b	Indicator	LG staff expand energy policy knowledge and/ or networks that enable future energy policy work	Percent	79%	TBD
C&S_BVM_05-c	Indicator	LG staff expand energy policy knowledge and/ or networks that enable future energy policy work	Percent	51%	TBD
MS_BVM_01	Indicator	Competitive, diverse market of capable aggregators serving SMBs	Count	N/A	N/A – Program Changed in 2022
MS_BVM_02	Indicator	LGs have assistance they need to submit application(s) to applicable programs	Count	N/A	N/A - Program(s) begin 2024
MS_BVM_04	Indicator	Program develops and shares decarbonization showcase case studies	Count	N/A	N/A – Program(s) begin 2024
MS_BVM_05	Indicator	Clean Economy Firm Partners commit to providing internships and possibly full time employment	Count	N/A	12
MS_BVM_06	Indicator	MF property owners / managers aware of EE and decarb opportunities	Count	N/A	110.00

Index	Metric/Indicator	Metric Description	Units of Measurement	2021 Achievements	2022 Achievements (Excluding Q4)
MS_BVM_07	Indicator	Amount of non-ratepayer capital available for customer-side energy/water efficiency programs	Dollars	<p>\$1,000,000 in capital funding approved.</p> <p>\$26,070 in projects funded with ABAG program funding in 2021.</p>	<p>\$1,000,000 in capital funding approved.</p> <p>\$6,173.85 in projects funded with ABAG program funding in 2022 Q3.</p> <p>Cumulative funding to date is \$33,147.25</p>
MS_BVM_08	Indicator	Amount of non-ratepayer capital invested in energy efficiency programs	Dollars	N/A	N/A - Program begins 2024
Value Metrics/Indicators that are also Statewide Metrics/Indicators					
MS_02_BVM	Metric	Number and % increase/decrease of customers receiving information, education, or outreach on EE projects, products, and services through relevant Market Support programs [Local government staff are aware of the most current information on technologies, programs and incentives relevant to their agency's specific energy goals]	Count	N/A	N/A- Program(s) begin in 2024
MS_02_BVM	Metric	Number and % increase/decrease of customers receiving information, education, or outreach on EE projects, products, and services through relevant Market Support programs [LGs receive: 1) actionable roadmaps with specific steps identified for achieving their energy goals and 2) tailored support for implementation]	Count	N/A	N/A- Program(s) begin in 2024
MS_02_BVM	Metric	Number and % increase/decrease of customers receiving information, education, or outreach on EE projects, products, and services through relevant Market Support programs [LGs staff knowledgeable of decarbonization technologies and financing options]	Count	N/A	N/A- Program(s) begin in 2024
MS_06_BVM	Indicator	% of customer sample that has taken action towards obtaining EE product/service (behavior a)	Percent	N/A	N/A- Program(s) begin in 2024
MS_07_BVM	Metric	% of customers that have obtained EE products/services (behavior b) Home Energy Scores and referrals to Home+ EA as needed (everyone and follow up if low score, i.e., sites obtain an EE product/service)	Count	0	0

Index	Metric/Indicator	Metric Description	Units of Measurement	2021 Achievements	2022 Achievements (Excluding Q4)
MS_10_BVM	Metric	% of market actors knowledgeable of energy efficient products and/or services that can be supplied to customers (knowledge) Local realtors and appraisers green certified and/or are trained and knowledgeable about how to evaluate energy efficiency and green homes (i.e., EE services that can be supplied to customers)	Count	Realtors certified: 130, Appraisers certified: 22	Realtors certified: 102, Appraisers certified: 11
MS_10_BVM	Indicator	% of market actors knowledgeable of energy efficient products and/or services that can be supplied to customers (knowledge) Local lenders knowledgeable about the benefits of EE lending options and/or how to market green lending (i.e., EE services that can be supplied to customers)	Count	0	0
MS_17_BVM	Indicator	Number of EE customers/market actors reached through partner networks and partner communications channels [Customers obtain/install EE products and water measures]	Count	0	66
MS_18_BVM	Indicator	Assessed value of the partnership by partners	Unstructured description	This will be a narrative in the annual report	This will be a narrative in the annual report
MS_20_BVM _a	Metric	Number of partners by type and purpose (specifically, Number of partners by type)	Count	1	1
MS_20_BVM _b	Indicator	Number of partners by type and purpose (specifically, Purpose of partnership)	Unstructured description	This will be a narrative in the annual report	This will be a narrative in the annual report
MS_23_BVM	Metric	Number of market support projects (outside of ETP) that validate the technical performance, market and market barrier knowledge, and/or effective program interventions of an emerging/under-utilized or existing energy efficient technology	Count	N/A	N/A
MS_23_BVM	Metric	Number of market support projects (outside of ETP) that validate the technical performance, market and market barrier knowledge, and/or effective program interventions of an emerging/under-utilized or existing energy efficient technology	Count	N/A	N/A

Index	Metric/Indicator	Metric Description	Units of Measurement	2021 Achievements	2022 Achievements (Excluding Q4)
MS_31_BVM	Indicator	Total projects completed/measures installed and dollar value of consolidated projects (specifically, Total projects completed)	Count	N/A	66
MS_31_BVM	Indicator	Total projects completed/measures installed and dollar value of consolidated projects (specifically, Dollar value of consolidated projects)	Dollars	N/A	\$33,147.25

Table 24. BayREN Equity Value Metric/Indicator 2021 and 2022 Achievements

Index	Metric/Indicator	Metric Description	Units of Measurement	2021 Achievements	2022 Achievements (Excluding Q4)
Value Metrics/Indicators that are <u>not</u> Statewide Metrics/Indicators					
Equity_BVM_01	Indicator	Contractors recruited to engage with HHS that speak languages other than English (companies and individual workers)	Counts	N/A	32.00
Equity_BVM_02	Indicator	Youth gain clean economy career skills and job readiness	Counts	N/A	17
Equity_BVM_03	Indicator	Youth placed into full time employment within clean economy	Counts	N/A	0
Equity_BVM_04	Indicator	HTR or Underserved SMB lifecycle net kWh (claimed through Resource Acquisition or non-claimed and estimated in Equity)	Lifecycle Net kWh Savings	0	0
Equity_BVM_05	Indicator	HTR or Underserved SMB lifecycle net kW (claimed through Resource Acquisition or non-claimed and estimated in Equity)	Lifecycle Net kW Savings	N/A	N/A – Program changed in 2022
Equity_BVM_06	Indicator	HTR or Underserved SMB lifecycle net therms (claimed through Resource Acquisition or non-claimed and estimated in Equity)	Lifecycle Net Therm Savings	N/A	N/A – Program changed in 2022
Equity_BVM_07	Indicator	HTR or Underserved SMB lifecycle net GHG (claimed through Resource Acquisition or non-claimed and estimated in Equity)	Lifecycle Net GHG Savings	N/A	N/A – Program changed in 2022
Equity_BVM_08	Indicator	HTR SMB served (within the Resource Acquisition segment program)	Counts	N/A	N/A – Program changed in 2022
Equity_BVM_09	Indicator	HTR SMB utility bill savings and/or NEBs (within the Resource Acquisition segment program)	Dollars or Counts	N/A	N/A – Program changed in 2022
Value Metrics/Indicators that are <u>also</u> Statewide Metrics/Indicators					
Equity_1_BVM	Metric	Total # residential (SF) equity-targeted households (HHS) served by the Equity programs	Households (HH)	305	995

Index	Metric/ Indicator	Metric Description	Units of Measurement	2021 Achievements	2022 Achievements (Excluding Q4)
Equity_1_BVM	Indicator	Total # residential (MF unit) equity-targeted households (HHs) served by the Equity programs	Households (HH)	2,302	1,117
Equity_2_BVM	Indicator	Single Family – equity market support (ex: education, information, training, technical support, etc.)	Households (HH)	N/A	163
Equity_3_BVM	Indicator	Single family – equity resource acquisition (ex: energy saving action, etc.)	Households (HH)	305	995
Equity_5_BVM	Indicator	Multifamily – equity resource acquisition (ex: energy saving action, etc.)	Households (HH)	2,302	1,117
Equity_6_BVM	Metric	Total # MF equity-targeted buildings served by the Equity programs	Buildings	N/A	61
Equity_17_BVM	Metric	Total # small and medium business (SMB) equity-targeted participants served by the Equity programs	Businesses	N/A	0
Equity_23_BVM	Metric	Total # of contractors/workers served by Equity Segment Programs	Contractors/Workers	N/A	28
Equity_24_BVM	Indicator	Total # (indicator for all) [and % (metric for PAs with no relevant legal restriction)] of contractors and/or workers that are disadvantaged workers or otherwise underrepresented, who are directly involved in implementing Equity Segment programs	Contractors/Workers	N/A	54
Equity_26_BVM	Indicator	Expected first-year bill savings in total \$ for equity-targeted program participants (metric)	Dollars	N/A	TBD
Equity_27_BVM	Indicator	GHG reductions (tons)_EquityAll	Lifecycle GHG reductions (tons) - Net	N/A	TBD
Equity_31_BVM ^a	Indicator	Total kWh savings_EquityAll	Lifecycle ex-ante kWh net	248,466	103,946
Equity_35_BVM ^a	Indicator	Total kW savings_EquityAll	Lifecycle ex-ante kW net	17.6	6.3
Equity_39_BVM ^a	Indicator	Total Therm savings_EquityAll	Lifecycle ex-ante Therm net	8,576	6,068
Equity_43_BVM	Indicator	Community engagement activities during program design and to identify community needs and solutions	Unstructured data	This will be a narrative in the annual report	This will be a narrative in the annual report
Equity_44_BVM	Indicator	Community engagement activities during program implementation	Unstructured data	N/A	TBD
Equity_47_BVM	Indicator	Health – “non-energy benefits” in “counts of participants receiving this benefit” until we can monetize. Reporting at least one of: Indoor air quality, Outdoor air quality (e.g., reduction in emissions from gas combustion appliances that vent to nearby outdoor air), Reduction in interior contaminants/biologics, other	Counts	N/A	TBD

Index	Metric/Indicator	Metric Description	Units of Measurement	2021 Achievements	2022 Achievements (Excluding Q4)
Equity_48_BVM	Indicator	Comfort - “non-energy benefits” in “counts of participants receiving this benefit” until we can monetize. Reporting at least one of: reduced drafts, quieter interior, managed interior temp, other	Counts	N/A	TBD
Equity_49_BVM	Indicator	Safety -“non-energy benefits” in “counts of participants receiving this benefit” until we can monetize. Reporting at least one of: improved safety of appliances, other	Counts	N/A	TBD
Equity_50_BVM	Indicator	Economic or other “non-energy benefits” (as proposed by the PAs or program) in dollars or “counts of participants receiving this benefit” until we can monetize	Counts	N/A	0

^a These achievements are not inclusive of the MF savings that will be rolled into this metric, which are TBD

BayREN's process for collecting achievement and baseline data and for setting targets begins with each program manager understanding the metric/indicator data they must collect for their respective programs. BayREN’s most recent round of logic models itemizes the value metrics and indicators to be tracked for each program starting in 2024. BayREN leadership then talked with program managers about each program’s logic model, discussing data collection methods and units of measurement (e.g., count, percent, etc.). Each BayREN program manager and associated implementation team are now aware that they are responsible for collecting the requisite data. As shown in the preceding tables, BayREN has already begun to collect this data for existing programs wherever feasible. However, BayREN staff noted that the availability of useable data differs based on program design, implementation timelines, and metrics. For instance, BayREN’s pay for performance program underwent significant program design changes and BayREN staff said it could take up to a year for projects to start showing up. Because it is a pay for performance program, BayREN cannot report savings until new customers are recruited, projects are completed, and a full year of savings are recorded. Needless to say, this leads an additional challenge to collecting baseline data and a time lag for reporting achievements.

BayREN’s current value metric/indicator process consists of circulating a spreadsheet to the program leads to populate. This is done on a quarterly basis to coincide with CEDARS reporting, which occurs three months after the previous quarter. BayREN then performs quality assurance checks to identify any missing or outlier data. Finally, the collected value metrics/indicator data are aggregated into a master file to ease the annual reporting process. BayREN staff indicated these quarterly efforts help to rectify any data collection issues early on and minimize issues that might be compounded if not identified until later in the year. BayREN staff also indicated that, given the large volume of data they need to collect, incremental processing throughout the year makes it easier to manage. In addition, BayREN is in the process of developing a CRM system that will fulfill their broader organizational needs. BayREN staff anticipate the CRM system will include the requisite functionality to be used for metric tracking. Although they are too early in the process to have a definitive timeframe for completion of the CRM, once complete it will greatly streamline their internal process of responding to data requests, reporting value metrics/indicators, as well as preparing annual reports and other filings.

BayREN plans to set baselines for their metrics using 2022 and 2023 data as well as 2021 data where available. For most programs, BayREN will have collected the necessary baseline data by the end of 2023. It

is expected to take three months for BayREN to conduct quality control and assurance checks on the data. Accordingly, BayREN anticipates it can set targets for most of their value metrics by the end of the first quarter of 2024. BayREN staff noted that any of the new programs filed in the 2024-2027 Portfolio Plan will not start until 2024. BayREN staff believe these programs will require a full two years of operations before enough baseline data can be collected to set associated targets.

Based on our review of BayREN's value metrics/indicators data, and in-depth interviews, the evaluation team finds that they have not yet set clear and measurable baselines and targets for their value metrics. However as discussed previously, this is because most of BayREN's value metrics/indicators proposed in the application are indicators, and all but two value metrics are also CAEECC proposed statewide metrics. Since these statewide metrics are not approved yet, the evaluation team finds it reasonable that BayREN has not yet set baselines and targets for its value metrics. Moreover, because BayREN did not establish targets for 2022, it is premature for the evaluation team to assess the extent to which they have met or fell short of targets. Although BayREN has not yet set value metric baselines or targets, the evaluation team was impressed by the REN's detailed program logic models that demonstrate alignment among activities, metrics/indicators, and core values. We were also pleased to review BayREN's workbook containing value metric/indicator achievements by program, which at the time of our review contained data through the third quarter of 2022. Despite the availability of this data, the evaluation team found BayREN staff hesitant to state whether their metrics/indicators are reasonably achievable because they have yet to set their baselines and targets.

The 24 BayREN specific market support and equity value metrics/indicators that are already being tracked should be sufficient to quantitatively assess once BayREN's value metrics and indicators are approved, and once value metric baselines and targets are set. However, this does not include the 36 value metrics (including sub-metrics that contain multiple parts) that are also CAEECC proposed statewide market support and equity metrics that are not yet approved. (See Section 4 Statewide Metrics for our commentary regarding outstanding issues that need to be addressed for these metrics/indicators). Starting in 2025, future evaluations covering program year 2024 and beyond should be able to assess BayREN performance compared to their established targets and determine the margins by which BayREN outperforms/underperforms, as well as the cause of any over/under performance.

Demonstrable Value Beyond Metrics

To gain insights into BayREN's value and accomplishments that fall outside the metrics reporting, the evaluation team drew primarily upon interviews with BayREN staff and on BayREN's 2021 Annual Report. During the interviews BayREN staff stated their member county agencies rely on BayREN programs and data to meet county climate action plan goals. BayREN pointed out that data sharing demonstrates one way the counties maintain relationships and engage with local jurisdictions. As one interviewee stated, "*BayREN provides a lot of value to counties, cities and unincorporated areas from BayREN work. It could be something on a website or in a board report. It's a big value to our local governments, but it's not necessarily reported to the CPUC.*"⁷⁶ During the interviews BayREN also pointed out that they are making a concerted effort to better communicate their achievements. One finding from a recent BayREN organization study suggested that the REN invest in additional marketing. As a result, BayREN recently hired a full-time marketing coordinator.

⁷⁶ Interview with BayREN on January 5, 2023

In addition to the interviews, a review of BayREN’s 2021 Annual Report reveals that it documents several activities and accomplishments which fall beyond the scope of the reporting metrics. Table 25 details some of the accomplishments and values that BayREN included in the 2021 Annual Report, including:

- Collaborations with partners to strengthen community engagement practices, including expanding the number of languages offered during program outreach, ensuring applicable training opportunities, and promoting programs
- Expanded language offerings for the BayREN website, program materials, trainings, and program activities
- Data-driven approach to small business sector targeted-outreach
- Making C&S education accessible to local government staff who are new to reach codes
- Using forums to drive connection across diverse stakeholders on energy-related topics

Table 25. BayREN Value Beyond Metrics Overview

Sector	Programs	Demonstrable value beyond metrics
All sectors	N/A	<ul style="list-style-type: none"> ■ Completed a year-long effort to expand website language offerings
Residential	Single Family Home+	<ul style="list-style-type: none"> ■ Through the Home+ program, Energy Advisors responded to 5,091 inquiries from residents about resources available regarding incentives for EE upgrades, and made 1,539 programs referrals ■ Conducted webinars on resources and rebates in English, Cantonese, Mandarin and Spanish ■ BayREN member agencies sent letters regarding BayREN programs in Spanish and Chinese ■ Strong coordination with counties and other partners to ensure a) appropriate trainings are being delivered to underemployed and underserved populations; and b) there are sufficient contractors that can provide services in languages other than English ■ Began offering a \$500 enrollment bonus to contractors offering services in non-English languages ■ Refining their definition of “moderate income” for each county based on differences in cost of living across the Bay Area ■ Continues to develop partnerships with local associations of Realtors, engaging them as BayREN stakeholders and encouraging them to pass on information to clients about Home+, HES and other programs
	Green Labeling	
	Bay Area Multifamily Building Enhancements (BAMBE)	
Commercial	Small and Medium Business (SMB)	<ul style="list-style-type: none"> ■ Used data sets to prioritize outreach to businesses with high energy consumption

	BayREN Business ⁷⁷	<ul style="list-style-type: none"> Despite challenges related to Covid-19, BayREN’s small and medium business program remained the only SMB program open in the Bay Area and received numerous referrals from local PAs Collaborated with a data analytics firm to apply data-targeting in the SMB sector, and identified and added data filters to screen for ideal participants and avoid any “double-dipping”, removing any past ratepayer program participants
	BayREN Microloan ⁷⁸	
Cross-cutting	Codes and Standards	<ul style="list-style-type: none"> Continued offering quarterly energy-related forums that are open to anyone interested, allowing for diverse stakeholders to connect Collaborating with IOU Reach Codes Program to put together a Reach Code Newcomer’s Webinar Series, which will help get local government staff who know little to nothing about reach codes acquainted with them Leveraged regional water networks to present the Water Upgrades Save program to several regional water conservation organizations
	Water Upgrades Save	

3.3 3C-REN Value Metrics

Core Values Overview

In 2020, 3C-REN filed its 2021 ABAL which included its four core values and a first draft of corresponding value metrics. Table 26 below shows 3C-REN’s four core values: Service, Climate Action, Economic Impact, and Diversity, Equity & Inclusion. The core values support programmatic decisions and guide future planning activities.

Table 26. 3C-REN’s Core Values⁷⁹

Core Value	Description
Diversity, Equity & Inclusion	Execute program design, procurement, delivery, and participant targeting to deliver diverse, equitable, and inclusive participation across the Tri-County region.
Service	Serve Tri-County residents not otherwise served by existing ratepayer-funded programs.
Climate Action	Support Tri-County member agencies in meeting climate goals.
Economic Impact	Positively impact the economic development of the Tri-County region through its built environment and workforce.

When developing its core values, 3C-REN sought to build off the goals put forth in its initial 2018 Business Plan. These goals include:⁸⁰

- All Tri-Counties residents will have the access, information, and path to achieve deeper energy retrofits.

⁷⁷ There were no program participants who completed projects with the BayREN Business subprogram in 2021. BayREN cited in the annual report that the resurgence of the pandemic impacted their ability to garner program interest and participation.

⁷⁸ BayREN closed the Microloan subprogram in September 2021.

⁷⁹ 3C-REN 2021 ABAL, September 1, 2020

⁸⁰ 3C-REN ABAL 2021, page 13

- The Tri-Counties Region will substantially increase implementation and adoption of energy retrofits for their residential buildings.
- The Tri-Counties will have a profitable workforce capable of delivering buildings at quality and efficiency levels mandated by the State and through building codes.
- Building departments will have the necessary tools and resources to increase energy code compliance.

Because 3C-REN functions as a collaborative among member jurisdictions, local government perspectives heavily informed the REN’s value metrics selection. In addition, 3C-REN staff emphasize that their role as a REN administrator and local-government collaborative serves as a defining principle of their unique value. They note in their 2021 ABAL: *“To create ‘unique’ value metrics, 3C-REN defined ‘unique’ as reflecting its local- government-powered regional focus, and targeting populations not served through existing ratepayer-funded programs in the region.”*⁸¹ Table 27 shows 3C-REN’s four value metrics/indicators and the sectors, segment, and core value they are aligned with. Although one of 3C-REN’s values is Service, there is not a specific value metric tied to the value of providing service to “tri-county residents not otherwise served by existing rate-payer funded groups”. It does, however, remain a guiding principle for 3C-REN’s current and planned programs. The current set of value metrics covers the residential, C&S, and WE&T sectors. 3C-REN currently has no value metrics for Resource Acquisition because no active programs are assigned to resource acquisition as a primary segment.

Table 27. 3C-REN Core Value Alignment

Index	Metric/Indicator	Sector	Segment	Core Value
330_3C_VM	Number of Tri-County member jurisdictions receiving annual 3C-REN data that informs member jurisdictions achievements toward climate action plans GHG emission reduction goals.	Residential	Equity	Climate
331_3C_VM	Percentage of event 3C-REN attendees considered hard-to-reach (HTR).	Codes & Standards	C&S	Diversity, Equity, & Inclusion
332_3C_VM	Percentage of event 3C-REN attendees considered hard-to-reach (HTR).	Workforce Education and Training (WET)	Market Support	Diversity, Equity, & Inclusion
333_3C_VM	Percentage of participants receiving economic value, inclusive of job creation.	Workforce Education and Training (WET) & Codes & Standards	Market Support	Economic Impact

The evaluation team finds 3C-REN’s value metrics clearly explain how each metric aligns with its core values and with the statewide segments for Market Support and Equity. In doing so, 3C-REN shows the unique value it provides throughout each segment of its portfolio. The evaluation team also finds that the metrics/indicators presented currently cover all existing sectors served by 3C-REN. However, 3C-REN’s 2024-2027 Portfolio Plan proposes new programs in the Agricultural and Commercial sectors. If these programs are approved 3C-REN will need to modify the list of value metrics to include at least one value metric applicable to each sector. This will demonstrate how each sector contributes to their value metrics and how the contributions of those new programs are reflected in future measurements of 3C-REN’s value.

Baselines, Targets, and Achievements

In 3C-REN’s 2021 ABAL, it stated that statewide metric targets and timelines would be determined shortly after baselines are established. The ABAL clarifies further that 3C-REN expected to report baseline values in

⁸¹ Ibid

2020 reporting for its Climate and Economic Impact related metrics/indicators, and in 2021 for its Diversity, Equity and Inclusion related metrics.⁸² However, select value metrics have been modified since 3C-REN’s 2021 ABAL filing, and additional value metrics have been added. 3C-REN modified the unit of measurement for metric 333_3C_VM. This metric tracks the percentage of participants receiving economic value, inclusive of job creation. Originally this metric was measured by a score but is now measured as a percentage. Additionally, 3C-REN consolidated the metric measuring economic value. Where there were originally two value metrics capturing “[n]umber of jobs and economic value, inclusive of job creation at counties”—one for the C&S sector and one for the WE&T sector—there is now one that captures achievements in both sectors (333_3C_VM) and will be reported at the market support segment level.

Table 28. 3C-REN Current Value Metric /Indicator Baselines and Targets

Index	Metric	Units of Measurement	Metric/ Indicator	Baseline Year	Baseline Number	Targets Timeline
330_3C_VM ^a	Number of Tri-County member jurisdictions receiving annual 3C-REN data that informs member jurisdictions achievements toward climate action plans GHG emission reduction goals	Count	Metric	2023	TBD (2025 after two years data collection)	TBD (2025 after two years data collection)
331_3C_VM	Percentage of event 3C-REN attendees considered hard-to-reach (HTR)	Percentage	Metric	2021	29%	TBD (April 2023)
332_3C_VM	Percentage of event 3C-REN attendees considered hard-to-reach (HTR)	Percentage	Metric	2021	30%	TBD (April 2023)
333_3C_VM	Percentage of participants receiving economic value, inclusive of job creation	Percentage	Metric	2021	76%	TBD (April 2023)

^a In response to the CPUC’s data request 3C-REN originally provided baseline and targets for 330_3C_VM that reflected their old model of the residential sector, but during a follow up interview with the evaluation team they suggested the potential changes to the value metric that are reflected in the above table. The table therefore reflects the latest information. In response to the CPUC’s data request, 3C-REN cited their 2024-2027 Portfolio Plan as a publicly available citation to verify their value metrics, which contained the following baseline and target information on 330_3C_VM: baseline year: 2020; baseline number: TBD; 2024 target: 26; 2025 target: 26; 2026 target: 28; 2027 target: 28.

In response to the evaluation team’s data request, 3C-REN provided the most recent value metrics/indicators, associated baselines, and timelines for setting targets, as shown in Table 28 above. 3C-REN staff explained that for value metrics with a 2021 baseline year targets have not been set because, as of the time of this report’s writing, 3C-REN is still collecting the two years of program data needed to enable them to confidently set targets. The full two years of program data will be available in 2023, at which point 3C-REN plans to present its targets in the 2022 Annual Report to be released in April 2023. 3C-REN indicated they can confidently set targets in 2023 for 331_3C_VM, 332_3C_VM, and 333_3C_VM since they will have two full years of program data for the C&S and WE&T programs that the three aforementioned value metrics are based on. 3C-REN’s WE&T and C&S programs, Building Performance Training and Energy Code Connect, have been operating consistently without major changes or interruptions since the 2021 baselines were set for 331_3C_VM, 332_3C_VM, and 333_3C_VM. 3C-REN stated that, while the targets have not been set for 331_3C_VM, 332_3C_VM, and 333_3C_VM, those are the metrics for which the targets are most reasonably achievable since the WE&T and C&S sectors have the most consistent program participation in 3C-REN’s history.

3C-REN’s retired single-family residential program ran from early 2020 until the end of 2021, and in 2022 3C-REN launched two residential programs: Single Family Normalized Metered Energy Consumption (NMEC)⁸³ and Multifamily Home Energy Savings. Consequently, because the old program performance data may not be

⁸² 3C-REN 2021 ABAL, September 1, 2020. p. 14 of 25

⁸³ The program is also known as Single Family Home Energy Savings.

predictive of performance under the new program models, 3C-REN prefers to collect new baseline data. 3C-REN's desire to obtain two years of program data prior to setting targets stems from the need for at least one full calendar year of data with a sufficient number of participants. 3C-REN points out that because new programs take time to ramp up, they do not typically recruit enough participants until many months after the program launches. Thus, in the case of new or significantly revised programs, before 3C-REN can confidently determine a baseline and properly set targets it typically requires two years of program operation to obtain a minimum of 12 months of data collected from a reasonable number of customers who have participated under normal operating parameters. Because the new single-family program completed its first project in 2022 and the new multifamily program will complete its first projects in 2023, 2023 marks when the first full year of viable data will be available for the newly envisioned residential programs. The evaluation team was pleased to note that 3C-REN raised the potential of expediting the timeline for setting baselines by augmenting new program performance insights gained during the first year of operation with performance data collected under the program's previous design. However, we concur with 3C-REN on the wisdom of waiting until at least a year of new program data has been collected prior to determining if the old data will be useable in this manner.

Based on the evaluation team's review of 3C-REN's value metrics/indicators and on our in-depth interviews, we find that at the time of this report 3C-REN has established clear baselines for three of four value metrics, but the REN has not yet set clear targets for these value metrics. However as discussed above, 3C-REN expects to fully release its targets for these metrics in April 2023, shortly after the finalization of this report. In addition, the evaluation team finds it reasonable that due to its recent program design modifications 3C-REN does not have yet enough information to set a target for the 330_3C_VM metric in their upcoming annual report.

Moreover, the evaluation team finds that all proposed value metrics appear to be suitable for quantitative assessments in future evaluations once final targets and baselines are approved. This conclusion is based in part on 3C-REN's preparedness to release baselines and targets for the majority of their value metrics in their upcoming 2022 annual report. In addition, during interviews 3C-REN staff indicated that they are confident targets for the WE&T and C&S value metrics will be reasonably achievable, assuming corresponding budgets are approved. Since 3C-REN has not yet established targets for 2022, it is premature for the evaluation team to assess the extent to which they have met or fell short of targets. Starting in 2025, future evaluations covering program year 2024 and beyond should be able to assess 3C-REN's performance compared to their established targets and determine the margins by which 3C-REN outperforms/underperforms, as well as the cause of any over/under performance.

Demonstrable Value Beyond Metrics

During interviews and in the 2021 Annual Report, 3C-REN reaffirmed that as a local government collaborative they are uniquely positioned to administer EE programs and support other jurisdictions in the region. Quantitatively, this value is reflected in their metric 330_3C_VM, which measures the number of Tri-County member jurisdictions receiving annual 3C-REN data to inform their climate action plans GHG emission reduction goals. However, there are additional qualitative accomplishments that 3C-REN shared in the interviews and in the 2021 Annual Report that are worth noting.

3C-REN's practice of surveying training participants provides another example of the REN's value. The surveys ask training participants, "Do 3C-REN trainings contribute economic value to your business?" While the survey is primarily used to report on their metric measuring economic impact, 333_3C_VM, respondents are also asked additional in-depth questions that allow 3C-REN to better serve training participants, such as: 1) Has 3C-REN training given you a competitive edge by staying ahead of the curve when it comes to the latest in high performance buildings or application of the energy code?; and 2) What other resources could 3C-REN provide

to increase your or your company's ability to create high performance buildings in the Tri-County Region? The composite 2021 survey results indicate that 75%⁸⁴ of surveyed attendees reported 3C-REN's trainings contributed economic value to their businesses. 3C-REN staff supplemented these quantitative insights with anecdotes such as that of a local firm that has been so enthusiastic about the trainings that they asked for the training calendar early to ensure staff calendars were free to attend.

Table 29 shows details drawn from 3C-REN's 2021 Annual Report that describe the types of accomplishments and value beyond metrics that the REN provides, such as:

- Innovative workforce development initiatives, including workshopping strategies to engage younger people in the energy efficiency workforce and offering a guest speaker series for a career development program at Santa Barbara City College (SBCC).
- Use of surveys to collect and implement feedback on trainings.
- Growth in communication and outreach in the WE&T sector.
- CRM that is optimally integrated with other platforms to ensure successful and efficient program delivery.
- In response to questions fielded through Energy Code Coach—a service offered through the Energy Code Connect program that helps building professionals navigate California energy code via online, in-person, or over the phone support from code experts— 3C-REN developed training and curriculum on a topic that building practitioners had been inquiring about: how building codes and standards apply to ADU and unconventional housing.⁸⁵

Table 29. 3C-REN Demonstrable Value Beyond Metrics

Sector	Programs	Demonstrable Value Beyond Metrics
WE&T	Building Performance Training	<ul style="list-style-type: none"> ■ Offered trainings to new group of stakeholders—cannabis cultivators, who have high energy consumption ■ Use of surveying to determine satisfaction of training attendees ■ Increased frequency of training events ■ Marketing outreach via weekly emails and other methods to distribution list, which grew significantly in 2021—communications have an average open rate of 30%, and click rate of 4% ■ Use of CRM to streamline event coordination ■ Hosted guest speaker series at SBCC to advance career opportunities to people facing unemployment due to Covid-19
C&S	Energy Code Connect (ECC)	<ul style="list-style-type: none"> ■ Published case study describing their work on energy-code compliant sample construction documents for farmworker housing ■ Partnered with the California Association of Building Energy Consultants to present a training series ■ ECC engages bi-monthly with the CEC to share local updates from the tri-county region ■ When Covid-19 restrictions permitted, ECC staff went on “road shows” where they were able to meet with building departments in 3C-REN's county and city building departments, creating opportunity for 3C-REN to better understand each department's needs

⁸⁴ 3C-REN 2021 Annual Report, page 32

⁸⁵ 3C-REN provides additional highlights on their C&S work concerning ADU and farmworker housing on page 18 of their annual report.

Residential	Home Energy Savings ⁸⁶	<ul style="list-style-type: none"> ▪ Prior to the multifamily program’s launch, staff held meetings with including property managers, housing authorities, affordable housing providers, and other stakeholders ▪ Participated in a collaboration with People’s Self Help Housing (PSHH) and Association for Energy Affordability (AEA) to offer energy efficiency upgrades for farmworker housing by leveraging several incentive programs ▪ The Farmwork Housing Upgrade Collaborative installed 197 heat pump water heaters, making it responsible for the majority of heat pumps that have been installed in the tri-county region
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4. Statewide Metrics

BayREN, SoCalREN and 3C-REN proposed statewide metrics in their respective applications filed in March 2022. Their statewide metrics originate from the CAEECC market support and equity working groups. Each REN’s proposed statewide metrics were developed by taking the full list of CAEECC metrics/indicators and subtracting any that are not relevant to the REN’s respective portfolio. Table 30 on the following pages provides the full list of Market Support and Equity metrics/indicators and indicates which RENs have proposed each metric/indicator in their application filed in March 2022. These metrics have not been approved by the CPUC and are subject to change. The metrics in Table 30 are also subject to change depending on 2024-2027 Portfolio Plan approvals.

⁸⁶ HES for single family homes launched in March 2020 and closed in December 2021 due to challenges with the program model and reduction in measures with claimable savings. 3C-REN has plans to offer the program using a new model in 2022.

Table 30. Comparison of REN Statewide Metrics and Indicators

Index	Metric/Indicator Description	Metric/ Indicator	BayREN ⁸⁷	3C-REN	SoCalREN
Equity_1	Total # residential (SF or MF unit) equity-targeted households (HHs) served by the Equity programs	Metric	✓*	✓	
Equity_2	Single Family – equity market support (ex: education, information, training, technical support, etc.)	Indicator	✓	✓	✓
Equity_3	Single family – equity resource acquisition (ex: energy saving action, etc.)	Indicator	✓	✓	✓
Equity_4	Multifamily – equity market support (ex: education, information, training, technical support, etc.)	Indicator		✓	✓
Equity_5	Multifamily – equity resource acquisition (ex: energy saving action, etc.)	Indicator	✓	✓	✓
Equity_6	Total # MF equity-targeted buildings served by the Equity programs	Metric	✓	✓	
Equity_7	Equity - Market support (ex: education, information, training, technical support, etc.)	Indicator		✓	✓
Equity_8	Equity - resource acquisition (ex: energy saving action, etc.)	Indicator		✓	✓
Equity_9	Total # Ag or Ind. equity-targeted customers served by the Equity programs	Metric			✓
Equity_10	Ag – equity market support (ex: education, information, training, technical support, etc.)	Indicator			✓
Equity_11	Ag – equity resource acquisition (ex: energy saving action, etc.)	Indicator			✓
Equity_12	Ind –equity market support (ex: education, information, training, technical support, etc.)	Indicator			✓
Equity_13	Ind – equity resource acquisition (ex: energy saving action, etc.)	Indicator			✓
Equity_14	Total # equity-targeted public facilities and equipment or community projects served by the Equity programs	Metric			✓
Equity_15	Equity - Market support (ex: education, information, training, technical support, etc.)	Indicator			✓
Equity_16	Equity - resource acquisition (ex: energy saving action, etc.)	Indicator			✓
Equity_17	Total # small and medium business (SMB) equity-targeted participants served by the Equity programs	Metric	✓	✓	✓
Equity_18	Equity - Market support (ex: education, information, training, technical support, etc.)	Indicator		✓	✓
Equity_19	Equity - resource acquisition (ex: energy saving action, etc.)	Indicator		✓	✓
Equity_20	Total # of companies/non-profits served by the Equity Segment programs	Metric		✓	✓
Equity_21	Equity - Market support (ex: education, information, training, technical support, etc.)	Indicator		✓	✓
Equity_22	Equity - resource acquisition (ex: energy saving action, etc.)	Indicator		✓	✓
Equity_23	Total # of contractors/workers served by Equity Segment Programs	Metric	✓	✓	✓
Equity_24	Total # (indicator for all) [and % (metric for PAs with no relevant legal restriction)] of contractors and/or workers that are disadvantaged workers or otherwise underrepresented, who are directly involved in implementing Equity Segment programs	Indicator	✓*	✓	✓
Equity_25	Total # (indicator for all) [and % (metric for PAs with no relevant legal restriction)] of companies/non-profits who are Diverse Business Enterprises (DBE) or otherwise underrepresented (e.g., BIPOC-owned) with contracts to implement Equity Segment programs	Indicator		✓	✓
Equity_26	Expected first-year bill savings in total \$ for equity-targeted program participants (metric)	Indicator - BayREN Metric - SoCalREN, 3C-REN	✓	✓	✓

⁸⁷ Checkmarks with a star (✓*) indicate that in BayREN's application from March 2022 they separated the given metric/indicator into multiple sub-metrics/indicators.

Index	Metric/Indicator Description	Metric/ Indicator	BayREN ⁸⁷	3C-REN	SoCaREN
Equity_27	GHG reductions (tons)_EquityAll	Indicator	✓	✓	✓
Equity_28	GHG reductions (tons)_EquityDAC	Indicator			✓
Equity_29	GHG reductions (tons)_EquityHTR	Indicator			✓
Equity_30	GHG reductions (tons)_EquityUnderserved	Indicator			✓
Equity_31	Total kWh savings_EquityAll	Indicator	✓	✓	✓
Equity_32	Total kWh savings_EquityDAC	Indicator			✓
Equity_33	Total kWh savings_EquityHTR	Indicator			✓
Equity_34	Total kWh savings_EquityUnderserved	Indicator			✓
Equity_35	Total kW savings_EquityAll	Indicator	✓	✓	✓
Equity_36	Total kW savings_EquityDAC	Indicator			✓
Equity_37	Total kW savings_EquityHTR	Indicator			✓
Equity_38	Total kW savings_EquityUnderserved	Indicator			✓
Equity_39	Total Therm savings_EquityAll	Indicator	✓	✓	✓
Equity_40	Total Therm savings_EquityDAC	Indicator			✓
Equity_41	Total Therm savings_EquityHTR	Indicator			✓
Equity_42	Total Therm savings_EquityUnderserved	Indicator			✓
Equity_43	Community engagement activities during program design and to identify community needs and solutions	Indicator	✓	✓	✓
Equity_44	Community engagement activities during program implementation	Indicator	✓	✓	✓
Equity_45	Community engagement activities during program assessment	Indicator		✓	✓
Equity_46	Energy and climate benefits (monetized within TSB)	Indicator		✓	✓
Equity_47	Health - "non-energy benefits" in "counts of participants receiving this benefit" until we can monetize. Reporting at least one of: Indoor air quality, Outdoor air quality (e.g., reduction in emissions from gas combustion appliances that vent to nearby outdoor air), Reduction in interior contaminants/biologics, other	Indicator	✓	✓	✓
Equity_48	Comfort - "non-energy benefits" in "counts of participants receiving this benefit" until we can monetize. Reporting at least one of: reduced drafts, quieter interior, managed interior temp, other	Indicator	✓	✓	✓
Equity_49	Safety -"non-energy benefits" in "counts of participants receiving this benefit" until we can monetize. Reporting at least one of: improved safety of appliances, other	Indicator	✓	✓	✓
Equity_50	Economic or other "non-energy benefits" (as proposed by the PAs or program) in dollars or "counts of participants receiving this benefit" until we can monetize	Indicator	✓	✓	✓
MS_1	Number and % increase/decrease of inquiries and/or requests for information on EE products and services through relevant Market Support programs	Metric		✓	✓
MS_2	Number and % increase/decrease of customers receiving information, education, or outreach on EE projects, products, and services through relevant Market Support programs	Metric	✓*	✓	✓
MS_3	% of customer sample aware of EE product/service (awareness)	Metric		✓	✓
MS_4	% of customer sample that is knowledgeable of EE product/service's benefits (knowledge)	Metric		✓	✓
MS_5	% of customer sample that is interested in obtaining an EE product/service (attitude)	Metric		✓	✓

Index	Metric/Indicator Description	Metric/ Indicator	BayREN ⁸⁷	3C-REN	SoCalREN
MS_6	% of customer sample that has taken action towards obtaining EE product/service (behavior a)	Indicator - BayREN Metric - SoCalREN, 3C-REN	✓	✓	✓
MS_7	% of customers that have obtained EE products/services (behavior b)	Metric	✓	✓	✓
301	Number of collaborations by Business Plan sector to jointly develop or share training materials or resources.	Metric		✓	✓
302	Number of participants by sector	Metric		✓	✓
303	Percent of participation relative to eligible target population for curriculum	Metric		✓	✓
304	Percent of total WE&T training program participants that meet the definition of disadvantaged worker.	Metric		✓	✓
305	Percent of incentive dollars spent on contracts with a demonstrated commitment to provide career pathways to disadvantaged workers	Metric		✓	✓
306	Number Career & Workforce Readiness (CWR) participants who have been employed for 12 months after receiving the training	Metric		✓	✓
MS_8	Number of Contractors (that serve in PA service territory) with knowledge and trained by relevant Market Support programs to provide quality installations that optimize EE	Metric		✓	✓
MS_9	% of market actors aware of energy efficient products and/or services that can be supplied to customers (awareness)	Metric		✓	✓
MS_10	% of market actors knowledgeable of energy efficient products and/or services that can be supplied to customers (knowledge)	Metric	✓*	✓	✓
MS_11	% of market actors that are interested in supplying energy efficient products and/or services to customers (attitude)	Metric		✓	✓
MS_12	% of market actors that have supplied energy efficient products and/or services to customers (behavior)	Metric		✓	✓
MS_13	% of market actors aware of what is required to perform/ensure quality installation of energy efficient products and/or services that optimizes energy efficiency savings (awareness)	Metric		✓	✓
MS_14	% of market actors knowledgeable of how to perform to perform/ensure quality installation of energy efficient products and/or services that optimizes energy efficiency savings (knowledge)	Metric		✓	✓
MS_15	% of market actors that are interested in performing/ensuring quality installation of energy efficient products and/or services that optimizes energy efficiency savings (attitude)	Metric		✓	✓
MS_16	% of market actors that have performed/ensured quality installation of energy efficient products and/or services that optimizes energy efficiency savings (behavior)	Metric		✓	✓
MS_17	Number of EE customers/market actors reached through partner networks and partner communications channels	Indicator - BayREN Metric - SoCalREN, 3C-REN	✓	✓	
MS_18	Assessed value of the partnership by partners	Indicator - BayREN Metric - SoCalREN, 3C-REN	✓	✓	
MS_19	% of partners that have taken action supporting energy efficiency	Metric		✓	✓
MS_20	Number of partners by type and purpose	Metric - BayREN Indicator - SoCalREN, 3C-REN	✓*	✓	✓
MS_21	Dollar value of non-ratepayer in kind funds/contributions utilized via partnerships	Indicator		✓	✓
314	Number of partners by type and purpose	Metric			✓

Index	Metric/Indicator Description	Metric/ Indicator	BayREN ⁸⁷	3C-REN	SoCaREN
315	Dollar value of non-ratepayer in kind funds/contributions utilized via partnerships	Metric			✓
316	Savings of measures currently in the portfolio that were supported by ETP, added since 2009. Ex-ante with gross and net for all measures, with ex-post where available.	Metric			✓
317	Number of new, validated technologies recommended to CalTF	Metric			✓
318	Number of market support projects (outside of ETP) that validate the technical performance, market and market barrier knowledge, and/or effective program interventions of an emerging/under-utilized or existing energy efficient technology	Metric			✓
319	Cost effectiveness of a technology prior to market support programs relative to cost effectiveness of a technology after intervention by the market support programs (% change in cost effectiveness)	Metric			✓
320	Percent market penetration of emerging/under-utilized or existing EE products or services	Metric			✓
MS_22	Percent market participant aware of emerging/under-utilized or existing EE products or services	Metric			✓
MS_23	Aggregated confidence level in performance verification by product, project, and service (for relevant programs)	Metric	✓*		✓
MS_24	Number of providers for performance verification services	Metric			✓
MS_25	Participant data, e.g., credit score, census tract income, CalEnviroScreen Scores of areas served, zip code	Metric			
MS_26	Comparisons between market-rate capital vs. capital accessed via EE programs, e.g., interest rate, monthly payment	Metric			✓
MS_27	Total projects completed/measures installed and dollar value of consolidated projects	Metric			✓
MS_28	Number of providers for performance verification services	Indicator			✓
MS_29	Ratio of ratepayer funds allocated to private capital leveraged	Metric			✓
MS_30	Differential of cost defrayed from customers (e.g., difference between comparable market rate products and program products).	Metric			✓
MS_31	% of market participants aware of capital access opportunities for investments in energy efficient projects, products, and/or services (awareness)	Indicator- BayREN Metric - SoCaREN	✓*		✓
MS_32	% of market participants knowledgeable about capital access opportunities for investments in energy efficient projects, products, and/or services (knowledge)	Metric			✓
MS_33	% of market participants interested in leveraging capital access opportunities for investments in energy efficient projects, products, and/or services (attitude)	Metric			✓
MS_34	% of market participants that were unable to take action due to access to capital or affordability of energy efficient projects, products, or services (behavior)	Metric			✓
MS_35	% of market participants knowledgeable about capital access opportunities for investments in energy efficient projects, products, and/or services (knowledge)	Metric			✓
MS_36	% of market participants interested in leveraging capital access opportunities for investments in energy efficient projects, products, and/or services (attitude)	Metric			✓
MS_37	% of market participants that were unable to take action due to access to capital or affordability of energy efficient projects, products, or services (behavior)	Metric			✓
Total			28	57	95

Through our research, the evaluation team learned from REN staff that they will not be able to set baselines or targets for statewide metrics/indicators until they are approved with their applications filed in March 2022. However, in the meantime the RENs are preparing to collect data for the new metrics and indicators. To that end, the RENs provided the following status updates regarding establishing baselines and targets for statewide metrics/indicators.

- SoCalREN indicated it has not collected any data regarding the statewide Market Support and Equity metrics as they have not been approved by the CPUC. However, SoCalREN also indicated that some current value metrics or internally tracked metrics would likely be useable to begin preparing statewide metric/indicator baselines and targets.⁸⁸ During subsequent interviews with SoCalREN staff, they indicated that as with their REN-specific value metrics, they anticipate generally being able to set baselines and targets with as little as one year of program data—if they are able to supplement the new program data with other external data and if they receive all requisite supporting data from the IOUs in a timely manner.
- SoCalREN also stated that “if the CAEECC Equity and Market Support Metrics are adopted before end of [2022], then 2022 could be utilized as a baseline and targets could be developed and filed in PY 2023. However, if the [CPUC] decision on metrics goes beyond 2022, then subsequent target development would be delayed.”⁸⁹
- BayREN shared their internal workbook used for data collection for both statewide and REN-specific value metrics/indicators. The workbook breaks out the data by program and lists the applicable statewide and value metrics for each program. BayREN program managers have begun collecting data for some statewide metrics, some of which had previous tracking data, and some of which started being tracked in 2022. BayREN has not begun collecting data for certain statewide metrics that are based on new programs that begin in 2024—assuming approval of their application—or for certain metrics that do not have a defined methodology yet. At the time of this report, available achievements for these metrics have been logged for program years 2021-2022 Q3.
 - As of this report, BayREN has collected data on some statewide metrics/indicators, that relate to the following programs: Water Upgrade \$aves, Green Labeling, BayREN Business , Single Family (Rising Sun), Single Family (CLEAResult), Climate Careers, Codes and Standards. However, while BayREN has collected some amount program data for these metrics/indicators, the BayREN staff state they still need additional data before they can confidently set baselines and targets.
 - BayREN also provided a detailed memorandum on their next steps to ensure that they have well documented and robust metrics and indicators for the 2024-2027 timeframe. The memorandum identifies 28 metrics/indicators in the equity and market support segments that require follow up or research. The memorandum states that “while BayREN will be submitting a filing in September 2023, it may be beneficial for BayREN to provide updated values to the CPUC before September to show actual values for targets while the CPUC is making decisions on the 2024-2027 program.” BayREN proposes to complete this additional research in mid-April of 2023, at which point they can determine targets for their 2024-2027 programs.
- 3C-REN noted in its response to the evaluation team’s data request that it is assessing the feasibility of data collection to inform Market Support and Equity metrics/indicators in program year 2022 and 2023. This ongoing work includes coordinating with 3C-REN’s program managers and implementation partners, and it is also informed by recent stakeholder discussions facilitated by ED.

⁸⁸ SoCalREN Response_CPUC 22B Year 4 REN Request - 12-02-2022

⁸⁹ SoCalREN Response- CPUC- REN Metrics Data Request – 09-09-2022

- 3C-REN established a data collection methodology for the Equity_1, Equity_6 and Equity_23 metrics (see Table 30) and has begun collecting the necessary data to report on these metrics. However, 3C-REN staff noted a limited number of projects in the pipeline for Equity programs through 2022. Consequently, setting baselines for these metrics remains infeasible until 2024. 3C-REN indicates that target setting for these metrics should follow about three months after baselines are finalized.
- 3C-REN reported already having the requisite baseline data for their WE&T metrics (index numbers 301, 302, 303, and 304 in Table 30). Targets for these metrics were reported in 3C-REN's application filing⁹⁰.
- 3C-REN's understanding is that for many of their Market Support metrics (including MS_9, MS_10, MS_11, MS_12, MS_13, MS_14, MS_15, and MS_16 in Table 30) the requisite data will be collected via a statewide effort. Once this data is available 3C-REN plans to set baselines and targets and report on these metrics accordingly.
- 3C-REN has not reported previously on metric MS_19 (Table 30) because it is new. However, 3C-REN staff indicated they are actively collecting data for it, and they plan to set a target for this metric by April 15, 2023.

In addition to providing these updates, the RENs also identified multiple challenges related to data collection for statewide metrics and indicators. These challenges include:

- Uncertainty around data collection practices for some Equity and Market Support segment metrics, such as:
 - How to best ask customers for invasive or sensitive customer data (e.g., customer income), or how to minimize the need to collect this type of data.
 - How RENs can work with the IOUs to gain timely access to customer utility bills so that they can quantify bill savings, or alternatively develop for CPUC-approval an approach for estimating bill savings using proxy values.
 - Some RENs expressed particular concern regarding metrics/indicators related to bill savings because RENs do not have the same access to billing data that the IOUs have. While proxies are one option, RENs are also concerned it may be difficult to provide something accurate, and they do not want bill savings related metrics/indicators to be too far removed from the other types of data that RENs can reliably gather on a regular basis.
- Needing to coordinate among all PAs to finalize methodology and procedures for using survey responses to collect statewide metric/indicator data.
- Needing to conduct evaluation activities before reporting on select metrics/indicators. An example of these are the metrics/indicators where the methodology consists of estimating non-energy benefits regarding health and safety. Since these metrics/indicators require separate evaluation research, RENs and other PAs may have to expedite this research to provide this information starting in 2024. Conversely, they may need to seek data from outside entities such as air quality management districts, other government bodies, or industry groups, which gives rise to questions of whether such exogenous data would be reliably available, suitably accurate, and feasibly obtainable in a timely manner.

⁹⁰ See the Budget Filing Appendix Tabs 17, 18.1 and 18.2 from 3C-REN's application for a full list of the REN's program metrics

The evaluation team observes that if issues such as these are not addressed in a coordinated manner by not only the RENs but all PAs, then RENs will not be able to set baselines and targets or adequately report on their full complement of statewide metrics/indicators. Moreover, during interviews all three RENs indicated their desire to receive further direction from the CPUC to assist in resolving these issues. Multiple RENs suggested that the CPUC conduct a workshop to discuss these issues and craft a plan for resolving them within six to twelve months. The evaluation team agrees and recommends as part of this workshop that organizers bring in an expert who is well versed in collecting sensitive demographic information from program participants at the same level of detail as what is currently proposed in the statewide metrics/indicators. Key topics of this workshop should include:

- Helping PAs to define a compelling reason for customers to provide sensitive demographic information.
- Evaluating the value of what programs, and related incentives, offer compared to what is being asked from the customer.
- Assessing acceptable proxies to be used if it is not possible/reasonable to ask for some sensitive information (e.g., income information), particularly information that PAs may not be able to validate.
- Identifying other governmental or utility programs that have been able to successfully collect sensitive demographic data with minimum to no incentives.

REN staff also reiterated their stance on the timing of setting statewide metric/indicator targets as discussed in the CAEECC market support and equity working groups. In these working groups, all the RENs supported option 1 over option 2.⁹¹ Option 1 opts to set targets following the first two program years of data collection, and provides the following rationale⁹²:

All Market Support [and Equity] segment metrics should have meaningful targets based on available data. Since little or no data exists for new programs, pilots and/or programs still being designed, targets cannot be reasonably established. Similarly, existing programs that are moved into the Market Support [and Equity] segment may not necessarily have relevant data to be able to report on the newly determined Market Support segment metrics. PAs should have the time to collect baseline data so that targets are both appropriate and reportable. Additionally, D.18-05-041 OP9 allows for new or modified metrics or indicators to be proposed in annual budget advice letter filings. Therefore, tier 2 advice letters (such as the True Up Advice Letter) may be an appropriate avenue for also providing targets.

Based on our analysis, the evaluation team finds it reasonable that the RENs have not yet set clear and measurable baselines and targets for their statewide metrics/indicators because they do not know if their programs, budgets and/or metrics and indicators will be approved. Beyond awaiting approval, additional work remains before the RENs and other PAs can adequately report on all their statewide metrics and indicators. The evaluation team recommends that the CPUC convene a workshop for all PAs to discuss outstanding issues, develop plans to address them, and establish a timeframe within which the issues should be resolved. The evaluation team suggests the CAEECC as the best mechanism for the PAs to coordinate and develop an agreed upon approach. In terms of timing, the evaluation team agrees with the RENs that two years of data collection will be necessary for establishing baselines and targets for most statewide metrics, particularly those

⁹¹ In the EMWG final report SoCalREN is documented as supporting Option 2, wherein PAs will “propose targets and/or set a date certain by which they will propose targets for all Equity segment metrics.” But SoCalREN later clarified their support for Option 1 for both the Equity and Market Support segment metrics in their 2024-2027 Portfolio Plan on page 78.

⁹² MSMWG Final Report, page 10 and EMWG Final Report, page 12

associated with new programs or those that require extensive data collection procedures such as Market Support metrics that call for coordinated surveys across multiple PA territories. If RENs can report on some statewide metrics sooner because they can use external data to supplement the first year of program data, or if they can rely on pre-existing historical data, then they should do so. Data collection for statewide indicators should start promptly after the approval and launch of any programs in 2024, with annual reporting of results after each year of operation.

The evaluation team’s review of the RENs’ proposed statewide metrics/indicators also identified three areas where the RENs maintained different statewide metric/indicator reporting structures and thus should coordinate to make their structures more consistent across RENs.

1. For most statewide metrics/indicators the RENs aligned on whether a given index should be classified as a metric or indicator. However, as shown in Table 31 the RENs differed in their positions on whether six proposed indices should be metrics or indicators. Five of these divergencies occurred in the market support segment and one occurred in the equity segment. BayREN and SoCalREN maintained contrary positions on all six indices. 3C-REN and SoCalREN agreed on the classification of five of the six indices. On the sixth 3C-REN found it not applicable. The evaluation team recommends the RENs align their classification of these six statewide indices as either metrics or indicators to make them consistent across RENs and simplify future statewide metric reporting and review processes.

Table 31.Divergent REN Statewide Indexes

Index	Metric/Indicator Description	BayREN	3C-REN	SoCalREN
Equity_26	Expected first-year bill savings in total \$ for equity-targeted program participants (metric)	Indicator	Metric	Metric
MS_6	% of customer sample that has taken action towards obtaining EE product/service (behavior a)	Indicator	Metric	Metric
MS_17	Number of EE customers/market actors reached through partner networks and partner communications channels	Indicator	Metric	Metric
MS_18	Assessed value of the partnership by partners	Indicator	Metric	Metric
MS_20	Number of partners by type and purpose	Metric	Indicator	Indicator
MS_31	% of market participants aware of capital access opportunities for investments in energy efficient projects, products, and/or services (awareness)	Indicator	Not Applicable	Metric

2. BayREN has seven metrics/indicators broken into sub-metrics/indicators in their application filing, whereas SoCalREN and 3C-REN did not use any sub-metrics/indicators. These metrics/indicators include:
 - **Equity_1:** Total number residential (SF or MF unit) equity-targeted households (HHs) served by the Equity programs.
 - **Equity_24:** Total number (indicator for all) [and percent (metric for PAs with no relevant legal restriction)] of contractors and/or workers that are disadvantaged workers or otherwise underrepresented, who are directly involved in implementing Equity Segment programs.
 - **MS_2:** Number and percent increase/decrease of customers receiving information, education, or outreach on EE projects, products, and services through relevant Market Support programs.
 - **MS_10:** Percent of market actors knowledgeable of energy efficient products and/or services that can be supplied to customers (knowledge).
 - **MS_20:** Number of partners by type and purpose.

- **MS_23:** Aggregated confidence level in performance verification by product, project, and service (for relevant programs)
- **MS_31:** Percent of market participants aware of capital access opportunities for investments in energy efficient projects, products, and/or services (awareness)

For example, BayREN broke Equity_1 into two separate sub-metrics. The first sub-metric/indicator measures the number of single-family equity targeted households, while the second measures the number of multifamily equity targeted households. For each of these, the evaluation team recommends the RENs coordinate on whether these indices need sub-metrics/indicators to be reported separately or if the sub-metrics might be tracked separately but be rolled into a total value that is reported as a singular metric/indicator. The evaluation team's intent with this recommendation is to encourage maximal alignment among the RENs when reporting their statewide metrics.

3. In BayREN's application filing budget appendix spreadsheet workbook,⁹³ tabs 18.1 "Equity Segment Metrics" and 18.2 "Market Support Segment Metrics", include all Equity and Market Support segment metrics. Since BayREN treats all statewide metrics also as value metrics, all of BayREN's value metrics are also found within this tab. However not all value metrics/indicators are statewide metrics/indicators, so BayREN developed an indexing approach to differentiate between them. In their application they distinguished this by placing "BVM" at the end of the metric index, or in the middle in the metric index as shown below.

- **[segment]_[number]_[BVM]** represents a metric/indicator that is both a CAEECC developed statewide metric and a value metric (e.g., Equity_01_BVM).
- **[segment]_[BVM]_[number]** represents a metric/indicator that is a value metric but is not a CAEECC developed statewide metric (e.g., MS_BVM_01).

The evaluation team finds BayREN's approach of classifying all statewide metrics/indicators as value metrics/indicators to be accurate in that these metrics/indicators are also representative of the value BayREN provides through its programs. In addition, BayREN's method of indicating through the index number whether a metric/indicator is a CAEECC developed statewide metric or not is beneficial for the CPUC and future evaluators to distinguish the type of metric being reported and to note any overlaps among value and statewide metrics/indicators. In comparison, SoCalREN and 3C-REN's business plan application workbooks do not follow this approach. Because they do not employ an easy to identify system for distinguishing metrics, the evaluation team found it extremely difficult to identify overlaps among their respective value and statewide metrics/indicators. Accordingly, the evaluation team recommends that other RENs also classify all their statewide metrics/indicators as value metrics and adopt a unified approach to distinguishing these metrics/indicators.

That said, while quite helpful, the evaluation team nonetheless found BayREN's placement of the same term "BVM" at different points within the index label to make it unnecessarily difficult to distinguish at a glance. Thus, we recommend that rather than using the placement of a singular denotation such as "BVM" at differing points, the RENs instead consider applying a set of distinct but standardized characters as either a suffix or prefix to the index name, such as Equity_01_XXX or Equity_01_YYY, where XXX (or equivalent agreed upon acronym) denotes a metric/index that is not a CAEECC developed statewide metric

⁹³ CAEECC website, 2024-2031 Business Plan & Application Documents. <https://www.caeccc.org/2022-business-plan-application-document>

and where YYY (or equivalent agreed upon acronym) denotes a metric/index that is both a value metric and a CAEECC developed statewide metric.

In addition, RENs should ensure they consistently use a metric/indicator’s corresponding index number (and prefix or suffix) whenever it is mentioned so that the CPUC and future evaluators can easily distinguish metrics/indicators across different filings and reports.

5. Metrics Considerations

The previous sections of this report summarize the RENs’ progress toward establishing their value and statewide metrics/indicators, as well as assessing the extent to which the RENs have been able to set baselines and targets for their metrics. Currently, the quantity and complexity of these metrics/indicators, as well as the nuanced differences in the way these metrics/indicators are reported by the RENs, make it difficult for stakeholders to understand the RENs’ progress with collecting, setting, and reporting on their metrics/indicators. This complexity notwithstanding, Table 32 condenses the RENs’ progress on value and statewide metrics/indicators into a simplified table. However, we remind readers of this report that the table below presents a static snapshot of the RENs’ continual progress regarding their metrics/indicators.

Table 32. REN Metrics/Indicators Progress at a Glance

Metric/Indicator Activity	SoCalREN	3C-REN	BayREN
Collect Value Metric Baseline Data	●	●	●
Set Value Metric Baselines	●	●	●
Set Value Metric Targets	●	○	○
Report 2022 Value Metric/Indicator Achievements	○	○	○
Collect Statewide Metrics Baseline Data	○	○	○
Set Statewide Metric Baselines	○	○	○
Set Statewide Metric Targets	○	○	○
Report 2022 Statewide Metric/Indicator Achievements	○	○	○
Develop a Shared REN Metric	○	○	○
Document and Demonstrate Unique Value	●	●	●

Key: ● Completed ○ In Progress ○ Not Yet Started

As of the writing of this report, the RENs have successfully collected baseline data and set baselines for their value metrics. The exception being those value metrics that are also statewide metrics or those metrics that are associated with a program that has yet to launch or has recently undergone substantial program design modifications. The RENs continue to document their unique values through their annual reports, and they plan to demonstrate their value when reporting the 2022 value metric/indicator achievement data to be reported later this year. As of this report, SoCalREN currently stands as the only REN to have finalized targets for these value metrics in its application⁹⁴. While 3C-REN and BayREN expect to set targets for their value metrics in approximately April of 2023. Once the RENs receive CPUC approval of their applications and their

⁹⁴ 2024-2031 Strategic Business Plan, 2024-2027 Portfolio Plan, and Budget filed in March 2022

statewide metrics, they will start to collect baseline data and prepare targets. Meanwhile, the RENs are considering the most effective means and sources for collecting this new data. For instance, BayREN asked its program leads to collect data to contribute to new metrics, and they are working to identify any appropriate existing or predecessor programs that may yield enough information to help establish targets. However, despite comparable activities by the other RENs as well, all three point out the necessity of additional research and coordination across all PAs to appropriately collect data, establish baselines, and set targets for the full suite of statewide, CAEECC-proposed metrics. Moreover, the RENs are now coordinating on a shared REN metric as mentioned in their recent rebuttal testimonies. This shared metric is still in the conceptual phase and the RENs have not yet agreed on a final methodology.

Given this progress on value and statewide metrics/indicators, the evaluation team finds the RENs' believe their filed and approved value metrics to be reasonably achievable in 2024-2027. Since we have been unable to review specific value metric targets, except for those proposed by SoCalREN, this assessment is based on the confidence the RENs expressed in their program leads. During interviews, REN leadership staff spoke with conviction that their program leads understand their associated metrics and the program objectives to be accomplished to meet these metrics/indicators.

The evaluation team does not find the RENs' statewide metrics to be reasonably achievable until the outstanding issues described in the Statewide Metrics section of this report are fully addressed. The evaluation team notes our concern that once value, and statewide and shared REN metrics are all approved and operational, there will be too many metrics for the CPUC to properly assess to inform CPUC decisions. Thus, we recommend reducing the complexity of these metrics by:

- Adopting BayREN's approach of treating all statewide metrics/indicators as simultaneous value metrics/indicators. This should help to simplify the structure of metrics.
- Limiting each program to a small number of value and/or statewide metrics (such as three to five) key performance indicators and then regarding any additional metrics beyond the primary ones as indicators.
 - Limiting the number of metrics will make them more actionable by focusing attention on the key objectives of each program. Such an approach would also be beneficial for the CPUC and evaluators given the volume of tracking information, including the 300 plus common metrics, that already exists to inform decisions.

In summary, narrowing the number of metrics and their associated baselines and targets will make it easier to track, report, review and assess targets, while keeping PAs accountable to meeting their metrics.

As the RENs approach the end of their first full cycle of collecting, setting, and reporting on their value metrics/indicators, several lessons and best practices can be applied to improve the process for statewide Equity and Market Support metrics. These include:

- **Clarifying the purpose of metrics and how they are intended to be used to ensure metrics reflect the right level of detail.** The purpose of instructing the RENs to create value metrics was to have a quantifiable way for RENs to demonstrate their value. When the RENs were originally drafting their value metrics, many started by adding every key performance indicator or idea for a metric that they had. This was primarily driven by not fully understanding how their metrics were going to be used. This resulted in the RENs asking their implementers to track a wide range of data points that are time-consuming—and in some instances problematic—to collect due to rules regarding personally identifiable information (PII). It wasn't until after multiple engagements with ED staff, with this

evaluation team, and with Grounded Research, that the RENs identified the key data points best suited to illustrate in a quantitative manner what they are accomplishing via their core values and associated program activities. These key data points were primarily determined by the results of the previously described REN process evaluations conducted by Grounded Research. Those internal REN process evaluations led by Grounded Research, along with this evaluation team's recommendations and feedback regarding data collection processes, helped the RENs to succinctly link the data they were collecting to their core values and associated value metrics. However, the RENs continue to track additional metrics or indicators that are not reflected in their value metrics because these additional metrics remain useful for understanding how specific program elements are performing. Such details often serve to guide internal program management decision making without providing meaningful data to demonstrate REN value to external stakeholders. Consequently, many potential metrics/indicators may not align with the right level of detail for CPUC oversight, and these could potentially be considered detrimental since they add unnecessary complexity.

- The evaluation team observed a similar situation unfolding with the development of the statewide Market Support and Equity metrics. The RENs again expressed uncertainty about what is important to the CPUC. If CPUC or ED staff provide further clarity on why these metrics/indicators are needed and what they intend use them for, then the RENs and other PAs will be better equipped to collect and report on the Market Support and Equity metrics/indicators in ways that are helpful to the CPUC. Accordingly, the evaluation team recommends that the RENs, and other PAs, hear from the CPUC, perhaps through a facilitator, the importance of the data they're trying to collect and how these data will inform CPUC decisions in the future.
- A critical part of metrics data collection lies in the level of detail that the CPUC requires for it to be useful for CPUC purposes. To address this, RENs have asked questions such as:
 - At what level of detail does the CPUC desire these metrics to be reported?
 - Is the CPUC seeking a high-level overarching set of select metrics to judge market support and equity performance?
 - Does the CPUC desire a way to roll up these metrics across PAs from a statewide reporting perspective?
 - Or does the CPUC want something else?
- **Setting grace/transition periods, establishing timelines, and providing instructions for how RENs should file new metrics.** The evaluation team observed the RENs have generally been risk-adverse when it comes to setting metric targets and baselines. This was made evident by their reluctance to set value metric baselines and targets, as well as by their insistence on two years of baseline data before any targets can be set. However, this stance seems understandable because 1) it is difficult to forecast results for metrics with certainty, especially when dealing with a new set of metrics or when they pertain to a new or significantly changed program; and because 2) a lack of clarity regarding how metrics are intended to be used further incentivizes the RENs to approach baseline and target setting in a conservative manner.
- The evaluation team has also seen this risk-adverse stance reflected in the RENs' process for developing statewide metrics and shared REN performance metrics. While the RENs have made incremental progress preparing these metrics, this evaluation team suggests that CPUC consider:
 - Instituting a grace or transition period for new market support, equity, and shared performance metrics so the RENs can revise their metric baselines and targets without penalty while they and other stakeholders figure out how the metrics work in practice. This

- should give the RENs more confidence when setting initial baselines and targets despite it being difficult to forecast new metrics accurately. This should also help to prompt the RENs to establish baselines and targets more quickly than they have done in previous cycles.
- Providing clear guidance on the desired timeline for RENs to finalize new metrics/indicators including any required baseline and target setting of new metrics. This is particularly important for any metrics that require coordination among PAs, such as the shared REN performance metric, statewide Market Support metrics requiring surveying, and statewide Equity metrics that still need definitions that are agreed upon by all PAs.
 - Direction should also be given regarding how any new metrics should be filed, such as via a Tier 1 or Tier 2 advice letter.
- **Vocalizing satisfaction or dissatisfaction with how metrics are progressing and providing feedback in a timely manner.** REN staff said that in the past they assumed the CPUC would eventually approve and/or provide feedback on their value metrics/indicators after filing. However, REN staff reported that they have not received any formal feedback on specific targets or achievements associated with these metrics/indicators, and thus the RENs have been under the assumption that the CPUC is satisfied with their metric/indicator related work to date. Some REN staff suggested that if the CPUC feels unsatisfied with their metric/indicator related work, then it would be beneficial to establish a process to enable the RENs to explain the nuances of why their value metrics were set as they were and why any reported values exceeded or underperformed expectations.
- If feedback is going to be provided by the CPUC, REN staff stated it would be most helpful to receive such feedback within one to two quarters. For instance, for true up advice letters filed in September, it would be beneficial to the RENs to receive the feedback prior the start of Q1 the following year, if possible. This would enable the RENs to respond to the feedback if needed and alter any metrics or data collection processes prior to the start of the year to ensure data collection remains standardized throughout the program year. The evaluation team agrees with this REN request since any accurate data collection necessarily relies on a confidence derived from CPUC approval of the REN's proposed metrics and targets. Any major changes to metrics/indicators—particularly changes occurring mid-program year—could result in data inconsistencies and misspent efforts and program funds. Thus, it is best to require filings and provide feedback as early as is reasonably possible.

In addition to these lessons and best practices, the evaluation team seeks to remind readers of several key findings and recommendations regarding REN segmentation strategies and metrics that were noted in our Year 2 REN Assessment and Year 3 REN Assessment. These include:

- **Year 2 Assessment Finding #5: Tracking protocols, methods and data currently differ among programs, especially across the three RENs.** Although it is logical for programs designed to deliver a unique value proposition to consequentially have unique value metrics, it is important from an evaluability perspective for there to be a set of common value metrics that can be assessed across programs and RENs. The new metrics requirements discussed in Decision 21-05-031 provide a mechanism to bring greater unanimity across the RENs and other PAs.
- **Recommendation:** All three RENs should prepare to provide, at a minimum, the following details for every value metric: applicable sectors, associated core value, data source, calculation methodology, reported value, unit, numerator (of reported value if applicable), denominator (of reported Value if applicable). In addition, RENs should ensure they have the necessary systems in place to streamline the collection, measurement and reporting of their value metrics. An example

of this level of value metric detail can be seen in Appendix A. REN-Wide Portfolio Metric Details Table of SoCalREN's 2021 ABAL.

- Although this Year 2 assessment finding and recommendation was originally directed towards REN value metrics, a consistent framework across RENs and other PAs for metrics reporting is equally applicable to statewide market support and equity metrics/indicators, and should be developed for the statewide metrics/indicators
- **Year 2 Assessment Finding #6: Process evaluations are useful for aligning core values with metrics.** BayREN conducted a formal process evaluation to gather a wide range of feedback from the CPUC, overlapping PAs and stakeholders in order to prepare a Core Value and Proposed Value Metrics Memo. The memo clearly outlines how BayREN's programs contribute in a unique way to the EE portfolio, as well as formally tying their metrics to Program Theory and Logic Models (PTLMs). During 2020, SoCalREN initiated a comparable formal process evaluation that includes assistance with core values and proposed value metrics. Those results [were] to be made public in 2021.
 - **Recommendation:** New RENs should include development of their core values and associated metrics in their feasibility and planning documents. This process should include discussions with CPUC representatives, overlapping PAs and a broad range of efforts to solicit stakeholder feedback such as jurisdiction-wide group discussions, online surveying, in-depth interviews, and feedback from local jurisdictions. After running programs long enough to establish baselines, RENs should conduct a thorough process evaluation to assess how effectively their programs are delivering on their initially stated value metrics.
- **Year 3 Assessment Finding #3: Focus on outcomes and demonstrating accountability.** Statewide 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' 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.
- **Year 3 Assessment Finding #4: Balance doing the best good with the most good.** Multiple implementers and trade allies expressed an interest in conveying the importance of balancing the insights gained from any new statewide or 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.

- **Year 3 Assessment Finding #7: Establish best practices for collecting sensitive information needed to report new metrics.** 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 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.

- **Year 3 Assessment Finding #8: Delineate metrics between those that can be collected by PAs through program-related data and metrics that require data from external organizations.** 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.

- **Year 3 Assessment Finding #9: Metrics must be crafted to consider the scope, scale, and budget of the program being measured.** 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 realtors⁹⁵ 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

⁹⁵ National Association of Realtors, <https://cdn.nar.realtor/sites/default/files/documents/monthly-membership-05-2022.pdf>

finds that in such cases, it may be appropriate for the RENs to work with the CPUC and third party evaluators to establish value metrics to report on program activities rather than using statewide metrics.

- **Year 3 Assessment Finding #11: Take steps to avoid double counting.** 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.).

6. Findings and Recommendations

This section summarizes key findings and recommendations from the research and evaluation activities conducted during the Year 4 Assessment.⁹⁶ Note that not all findings have an associated recommendation.

Overarching Findings

- **Finding #1: The table below provides an overview of REN metrics and indicators.** Currently, the quantity and complexity of value and statewide metrics/indicators, as well as the nuanced differences in the way these metrics/indicators are reported by the RENs, make it difficult for stakeholders to understand the RENs' progress with collecting, setting, and reporting on their metrics/indicators. This complexity notwithstanding, Table 32 (shown previously), condenses the REN's progress on value and statewide metrics/indicators into a simplified table for stakeholders. Accordingly, the RENs have successfully collected baseline data and set baselines for their value metrics. The exception being those value metrics that are also statewide metrics or those metrics that are associated with a program that has yet to launch or has recently undergone substantial program design modifications. The RENs also continue to document their unique values through their annual reports, and they plan to demonstrate their value when reporting the 2022 value metric/indicator achievement data to be reported later this year. As of this report, SoCalREN currently stands as the only REN to have finalized targets for these value metrics in its application.⁹⁷ 3C-REN and BayREN expect to set targets for their value metrics in approximately April of 2023. Once the RENs receive CPUC approval of their applications and the statewide metrics, they will start to collect baseline data and prepare targets. Meanwhile, the RENs are considering the most effective means and sources for collecting this new data. All three RENs point out the necessity of additional research and coordination across all PAs to appropriately collect data, establish baselines, and set targets for the full suite of statewide, CAEECC-proposed metrics. Moreover, the RENs are now coordinating on a shared REN metric as mentioned in their recent rebuttal testimonies. However, this shared metric remains in the conceptual phase and the RENs have not yet agreed on a final methodology.

Value Metric/Indicator Findings

- **Finding #2: REN metrics demonstrate their core values⁹⁸.** The evaluation team finds that the RENs' value metrics/indicators continue to be clearly linked to their core values, as demonstrated in their respective process evaluations and data. Furthermore, the RENs recent modifications to their value metrics have resulted in alignment with not only their core values but also the statewide segments of RA, MS, and Equity. By aligning each value metric to a given market segment the RENs have positioned themselves to succinctly demonstrate the unique value they provide to each segment of their portfolios.
- **Finding #3: SoCalREN has set clear and measurable targets for their value metrics.** Based on a review of SoCalREN's proposed baseline and targets, the evaluation team concludes that this REN has set

⁹⁶ Please see section 5 for additional past findings and recommendations regarding REN segmentation strategies and metrics that were noted in our Year 2 REN Assessment and Year 3 REN Assessment.

⁹⁷ 2024-2027 Portfolio Plan and 2024-2031 Business Plan submitted March 2022

⁹⁸ SoCalREN's core values are: delivering energy and climate impacts; building energy capacity and economic resilience; and expanding access to energy efficiency benefits. BayREN's core values are: building human and organizational infrastructure; obtaining energy savings locally while also supporting local difficult to serve (LDTs) populations; and testing innovative solutions. 3C-REN's core values are: diversity, equity and inclusion; service; climate action; and economic impact. More information on each of the RENs' core values can be found in chapter 3.

clear and measurable targets for their value metrics as evidenced by clearly delineated value metric baseline years and values, as well as by the presence of individual targets for all currently approved sectors for program years 2024 through 2027. Based on our review of SoCalREN's data, internal dashboards, and in-depth interviews, the evaluation team also finds that all proposed value metrics appear to be suitable for quantitative assessments once final targets and baselines are approved by the CPUC. This conclusion is also evident based on SoCalREN staff stating in interviews that they will be including 2022 value metrics achievements in their 2022 annual report.

In addition, SoCalREN staff indicated a high degree of confidence that their proposed targets for 2024-2027 are reasonably achievable, assuming corresponding budgets are approved. However, because SoCalREN has not established targets for 2022, it is premature for the evaluation team to assess the extent to which they have met or fallen short of such targets in this study. Future studies that start in 2025 to evaluate the 2024 program year should be better positioned to assess REN performance to determine the margin by which they outperform/underperform compared to their associated targets and to determine the cause of any over/under performance.

- **Finding #4: BayREN's approach to metric setting emphasizes indicators and has not yet clarified measurable targets.** Based on our review of BayREN's value metrics/indicators data, and in-depth interviews, most of BayREN's value metrics/indicators proposed in their application are classified as indicators, rather than metrics, and thus will not require baselines or targets. Furthermore, all but two of their value metrics are also designated as statewide Market Support or Equity metrics. The evaluation team finds that while BayREN has set baselines for the two non-statewide value metrics, BayREN has not yet set clear and measurable targets for them. For their other value metrics that are also statewide metrics, they have not yet set baselines or targets because statewide metrics remain to be approved by the CPUC.
- **Finding #5: 3C-REN established three of four baselines for its value metrics but has not yet set clear targets.** Based on the evaluation team's review of 3C-REN's value metrics/indicators and on our in-depth interviews, we find that 3C-REN has established clear baselines for three of four value metrics, but 3C-REN has not yet set clear targets for these value metrics. 3C-REN expects to fully release its targets for these three-value metrics in April 2023, shortly after the finalization of this report. In addition, the evaluation team finds it reasonable that due to its recent program design modifications, 3C-REN does not have enough information to set a target for metric 330_3C_VM in their upcoming annual report. Metric 330_3C_VM measures the "number of Tri-County member jurisdictions receiving annual 3C-REN data that informs member jurisdictions achievements toward climate action plans GHG emission reduction goals." All proposed value metrics appear to be suitable for quantitative assessments once final targets and baselines are approved. We base this conclusion in part on 3C-REN's preparedness to release baselines and targets for the majority of their value metrics in their upcoming 2022 annual report.

In addition, during interviews 3C-REN staff indicated that they are confident targets for the Workforce, Education and Training (WE&T) and Codes and Standards (C&S) value metrics will be reasonably achievable, assuming corresponding budgets are approved. Since 3C-REN has not yet established targets for 2022, it is premature to assess the extent to which they have met or fallen short of targets in this study. Starting in 2025, future studies covering program year 2024 and beyond should be able to assess 3C-REN's performance compared to their established targets and determine the margins by which 3C-REN outperforms/underperforms, as well as the cause of any over/under performance.

- **Finding #6: The three RENs believe that their previously filed and approved value metrics will be achievable on a yearly basis for 2024-2027.** REN leadership staff spoke with conviction that their program leads understand their associated metrics and the program objectives can be accomplished

to meet these metrics/indicators. However, since the evaluation team was only able to review a limited number of value metric targets, we base our assessment primarily on the confidence the RENS expressed in their program leads rather than on a comprehensive assessment of REN value metrics.

- **Finding #7: The RENS' statewide metrics will not be reasonably achievable until multiple challenges and issues are fully addressed.** The CPUC should convene a workshop for all PAs to resolve matters. Additional work remains before the RENS and other PAs can adequately report on all their statewide metrics and indicators. Accordingly, the evaluation team does not find the RENS' statewide metrics to be reasonably achievable until these issues are fully addressed. Identified challenges related to data collection for statewide metrics and indicators include:
 - Uncertainty around data collection practices for some Equity and Market Support segment metrics. This includes 1) How to best ask customers for invasive or sensitive customer data, (e.g., customer income), or how to minimize the need to collect this type of data, and 2) How RENS can work with the IOUs to gain timely access to customer utility bills so that they can quantify bill savings, or alternatively develop, for CPUC-approval, an approach for estimating bill savings using proxy values. The RENS expressed particular concern regarding metrics/indicators related to bill savings because they do not have the same access to billing data as the IOUs. While proxies are one option, RENS are also concerned that it may be difficult to provide something accurate and they do not want bill savings-related metrics/indicators to be too far removed from the other types of data that RENS can reliably gather on a regular basis.
 - Needing to coordinate among all PAs to finalize methodology and procedures for using survey responses to collect statewide metric/indicator data.
 - Needing to conduct evaluation activities before reporting on select metrics/indicators. An example of these are the metrics/indicators where the methodology consists of estimating non-energy impacts regarding health and safety. Since these metrics/indicators require separate evaluation research, RENS and other PAs may have to expedite this research to provide this information starting in 2024. Conversely, they may need to seek data from outside entities such as air quality management districts, other government bodies, and/or industry groups, which gives rise to questions of whether such exogenous data would be reliably available, suitably accurate, and feasibly obtainable in a timely manner.
- **Recommendation:** The evaluation team recommends the CPUC convene a workshop for all PAs to discuss these outstanding issues, develop plans to address them, and establish a timeframe within which the issues should be resolved. The evaluation team suggests the CAEECC as the best mechanism for the PAs to coordinate and develop an agreed upon approach. In addition, the evaluation team recommends that as part of this process, the CPUC hold a workshop on the topic of collecting sensitive demographic information. As part of this workshop, organizers should bring in one or more experts well versed in collecting sensitive demographic information from program participants at the same level of detail as what is currently proposed in the statewide metrics/indicators. Key topics of this workshop should include:
 - Helping PAs to define a compelling reason for customers to provide this level of sensitive demographic information.
 - Evaluating the value of what programs offer customers compared to what is being asked for.

- Assessing acceptable proxies to be used if it is not possible/reasonable to ask for some sensitive information (e.g., income information), particularly information that PAs may not be able to validate.
- Identifying other governmental or utility programs that have successfully collected sensitive demographic data with minimum or no incentives.
- **Finding # 8: RENS and other PAs expressed interest in further discussing how the metrics data they collect will inform future CPUC oversight.** During interviews, REN staff expressed uncertainty about what is important to the CPUC. A critical part of metrics data collection lies in the level of detail that the CPUC requires for it to be useful for its purposes. To address this, RENS have asked questions such as:
 - At what level of detail does the CPUC desire these metrics to be reported?
 - Is the CPUC seeking a high-level overarching set of select metrics to judge Market Support and Equity performance?
 - Does the CPUC desire a way to roll up these metrics across PAs from a statewide reporting perspective?
 - Or does the CPUC want something else?
- **Recommendation:** Clarify the regulatory process of the Market Support and Equity metrics/indicators and how these metrics will be used to assess the performance of RENS and other PAs.
- **Finding # 9: The CPUC should consider providing clearer guidance on metrics, including timelines.** The RENS have generally been risk-adverse when it comes to setting metric targets and baselines, evident by their reluctance to set value metric baselines and targets, as well as by their insistence on two years of baseline data before any targets can be set. This stance is understandable because 1) it is difficult to forecast results for metrics with certainty, especially when dealing with a new set of metrics or when they pertain to a new or significantly changed program; and because 2) a lack of clarity regarding how metrics are intended to be used further incentivizes the RENS to approach baseline and target setting in a conservative manner. The evaluation team has also seen this risk-adverse stance reflected in the RENS' process for developing statewide metrics and shared REN performance metrics.
- **Recommendation:** While the RENS have made incremental progress preparing these metrics, the evaluation team suggests that CPUC consider the following:
 - Institute a grace or transition period for new MS, Equity, and shared performance metrics so the RENS can revise their metric baselines and targets without penalty while they and other stakeholders figure out how the metrics work in practice. This should give the RENS more confidence when setting initial baselines and targets despite it being difficult to forecast new metrics accurately. This should also help to prompt the RENS to establish baselines and targets more quickly than they have done in previous cycles.
 - Provide clear guidance on the desired timeline for RENS to finalize the creation and/or baseline and target setting of new metrics. This is particularly important for any metrics that require coordination among PAs, such as the shared REN performance metric, statewide Market Support metrics requiring surveying, and statewide Equity metrics that still need definitions that are agreed upon by all PAs.

- Give direction regarding how any new metrics should be filed, such as via a Tier 1 or Tier 2 advice letter.

Improvements to Metrics Data Collection and Reporting Processes

- **Finding #10: The evaluation team recommends establishing a clear process and timeline for the RENs to receive CPUC feedback regarding targets and metrics.** REN staff reported that they have not received clear feedback from the CPUC on specific targets or achievements associated with their metrics/indicators, and thus the RENs have been under the assumption that the CPUC is satisfied with their metric/indicator related work to date. In addition, any major changes to metrics/indicators—particularly changes occurring mid-program year—could result in data inconsistencies and misspent efforts and program funds. Thus, it is best that any feedback is provided as early as is reasonably possible.
- **Recommendation:** Because accurate data collection necessarily relies on a confidence derived from CPUC approval of the REN’s proposed metrics and targets, the evaluation team recommends the CPUC provide its feedback within one to two quarters with a particular sensitivity to the need for RENs to collect metrics consistently throughout a given program year. Additionally, if the CPUC determines it is unsatisfied with any REN metric/indicators or related work, then it would be beneficial to establish a process that enables the RENs to explain the nuances behind their value metrics, targets, and reasons why any reported values may have exceeded or underperformed expectations.

Finding #11: RENs and other PAs should consider opportunities to leverage external data sources to help fill gaps in their data used to establish targets. SoCalREN primarily relied on historical program data when it established the baselines and targets for its portfolio. However, SoCalREN also identified external public data sources that could be used to accurately fill gaps when the requisite data does not exist. For example, SoCalREN’s multi-family program team used real estate databases to supplement historical program data. The evaluation team identified this use of supplementary data sources as one reason why SoCalREN was able to set clear and measurable targets for most of their value metrics. Although such an approach may not be applicable for all sectors or programs, the evaluation team finds such efforts to be a creative and useful means to reduce the time needed to set targets for newly proposed programs.

- **Recommendation:** RENs and other PAs should consider opportunities to leverage external data sources to help fill gaps in their data used to establish targets. This is particularly relevant for new programs that will not be launched until 2024, since combining one year of historical data with external data may enable some targets to be set earlier than otherwise possible.
- **Finding #12: Reducing the number and complexity of metrics will make it easier to track, report, review and assess performance, while keeping PAs accountable for meeting their metrics.** The evaluation team feels concerned that once value, statewide and shared REN metrics are all approved and operational, there will be too many metrics for the CPUC to properly assess to inform CPUC decisions.
- **Recommendation:** Narrowing the number of metrics and their associated baselines and targets will make it easier to track, report, review and assess performance, while keeping PAs accountable for meeting their metrics. We recommend reducing the complexity of the full set of value, statewide and shared REN metrics by:
 - Adopting BayREN’s approach of treating all statewide metrics/indicators as simultaneous value metrics/indicators. This should help to simplify the structure of metrics. The evaluation

- team also recommends that if other RENs adopt this approach, that the RENs work together to develop and adopt a mutually agreed upon index nomenclature to establish a uniform syntax for labeling and reporting their statewide value metrics/indicators.
- Limiting each program to a small number of value and/or statewide metrics (such as three to five) key performance indicators and then regarding any additional metrics beyond the primary ones as indicators. Limiting the number of metrics will make them more actionable by focusing attention on the key objectives of each program. Such an approach would also be beneficial for the CPUC and evaluators given the volume of tracking information, including the 300 plus common metrics, that already exists to inform decisions.
 - **Finding #13: The RENs should align the six outstanding statewide indices as either metrics or indicators to ensure consistency in reporting and review processes.** For most statewide metrics/indicators, the RENs are aligned on whether a given index should be classified as a metric or indicator. However, the RENs differ in their positions on whether six proposed indices should be metrics or indicators. Five of these divergences occur in the Market Support segment; one lies in the Equity segment (See Table 31 in the body of the report for a full discussion.).
 - **Recommendation:** The evaluation team recommends the RENs align their classification of these six statewide indices as either metrics or indicators to make them consistent across RENs to simplify future statewide metric reporting and review processes.
 - **Finding #14: The CPUC should encourage maximal alignment among the RENs when reporting their statewide metrics.** BayREN has seven Market Support and Equity metrics/indicators broken into sub-metrics/indicators in their application filing, whereas SoCalREN and 3C-REN did not appear to use any sub-metrics/indicators. BayREN's first sub-metric/indicator measures the number of single-family equity targeted households, while the second measures the number of multifamily equity targeted households.
 - **Recommendation:** For each of these metrics/indicators, the evaluation team recommends the RENs coordinate on whether these indices need sub-metrics/indicators to be reported separately or if the sub-metrics might be tracked separately but be rolled into a total value that is reported as a singular metric/indicator. The evaluation team's intent with this recommendation is to encourage maximal alignment among the RENs when reporting their statewide metrics.

Appendix A. D22 REN Year 4 Interview Guide #1

The question sets below represent the range of inquiry we are investigating. Multiple interviews will be conducted to address all the topics with the most appropriate individuals, including REN management, program managers, and implementers involved in the collection of REN unique value metrics and Statewide Metrics (Market Support and Equity metrics). Key study questions we are looking to answer include:

- What quantitative targets or goals could the RENs reasonably achieve in 2024-2027 for their unique value metrics and their statewide Equity and Market Support metrics?⁹⁹
- How is each REN documenting and demonstrating its unique value?
- What lessons learned from the REN's unique value metrics can be applied to the statewide Equity and Market Support metrics?
 - Were some unique value metrics not possible to quantitatively assess if they were met or not?
 - What improvements need to be made to the REN unique value metrics, statewide equity and market support, and common metrics data collection and reporting process?
 - How has the process of creating statewide metrics for the market support and equity segments superseded the RENs efforts to create unique value metrics?

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.” The purpose of the following questions is to explore how each REN has since been implementing and documenting efforts to demonstrate their unique value.

1. Now that a year has passed since we last discussed your unique value metrics, please provide an overview of your REN's unique values and how they support your overall mission? How do those values relate to the key outcomes of your program offerings?
2. Based on our review of your CPUC filings we have identified [insert number] UVM's for your REN. Is this correct?
3. Please tell us about the key unique metrics that you plan to report to the CPUC and why you selected them.
4. Have any value metrics or their methodologies changed since the applications filed in March 2022? Did the CPUC's ED data request on 8.22.22 prompt any modifications? If so, what changed and why?

⁹⁹ Regarding common metrics, please see attachment A of D.18-05-041.

- a. According to our review of your data request response, there does not appear to be any changes to your methodologies.
5. Please explain your organization's process for collecting baseline data and setting targets for the portfolio. Does this process differ among sectors or segment (market support, equity)? When did these processes start and when do you expect baselines to be completed?
6. For which of your REN's unique value metrics have you completed the collection of baseline data? What years do your baselines cover? How do baselines differ between programs?
 - a. According to our review of your data request response, we identified [insert number] UVMs with baselines and targets.
7. For which value metrics are you currently collecting baseline data? When will that be complete?
8. For those value metrics for which you have not yet started collecting baseline data, please explain why not.
 - a. When do you anticipate starting to collect baseline data?
 - b. What needs to happen before you can begin collecting baseline data? How are you addressing this?
9. For which value metrics have you set targets? Please explain the metrics and the targets.
10. Which value metrics do not yet have set targets?
 - i. Please explain why these targets are not set yet.
 - ii. When do you anticipate setting targets for these metrics?
 - iii. What steps are you taking to establish these targets?
11. Among those value metrics with pre-established targets:
 - a. Which ones have you met? By what margin?
 - b. Which ones have not been met? By what margin are they off?
 - i. If the targets were not met, what were the reasons?
 - ii. If the targets were not met, what actions are you now taking to meet them?
 - iii. If the targets were not met, have you revised your original targets? If so, what are the new targets? Why is the new target more appropriate? Have you notified the CPUC of the change?
12. Please provide an overview of your REN's overarching approach for tracking and collecting value metric data. We would like to know the whole approach from establishing and communicating those metrics to ensuring they are incorporated into implementation, and carried through to reporting.
 - a. Are some value metrics more difficult to track and report on than initially expected? If so, how do you plan to improve collecting and reporting of these metrics?
 - b. Describe any barriers or challenges to tracking and measuring your unique value metrics you have already faced. What obstacles do you anticipate going forward?

- c. Do you feel that your REN and implementers have the appropriate data collection systems in place to provide underlying program data that can be used to confirm your reported metrics? What might be improved?
13. Do you feel that all your unique value metrics are clear and measurable? If not, why?
- a. What quantitative targets or goals do you feel are reasonably achievable in 2024-2027 for your REN's unique value metrics?
 - b. What level of detail will you be able to provide to the CPUC and/or future evaluators regarding your value metrics data?
14. Because numbers and metrics cannot fully capture the full value of a program or activity, what else are you currently doing or planning to do to document and demonstrate the unique value your REN provides? Please give examples.

Statewide Metrics (Market Support and Equity)

On May 26, 2021, D.21-05-031 stated that “[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 to weigh down portfolio-level cost effectiveness calculations.” To reduce the conflict between cost-effectiveness and other important policy objectives, D.21-05-031 adopted a new approach to segmenting the EE program portfolio into programs with primary purposes of resource acquisition, market support, or equity. 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 California Energy Efficiency Coordinating Committee (CAEECC) to develop and vet metrics for these types of programs. The CPUC will evaluate the PAs segmentation metrics in the 2024–2027 energy portfolio applications when deciding whether to approve the portfolio proposals. Since the topic of statewide metrics was recently covered in the Year 3 REN study, the purpose of the following questions is to identify any changes since that study, explore lessons learned from the process, and gauge the extent to which each REN has set clear and measurable targets.

15. Please reiterate for us the key statewide metrics that you plan to report to the CPUC and why you selected them.
- a. How did you choose which CAEECC proposed metrics to include in your 2022 application filing? Are there any CAEECC proposed metrics that you chose not to pursue? Why or why not?
 - b. What statewide metrics are you currently tracking? How are you tracking and reporting on these metrics?
 - c. In response to the evaluation team's data request, SoCalREN pointed to the March 2022 application filing as the latest source on its statewide metrics. Can you please provide clarity on how statewide and unique value metrics are differentiated in the application filing budget appendix spreadsheet?
 - d. For statewide metrics you have not begun tracking, explain why. When do you anticipate starting to track these metrics?
16. What lessons has your REN learned from the development of your unique value metrics, and how can they be applied to the statewide Equity and Market Support metrics?

- a. Are some statewide metrics not possible to quantitatively determine if they were met or not?
 - b. What changes, steps or recommendations can you suggest to improve the data collection and reporting process for REN unique value metrics, statewide Equity and Market Support, or other common metrics?
 - c. How has the effort to create statewide metrics for the market support and equity segments superseded the RENs unique value metrics efforts?
17. Which of your REN's statewide quantitative targets or goals do you feel are reasonably achievable in 2024-2027?

Concluding Remarks

18. Is there anything we haven't covered today that you would like to share with us to inform our report?

Appendix B. D22 REN Year 4 Interview Guide #2

Our current report is broken into three primary sections.

1. Background history on decisions, value metrics development and reporting to date, statewide metrics development through CAEECC, as well as the recent rebuttals and draft shared REN metrics. This section is primarily intended for readers who are not familiar with the history to understand the sections that follow.
2. Review and analysis of REN core values, baselines and targets (i.e., either set or timeline for setting, depending on REN and metric), and demonstratable value beyond metrics (i.e., select positive highlights from annual reports and last interview). This section primarily considers data request items and questions answered during our previous interview to address several of the research questions posed by the CPUC and included in our Year 4 Workplan.
3. Metrics Considerations. This section provides an opportunity for the RENs and evaluators to propose suggestions for a path forward and influence the upcoming proposed decision.

In order to address some of this study's research questions, the evaluation team intends for this section to:

1. Recommend modifications and/or best practices to make value and statewide metrics more **actionable and easily measured**.
2. Propose a **reasonable timeline** for when quantitative targets (i.e., value and statewide metrics) can be finalized, reported, and measured.
3. **Define a methodology** for the CPUC to accept baselines and targets.

Our goal with this follow-up interview is primarily to get your feedback on the metrics considerations section. We want to capture your opinions on each of these topics, and also ground truth our initial takes, which are based on the last set of interviews and on a review of all the data across the RENs. We have compiled a list of questions for you.

1. **SIMPLIFICATION** The evaluation team finds that the large number of metrics, as well as the added complexity of varying terminologies and timelines has the potential to create confusion among all stakeholders. What would you want us to recommend to the CPUC to make the metrics more actionable and easily measured? What can we do to reduce the complexity of the situation? Some ideas we've heard/had:
 - a. Remove the resource acquisition value metrics because they do not add incremental value, since TSB captures the value.
 - b. Remove the Common Metrics so that the RENs can condense the metrics and really focus on the ones that are of greater value to the CPUC and the public.
 - c. Institute a standardized way of indexing value and statewide metrics across filings and reporting mechanisms.
 - d. Define a uniform methodology for reporting value and statewide metrics from year-to-year (e.g., standard form that can be included in annual report/BBAL) as it is currently difficult to track changes to value metrics across years.
 - e. Improve accessibility to IOU data (i.e., for some metrics RENs use denominator data from the IOUs) for metrics reporting by mandating a XX-day response window for related data requests

2. **REN PERFORMANCE AND ACCOUNTABILITY** Which performance metrics and associated targets should the RENs be held accountable to?
 - a. How do you think the CPUC should use your value, statewide and community benefit metrics to assess your performance?
 - b. Is it reasonable for the CPUC to use value and/or statewide metrics as performance metrics, why or why not?
 - c. What should that accountability look like?
3. **TIMELINES** If you could set the timeline for when value and statewide metrics are finalized, reported and measured, how would you structure it?
 - a. When would you have baseline data finalized for value metrics? For statewide metrics?
 - i. Is there a preferred cadence for how often baseline data should be updated? (e.g., when programs change significantly, but then what is the threshold?)
 - b. When would you be able to finalize reasonably achievable targets for value metrics? For statewide metrics?
 - c. Is there a preferred cadence for how often targets should be updated? (e.g., need to allow for adjustment after budgets are approved)
 - d. When would you want to report your value metric achievements? How about statewide metrics?
 - e. Does it make sense to report metric achievements before targets are set? (i.e., if targets aren't set until 2024, does it make sense to still report on metrics in 2023? Why or why not?)
 - f. How much time do you think it will take to finalize the total community benefit metric across the RENs? What does that timeline look like?
 - g. What else is needed to finalize the Total Community Benefit metric?
 - h. What are the roadblocks if any?
4. **CPUC REVIEW AND APPROVAL** How do you envision the CPUC process of approving/modifying/denying baselines, targets and reported achievements for value metrics? How about for statewide metrics?
 - a. What is a reasonable timeline for you to get feedback from the CPUC on your baselines?
 - b. What is a reasonable timeline for you to get feedback from the CPUC on your targets?
 - c. What is a reasonable timeline for you to get feedback from the CPUC on your achievements?
5. **EXTENSION (ask if time permits)** Are there any other lessons learned from the value metrics process that can be applied to the statewide metrics?
 - a. For example, value metrics were drawn from pre-existing values and legacy metrics to meaningfully demonstrate the value of REN programs. How can that be applied to

statewide metrics when the statewide version needs to be consistent across multiple programs from multiple PAs?

- b. Have you learned anything about the process of collecting data on value metrics that should be applied in a standardized way for statement metrics?
 - c. Do you have any other suggestions recommendations?
- 6. STANDARDIZATION (Ask if time permits)** What are your recommendations for standardized criteria for establishing baselines and targets?
- a. For example, prior to setting targets, new programs in new sectors might require X years of baseline data, while new programs in sectors with similar programs may require Y years of data, and programs based on or modified from existing programs may be able to extrapolate from existing data. What sorts of data availability standards would you recommend?
 - b. Should there be standardized criteria for when an indicator should be used rather than a target?
 - c. Should standard criteria for value metrics be different from statewide metrics? Why or why not?
 - d. What other criteria should be standardized?
- 7. WRAP UP** Do you have any other recommendations or best practices?

Appendix C. Response to Comments

Table 33. Response to Draft Report Comments

Comment #	Commenter	Report Section	Comment/Feedback	Evaluation Team Response
1	BayREN	Exec Sum	<p>Thank you to the Opinion Dynamics and Tierra Resource Consultants evaluation team for the in-depth analysis and guidance on REN performance metrics.</p> <p>In response to the recommendation for Finding 13, while we expect to be able to agree on the specific measurement, it may not be possible for all RENs to agree on whether the measurement should be an indicator (no target) or a metric (requiring a target) because of the nature of our individual programs – each of which has its own unique design and objectives for the local community. Metrics should align with the primary objectives of the program – not every measurement possible within a program is relevant. If the measurement is not aligned with the primary objective, the measurement may be better as an indicator so that it is tracked but does not have a perverse effect of taking resources away from the primary objective.</p> <p>As recommended within the report, BayREN will seek to coordinate with the other RENs to align and simplify our metrics where possible. BayREN will also take into consideration the recommended index labeling to clearly differentiate between CAEECC and non-CAEECC metrics for ease of comparison and evaluation.</p> <p>Lastly, we can produce any necessary data that was not available at the time of the evaluation including full 2022 achievements and data sets. We would also like to emphasize that BayREN has submitted targets to the CPUC as of 4/10/2023.</p>	<p>The evaluation team is pleased to hear BayREN has found this study’s analysis and recommendations useful for informing their performance metrics.</p> <p>In regard to BayREN’s comment on Finding 13, we agree that metrics and indicators should align with the primary objectives of the program. Please note that after this report was written, Decision 23-06-055 adopted “a set of indicators for both the equity and market support segments”¹⁰⁰ and includes metrics/indicators listed in Finding 13. According to this decision, market support and equity segments will use indicators going forward to track progress which will simplify reporting on these segments. As BayREN pointed out in its comment, this use of indicators should not have a “perverse effect” on programs or their primary objectives.</p> <p>We appreciate BayREN agreeing to 1) coordinate with the other RENs to attempt to align and simplify the metrics where possible and 2) clearly differentiate between CAEECC and non-CAEECC metrics. We feel these adjustments will greatly improve the evaluability of these metrics.</p> <p>Finally, we thank BayREN for their offer to produce any necessary data that was not available at the time of the evaluation including full 2022 achievements and data sets. Although not needed at this time, this should be included in the next round of evaluations. We also acknowledge that since the writing of this report, BayREN has successfully submitted targets to the CPUC as of 4/10/23.</p>
2	3C-REN	Exec Sum	<p>3C-REN would like to thank Opinion Dynamics and Tierra Resource Consultants for the comprehensive analysis of their</p>	<p>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.</p>

¹⁰⁰ Decision 23-06-055, Decision Authorizing Energy Efficiency Portfolios for 2024-2027 and Business Plans for 2024-3031. June 29, 2023. Pages 59-65.

Comment #	Commenter	Report Section	Comment/Feedback	Evaluation Team Response
			<p>performance metrics and subsequent recommendations for the future.</p> <p>As noted in the report, 3C-REN has used the proposed and adopted Statewide Metrics as a basis for their list of Equity and Market Support metrics/indicators. Therefore, 3C-REN has not created any explicit sub-indicators/metrics. However, per the recommendation within the report, 3C-REN will coordinate with other RENs to determine if there is a sufficient way to align efforts in reporting and/or tracking at the sub-indicator/metric level as necessary.</p> <p>Regarding 3C-REN's Unique Value Metrics, 3C-REN has submitted all available data for 2022 with the 2022 Annual Report. However, 3C-REN can provide any additional information or context as needed that was not provided at the time of the evaluation.</p> <p>Targets for 3C-REN's value metrics have not yet been set at this time. This is due to changes to their value metrics that will be reflected in the upcoming True Up Advice Letter. This will include updates to Metric language and methodology for index numbers 331_3C_VM, and 332_3C_VM, to focus more exclusively on workforce characteristics outside of Hard-to-Reach attendees. Specifically, geographic location of attendees within the WE&T sector, and a focus on Disadvantaged Workers within the C&S sector. 3C-REN will be able to pull historical baseline data to accommodate these changes and targets will be reported in the upcoming True Up Advice Letter, as noted above.</p>	<p>We appreciate 3C-REN agreeing to coordinate with other RENs to determine if there is a sufficient way to align efforts in reporting and/or tracking at the sub-indicator/metric level. As noted in our response to Comment #1, We feel these adjustments will greatly improve the evaluability of these metrics.</p> <p>We thank 3C-REN for their offer to provide any additional information or context as needed that was not provided at the time of the evaluation. Although not needed at this time, this should be included in the next round of evaluations. We also acknowledge that since the writing of this report, 3C-REN has successfully submitted all available data for 2022 with the 2022 Annual Report.</p> <p>Finally, we appreciate the update on when targets for 3C-REN's value metrics will be finalized due to pending changes to these metrics reflected in the upcoming True Up Advice Letter.</p>

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