

Application: A.26-03-009

Exhibit No.: BAYREN-01R

Witnesses: Various



Local Governments Empowering Our Communities

**Exhibit 1: Testimony in Support of the
Bay Area Regional Energy Network's
Application for Approval of the
2028-2031 Portfolio Plan and 2028-
2035 Business Plan**

Before the California Public Utilities Commission

San Francisco, CA

March 16, 2026 – CORRECTED September 18, 2026

Table of Contents

Chapter 1: Executive Summary	1
Chapter 2: Portfolio Summary	6
I. About BayREN	6
1. BayREN Members, Structure, and Governance.....	6
2. BayREN Mission, Vision, and Focus.....	7
II. Service Territory and Related Factors	8
1. Geographic and Climatic Conditions.....	8
2. Demographic and Socioeconomic Context.....	11
3. Other Program Administrators.....	13
4. Zero-Emission Appliance Rules.....	15
III. Application Summary Tables of Expected Performance Metrics Covering the 4- Year and 8-Year Budget Request	17
1. Overview.....	17
2. BayREN Regional Program Portfolio and Forecasts.....	17
3. Statewide HES California Program	23
Chapter 3: Portfolio Strategies	26
I. Overview of BayREN Portfolio and Goals.....	26
1. Overview of Proposed BayREN Programs by Sector	32
2. BayREN's Portfolio Goals	46
II. Commission-Identified Portfolio Strategies.....	54
1. Affordability and Mitigation of Rate Impacts	55
2. Cost-Effectiveness	59
3. Advancement of Building Decarbonization	64
4. Electric Savings at Peak Times	68
5. Use of Meter-Based Savings Measurement.....	70
6. Promote and Deploy Exempt Measures in the Equity Segment	72
7. Advancing ESJ Action Plan Goals	74
8. Supporting Integrated Demand-Side Management (IDSM)	80
9. Advancing Workforce, Education, and Training.....	82
10. Reporting Demographic Data	85
11. Overcoming Sector- and Segment-Specific Challenges.....	87
12. Reducing Environmental Impacts of Refrigerants.....	93
13. Spurring Innovation	95
14. Using Community-Based Program Design.....	98
III. Conclusion	99

Chapter 4: Forecast Methodology and Zero-based Budgeting	101
I. Demonstration of the Reasonableness of the Request	101
1. Overview	101
II. Zero-Based Budgeting Methodology (D.21-05-031, COL 22, OP 8).....	108
III. Methodologies to Forecast and Allocate Budget and Benefits by Segment.....	108
1. Resource Acquisition.....	111
2. Equity	112
3. Market Support.....	113
4. Codes & Standards (C&S)	115
IV. Methodologies to Forecast and Allocate Program Budget & Benefits by Sector	117
1. Sector-Level Forecasting Framework.....	117
2. Residential Sector.....	119
3. Commercial Sector	120
4. Public Sector	121
V. Cross-Cutting Sector	122
VI. Program Modifications from 2024-2027 Portfolio Cycle.....	123
Chapter 5: Portfolio Management	126
I. Overview of BayREN's Approach to Portfolio Management.....	126
II. Accountability for 2028-2035.....	128
1. BayREN's Portfolio-Level Logic Model Explained.....	129
2. Key Metrics and Outcomes for 2028-2035.....	132
III. Strategies to Optimize the Portfolio and Manage Risk	136
1. Use of Goals, including Total System Benefits (TSB).....	136
2. Managing the Risk of Underperformance.....	137
3. Procurement and Related Practices.....	138
IV. Statewide Programs	139
1. BayREN's Statewide Portfolio and Alignment with BayREN Goals	139
2. Proposed Changes to Funding Allocation, Funding Levels, and Lead PA.....	141
3. Coordination with Other Programs	142
V. Statewide Assessment.....	142
1. Areas of Agreement	143
2. Recommended Revisions	145
Chapter 6: Segmentation and Sector Strategy	152
I. Overview	152
II. Portfolio Sector Strategy	153
1. Residential Sector.....	153
2. Commercial Sector	155
3. Industrial Sector	155

4. Agricultural Sector	155
5. Public Sector	156
6. Cross-Cutting Sector	157
III. Portfolio Segmentation Strategy	159
1. Resource Acquisition.....	160
2. Market Support.....	162
3. Equity	170
4. Codes & Standards.....	176
IV. Conclusion	178
Chapter 7: Portfolio Coordination.....	180
I. Overview	180
II. Coordination within BayREN	180
1. Sector- and Segment-Specific Coordination	181
2. Program-Specific Coordination	182
III. Coordination with Other Program Administrators.....	186
1. Coordination Participants	186
2. Coordination Structure and Frequency.....	187
3. Coordination Practices (Overlap Identification and Mitigation Work).....	193
IV. Coordination with Market Transformation.....	194
1. Coordination with CalMTA	195
2. Coordination with the TECH Clean California Program.....	197
V. Coordination with Energy Savings Assistance (ESA) Programs	198
VI. Coordination with Other Demand Side Programs and Stakeholders	201
Chapter 8: Stakeholder Engagement.....	204
I. Engagement for BayREN's Regional Health and Resilience Focus.....	205
II. Summary of Engagement by Sector	207
1. Residential Sector.....	208
2. Commercial Sector	213
3. Public Sector	215
4. Codes & Standards.....	218
III. Workforce Education and Training	220
IV. Ongoing Engagement.....	222
Chapter 9: Evaluation, Measurement, and Verification.....	224
I. Overview	224
II. Planned EM&V Studies and Activities for 2028-2035.....	225
1. Portfolio-Level Research and Support.....	225
2. Program Process Evaluations	225
3. Evaluability Studies	226

4. Market Studies	226
5. Ad Hoc Support	226
6. EM&V Activities for Home Energy Score California	227
III. EM&V Budget Allocation	228
Chapter 10.....	230
Chapter 11: Recommendations for New or Modified EE Policy	231
I. Introduction	231
II. The Hard-to-Reach Definition Should be Revised to Include Access and Functional Needs Communities	232
1. Current HTR Criteria and Gaps	232
2. Proposed Modification to the HTR Definition	234
III. Net-to-Gross (NTG) Ratios and Equity Customers	235
1. NTG and Current Methodology	235
2. Misalignment in Current Application of NTG	236
3. Policy Misalignment	240
4. Recommended Commission Action	241
IV. Integrated Demand Side Management Continuation	242
1. BayREN's Approved IDSM Framework	242
2. Gap in Current Policy Context	243
3. Recommended Commission Action	244
V. Statewide Programs Funding Continuity	244
1. Statewide Programs Authorized on the Same Terms of the Decision.....	244
2. Timing Issue	245
3. Recommended Commission Action	246
VI. Conclusion	247
Attachment A Testimony Sponsors and Statements of Qualifications.....	248

Figures

Figure 2.1 BayREN Service Area.....	6
Figure 2.2 Climate Zones in Bay Area Counties.....	9
Figure 2.3 Home Prices and Household Incomes	12
Figure 2.4 CCAs Overlapping with BayREN Region	14
Figure 3.1 Initial Proposed Process for the Incubator for Community-Designed Initiatives	41

Figure 4.1 Regional 2028-2031 Budget Allocation by Cost Category	105
Figure 4.2 2028-2031 Regional Budget Allocation by Segment.....	110
Figure 4.3 Regional Budget Allocation by Sector.....	119
Figure 5.1 Portfolio Logic Model.....	131
Figure 6.1 Proposed BayREN Programs by Segment and Sector	152

Tables

Table 2.1 4-year Portfolio Budget Forecast Summary (2028-2031)—BayREN Regional Programs.....	19
Table 2.2 4-year Portfolio Forecast Summary (2028-2031) – BayREN Regional Programs	20
Table 2.3 4-year Portfolio Budget Forecast Summary (2032-2035) – BayREN Regional Programs	21
Table 2.4 4-year and 8-year IOUs Total System Benefit Forecast (without C&S) vs. Goals (IOUs and other PAs, as applicable).....	22
Table 2.5 4-year Portfolio Budget Forecast Summary (2028-2031) – Statewide HES California	23
Table 2.6 4-year Portfolio Forecast Summary (2028-2031) – Statewide HES California*24	
Table 2.7 4-year Portfolio Budget Forecast Summary (2032-2035) – Statewide HES California Program	25
Table 3.1 BayREN Goals and CPUC Strategies Matrix.....	52
Table 4.1 2028-2031 Regional Budget from D.23-06-055 vs. Proposed Regional 2028-2031 Budget by Cost Category	102
Table 4.2 Total Portfolio Budget Request, including EM&V	103
Table 4.3 Regional Portfolio Budget and TSB by Segment, 2028-2031	110
Table 4.4 Regional Programs and Budgets by Sector	119
Table 4.5 Closed Programs from the 2024-2027 Cycle.....	124
Table 4.6 New Programs in 2028-2032 Application Cycle	125
Table 5.1 BayREN Portfolio Value Metrics Overview and Reporting Approaches.....	134
Table 5.2 IOU Allocation Comparison	141

Table 5.3 Proposed Revisions and BayREN Notes for Market Support Segment Questions	145
Table 5.4 Proposed Revisions and BayREN Notes for Equity Segment Questions	146
Table 5.5 Proposed Revisions and BayREN Notes for Section 2 Questions.....	148
Table 5.6 Proposed Revisions for Section 3 Questions	149
Table 5.7 Proposed Revisions for Section 4 Questions	149
Table 5.8 Proposed Revisions and BayREN Notes for Section 5 Questions.....	150
Table 6.1 Regional Budget Distribution by Sector.....	158
Table 8.1 Summary of Survey Results and BayREN Responses	218
Table 9.1 Planned EM&V Activities	227

Chapter 1: Executive Summary

California has adopted ambitious climate targets, including full decarbonization by 2045,¹ installation of six million heat pumps by 2030,² and doubling energy efficiency by 2030.³ The Commission's Environmental and Social Justice (ESJ) Action Plan emphasizes that progress toward these mandates must equitably benefit all communities. The Bay Area Regional Energy Network (BayREN) proposes a portfolio of programs to help move the region and state toward these interconnected energy, climate, and equity goals.

The BayREN Business Plan also focuses on state priorities regarding affordability and ratepayer value, as set out by Governor Newsom in Executive Order N-5-24 and addressed by other bodies including the California Public Utilities Commission (CPUC or "Commission"),⁴ the State Auditor,⁵ and the Little Hoover Commission.⁶ As a Regional Energy Network (REN), BayREN's portfolio focuses on equity segment customers and ensuring they can participate in energy efficiency programs and reduce energy costs.

BayREN's proposed Business Plan portfolio also addresses the criteria the Commission established for REN programs: to carry out activities that other Portfolio Administrators

¹ California, Governor (Jerry Brown), Executive Order B-55-18 (September 10, 2018).

² California Heat Pump Partnership (CAHPP), Building Decarbonization Coalition, accessed March 2, 2026, <https://heatpumppartnership.org/>.

³ Clean Energy and Pollution Reduction Act of 2015, SB 350, 2015–2016 Reg. Sess., *Statutes of California 2015*, chap. 547.

⁴ California Public Utilities Commission. *CPUC Response to Executive Order N-5-24*. February 18, 2025. <https://www.cpuc.ca.gov/-/media/cpuc-website/industries-and-topics/reports/cpuc-response-to-executive-order-n-5-24.pdf>.

⁵ California State Auditor, *The California Public Utilities Commission: Without Improving Its Oversight, the Benefits of Energy Efficiency Programs May Not Be Worth Their Cost to Ratepayers*, Report 2023-127 (Sacramento, CA, March 2025), <https://www.auditor.ca.gov/reports/2023-127/>.

⁶ Little Hoover Commission, *The High Cost of Electricity in California*, Report #290 (Sacramento, CA, October 17, 2025), <https://lhc.ca.gov/report/the-high-cost-of-electricity-in-california/>.

(PAs) do not intend to undertake, pilot activities, and serve hard-to-reach markets.⁷

These criteria define a limited but critical role for RENs, especially as energy unaffordability hits vulnerable households, businesses, and communities the hardest. Approximately 66% of BayREN's total regional portfolio budget is dedicated to equity segment programs. BayREN's portfolio is also designed to fill gaps and spur innovation by responding quickly to changing conditions, testing solutions and implementing improvements at all levels, from program design to individual activities. Each of BayREN's programs is based on one or more of the criteria outlined above.

BayREN's portfolio was informed by significant engagement with community-based organizations (CBOs), program implementers, program participants, local governments, and regional and state agencies. Feedback from these stakeholders provided essential guidance on refining BayREN's strategic focus areas, ensuring programs and services meet the needs of underserved and hard-to-reach communities, and enhancing coordination across existing regional initiatives.

BayREN is uniquely positioned to support local action to meet California's goals, with an organizational structure that ensures programs reflect the complex needs of the Bay Area's nine counties, 101 cities, residents, and businesses. Continued collaboration with the seven Bay Area CCAs and one Investor-Owned Utility (IOU), Pacific Gas and Electric Company (PG&E), benefits shared customers, as each Portfolio Administrator is informed of ongoing programs, potential overlap, and opportunities to work together to move the region towards our shared goals.

⁷ These criteria were first established in California Public Utilities Commission (CPUC) *Decision (D.) 12-11-015: Decision Approving 2013-2014 Energy Efficiency Programs and Budgets* (November 8, 2012), and later refined in CPUC *Decision (D.) 19-12-021: Decision Regarding Frameworks for Energy Efficiency Regional Energy Networks and Market Transformation* (December 6, 2019).

1 The portfolio proposed in the Plan includes continuation of nine existing regional
2 programs and one statewide program, plus one new regional program. The nine
3 continuing regional programs have been analyzed and evaluated to confirm they are
4 making meaningful progress towards their goals and delivering benefits to ratepayers.
5 To improve their outcomes, some have been redesigned or changed in the last two
6 years. BayREN's workforce, education and training program is being expanded in this
7 application to provide training and mentorship to small, local, women, and minority
8 contractors, thereby increasing the workforce needed to meet state climate goals and
9 also providing opportunity for this segment of contractors. The one new program
10 proposed in this Plan is the Incubator for Community-Designed Initiatives, which is
11 based on the Community-Designed Collaborative framework requested by the
12 Commission in D.23-06-055. This program will allow community-based organizations
13 and local government agencies such as health departments to design and implement
14 energy efficiency demonstration projects, with results shared and potentially scaled.

15 BayREN is focused on meaningful action to improve energy efficiency and affordability
16 while reducing greenhouse gas emissions. As such, each program in the portfolio is
17 intended to contribute to energy savings and/or greenhouse gas (GHG) emission
18 reductions in either the short or long term. The BayREN Business program, the only
19 Resource Acquisition segment program, will continue to deliver cost-effective energy
20 savings. Two successful residential programs, Bay Area Multifamily Building
21 Enhancements Program (BAMBE) and the single-family Efficiency and Sustainable
22 Energy (EASE) Program, while focused primarily on equity goals, also directly contribute
23 to energy savings and impactful change, as does the workforce, education and training
24 program, BayREN Works. The commercial sector BayREN Refrigerant Replacement
25 (BRRR) Program, in addition to energy savings, also removes refrigerants with a high
26 Global Warming Potential (GWP), an identified priority of the state. The remaining five

BayREN programs support energy savings and GHG reductions, with two public sector programs measuring and tracking, but not claiming, these benefits.

BayREN's proposed portfolio will provide many benefits in addition to forecasted energy savings, bill savings, total system benefit (TSB), and greenhouse gas reductions. Over the eight years, these include: upgrading approximately 27,000 dwelling units occupied by equity segment households; assisting almost 3,500 hard-to-reach or underserved non-residential buildings; and training and providing support for almost 1,000 equity segment workers. BayREN anticipates educating over 14,000 attendees at over 600 training events. At a minimum, 85 Bay Area local governments will receive assistance or support from BayREN for code compliance, reach code development, or building improvements. The portfolio benefits also include funds leveraged from other sources, both to-code and below-code savings which would not have occurred without BayREN assistance, and further non-energy market support and equity benefits.

In addition to mandated metrics, BayREN continues to measure the success of the portfolio by tracking program-level BayREN Unique Value Metrics that address equity and market support as well as resource acquisition and cost-effectiveness. At the same time, BayREN is working to improve how it measures and reports on the performance of the portfolio and its programs with new portfolio-level Unique Value Metrics and by refining how we measure overall progress and performance, starting with a review of all program and portfolio outputs to ensure that all types of outputs are being identified and as many as possible are quantified and monetized. These efforts are in alignment with the California Energy Efficiency Coordinating Committee (CAEECC) Equity and Market Support Metric Working Groups, in which we are active participants.

BayREN's budget request for regional programs is largely consistent with the 2028-2031 budget approved by D.23-06-055, with a 5.5% increase. Being cognizant of rising utility

1 bills and recognizing the value BayREN programs provide to the communities we serve,
2 BayREN decreased administrative and marketing/outreach budgets while increasing
3 incentives. This will better assist more of the prioritized equity populations in reducing
4 their utility costs and ensuring they are not left behind in the energy transition. For the
5 second four-year period (2032-2035), BayREN applied a cost escalation between 2% and
6 3% to account for anticipated increases in labor, materials, and delivery costs. The full
7 eight-year strategic plan period is reasonably and appropriately sized to support the
8 state's goals for energy efficiency, greenhouse gas reductions, and equity within the
9 Bay Area region, and the distribution of budget between portfolio sectors and
10 segments reflects BayREN's continued focus on the equity segment.

11 The statewide Home Energy Score program, launched at the start of 2026, was not
12 included in BayREN's budget prepared for the 2024-2031 Business Plan. The
13 Commission awarded \$9.9 million for the program in D.23-06-055 and approved
14 BayREN's request for authorization to develop and implement the program, submitted
15 as Advice Letter 28-E, in 2024. Given that this funding covered two years of program
16 operations, the proposed four-year budget of \$23,267,129, and eight-year budget of
17 \$54,377,858, represents a modest increase accounting for inflation and conservative
18 estimates of increased demand as the program gains traction throughout the state.

19 BayREN's 2028–2035 plan builds on more than a decade of experience delivering
20 high-impact, community-responsive programs. The proposed portfolio reflects
21 BayREN's continued commitment to addressing unmet needs, supporting local
22 capacity, and ensuring that all communities benefit from California's clean energy
23 future. As the state moves toward its 2030 and 2045 mandates, BayREN remains a vital
24 partner in accomplishing California's energy transition in an effective and equitable
25 manner.

Chapter 2: Portfolio Summary

I. About BayREN

BayREN is a coalition of the Association of Bay Area Governments (ABAG) and the nine counties of the Bay Area (Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, Santa Clara, Solano, and Sonoma). First approved by the Commission as a Portfolio Administrator (PA) in 2012,⁸ BayREN administers regional, equity-focused programs within the resource acquisition, market support and equity segments as well as a codes and standards (C&S) program and one statewide program.



Figure 2.1 BayREN Service Area

1. BayREN Members, Structure, and Governance

BayREN has 10 member agencies: each of the nine Bay Area Counties plus ABAG. Originally created in 2013 through a Memorandum of Understanding (MOU) signed by

⁸ CPUC D.12-11-015.

each member, BayREN now operates as a holacracy⁹ with formally adopted and clearly defined roles, accountabilities, policies and procedures.

Each member agency elects a lead to serve on the Coordinating Circle, the central body which carries out all governance actions for BayREN, including setting its direction and priorities, electing program leads, and approving BayREN's budget. Similarly, each of BayREN's programs has a program committee that includes representatives of each member agency, who assist in setting the priorities for the program as well as collecting information from and engaging with potential program participants in the agency's geographic area. This structure means that Bay Area local governments directly manage BayREN, ensuring that programs and activities evolve as needed to address key local needs.

2. BayREN Mission, Vision, and Focus

Heat has become a significant concern in California. The state's Office of Environmental Health Hazard Assessment notes that extreme heat "is a public health threat, especially for individuals living in already disadvantaged circumstances."¹⁰ At the same time, climate is causing variability in weather patterns that create challenges for grid reliability,¹¹ increasing public concern about resilience.

From stakeholder engagement conducted in 2024 and 2025 and described in Chapter 8, BayREN found that improving health outcomes and resilience to climate impacts in the built environment is a priority for most Bay Area communities. In 2025, BayREN

⁹ Brian J. Robertson, *Holacracy: The New Management System for a Rapidly Changing World*, 2015, <https://us.macmillan.com/books/9781627794282>.

¹⁰ California Environmental Protection Agency, "About Heat and Its Impact on Communities," CalHeatScore, accessed January 4, 2026, <https://calheatscore.calepa.ca.gov/about-heat-and-its-impact-communities>.

¹¹ California Energy Commission, *California Energy Resource and Reliability Outlook*, July 1, 2025, CEC-200-2025-011 (Sacramento: California Energy Commission, 2025), 2.

updated its mission and vision statements to incorporate health and resilience as shown below.

Mission: A coalition of Bay Area governments empowering our communities to build healthy, resilient buildings that improve lives and reduce energy use.

Vision: An energy efficient, healthy and resilient built environment where all communities thrive.

This focus aligns with state goals and complements BayREN’s continued commitments to reducing energy consumption and greenhouse gas emissions, as well as serving our priority audiences—those who are underserved by or face persistent barriers to participation in traditional energy efficiency programs.

II. Service Territory and Related Factors

The BayREN region covers approximately 7,000 square miles and includes nearly 8 million residents in 109 jurisdictions and unincorporated areas. In addition to the three largest cities of San Francisco, Oakland, and San Jose, the nine counties include smaller urban centers such as Santa Rosa, Walnut Creek, and Redwood City, as well as suburban and rural areas. The region has a wide range of geographic and climatic conditions as well as diverse demographic and socioeconomic attributes, as discussed below, which results in a wide spectrum of energy needs and challenges.

1. Geographic and Climatic Conditions

The San Francisco Bay Area features a Mediterranean climate characterized by mild, wet winters and warm, dry summers, and is heavily influenced by its geography: coastal bay, inland valleys, and mountain ranges. Coastal areas receive frequent fog and cooler

temperatures due to marine influences from the Pacific Ocean, while inland zones are significantly warmer.

As a result, the Bay Area includes five of the California Energy Commission's (CEC's) adopted climate zones (CZs). These range from cooler and moderate coastal zones, such as CZ1 in coastal Sonoma County and CZ3 in San Francisco and San Mateo Counties, to hotter inland zones such as CZ12, which include portions of Solano, Contra Costa, and Alameda Counties. Buildings in the cooler zones, such as San Francisco, particularly older homes, are less likely to have air conditioning, while buildings in the hotter inland areas are more likely to have air conditioning.¹² As a result, buildings in the Bay Area may have widely varying thermal loads.

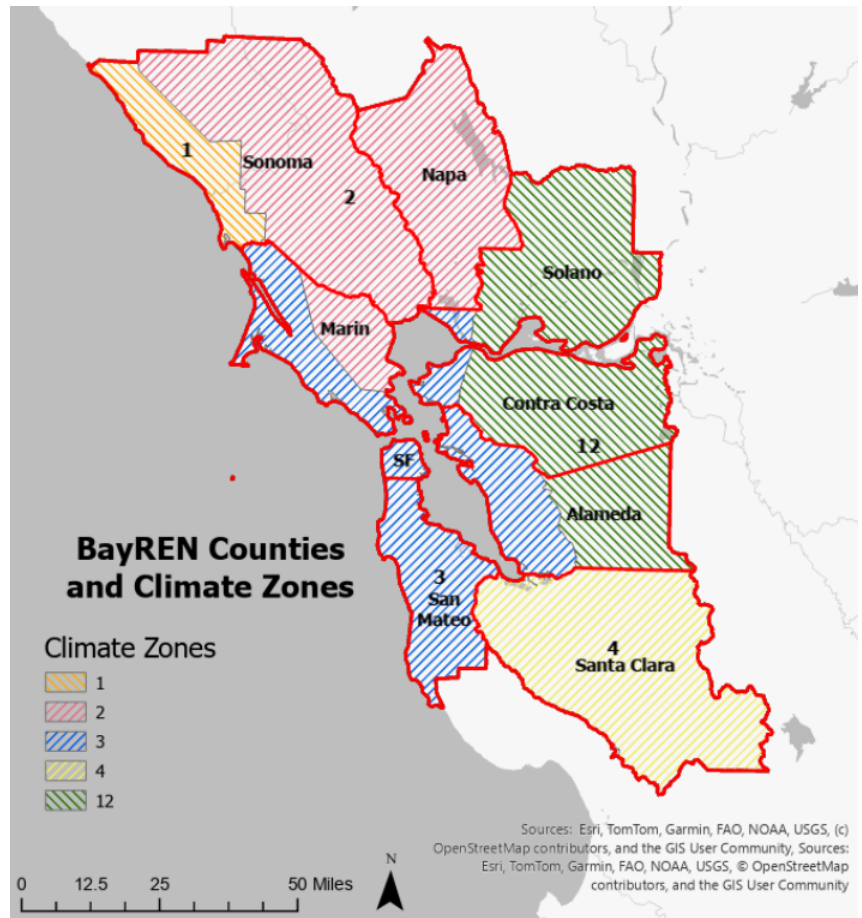


Figure 2.2 Climate Zones in Bay Area Counties

¹² Arup, *Existing Buildings Study: Building Characteristics Report* (San Francisco: Bay Area Regional Energy Network, 2025), https://www.bayren.org/sites/default/files/documents/2025/BayREN%20Detailed%20Building%20Characteristics%20Report_Final_0.pdf.

1 In addition to this large-scale geographic variation across the Bay Area, the topography
2 and geography of the area, including the Coast Range and San Francisco Bay, together
3 with the Pacific Ocean and the Sacramento River Delta, combine to create significant
4 microclimates, both within geographic areas and individual jurisdictions. A 2021 study
5 from Lawrence Berkeley National Laboratory examined 10 years of weather data from
6 27 stations in the City of San Francisco and found differences of up to 11° C
7 (approximately 50° F) in outdoor air temperatures between coastal and downtown
8 parts of the city during a 2017 heat wave. These microclimate differences have
9 significant implications for building energy usage, causing over a 100% modeled
10 variation in annual heating energy and a 65% variation in cooling energy among
11 prototypical office and hotel buildings. Additionally, the study found up to 30%
12 variability in peak cooling demand, with unconditioned homes experiencing indoor
13 temperature swings of up to 5 °C caused solely by microclimate effects.¹³

14 These patterns are also changing as the climate warms. As warmer summers become
15 more common, the demand for air conditioning will increase, particularly in coastal
16 areas where air conditioning has been uncommon, and summer energy demand will
17 increase, while winter heating demand will slightly decrease.¹⁴ BayREN's 2024 Heat
18 Mitigation Report notes that the Bay Area is forecast to experience significantly more
19 days over 90°F by 2035, with more and longer extreme heat events.¹⁵

¹³ Tianzhen Hong, "Urban Microclimate and Its Impact on Building Performance: A Case Study of San Francisco," *Urban Climate* 38 (July 2021), <https://doi.org/10.1016/j.uclim.2021.101012>.

¹⁴ David Ackerly et al., San Francisco Bay Area Summary Report: *California's Fourth Climate Change Assessment* (Sacramento: California Energy Commission, 2018), 50, https://www.energy.ca.gov/sites/default/files/2019-11/Reg_Report-SUM-CCCA4-2018-005_SanFranciscoBayArea_ADA.pdf.

¹⁵ Grounded Research and Consulting, LLC and Verdant Associates, LLC, *BayREN Heat Mitigation Pilot Research* (San Francisco: Bay Area Regional Energy Network, 2024), <https://www.bayren.org/sites/default/files/2024-01/BayREN%20Heat%20Mitigation%20Pilot%20Research%20Final.pdf>.

The wide range of climates and microclimates in the Bay Area, combined with the anticipated impacts of climate change, heightens the need for both energy efficiency and electrification in the region's buildings.

2. Demographic and Socioeconomic Context

The Bay Area is one of the most diverse metropolitan areas in the United States, and the population is approximately 28% Asian, 25% Latino, and 6% Black. Residents speak over 160 languages, and approximately 16% of the population are limited English speakers or linguistically isolated,¹⁶ making outreach difficult and resulting in barriers to participation in energy efficiency programs.¹⁷

At the same time, the Bay Area is an expensive place to live, with the median home price approaching \$1.2M in 2024. While approximately 44% of Bay Area residents are renters,¹⁸ the region is also one of the most expensive rental markets in the country.¹⁹ As a result, most renters (about 56%) in the Bay Area are paying over 30% of their incomes for housing.²⁰ Low-income Bay Area households are likely to be energy burdened as well, paying more than 6% of their income on home energy bills. The median low-income energy burden is 6.1% in the San Francisco metropolitan area, with

¹⁶ Office of Community Partnerships and Strategic Communications et al., "Regional Snapshots," report, by Governor's Office of Service and Community Engagement, *Office of Community Partnerships and Strategic Communications*, 2025, 11, https://ocpsc.ca.gov/wp-content/uploads/2025/05/OCPSC-Regional-Snapshots_.pdf.

¹⁷ Amann, Tolentino, and York, "Toward More Equitable Energy Efficiency Programs for Underserved Households," ACEEE, May 2023, 7-8, <https://www.aceee.org/sites/default/files/pdfs/B2301.pdf>

¹⁸ OCPSC, *Regional Snapshots*, 12.

¹⁹ Metropolitan Transportation Commission, "Rent Payments - Vital Signs - SF Bay Area," January 2023, <https://vitalsigns.mtc.ca.gov/indicators/rent-payments>.

²⁰ Christian Leonard, "Most Bay Area Renters Are 'Cost-Burdened' – Especially in These Areas," *San Francisco Chronicle*, September 30, 2025, <https://www.sfchronicle.com/bayarea/article/rent-burden-map-19794532.php>.

1 10% of all households paying more than 6% of their incomes for energy.²¹ This means
 2 that many moderate and low-income households have very limited discretionary
 3 income to spend on energy improvements, even if those improvements will save them
 4 money in the long run.

5 While the region has some of the
 6 highest incomes in the country, almost
 7 20% of residents have incomes below
 8 200% of the federal poverty level.²² This
 9 income inequality is increasing over
 10 time, with the incomes of those in the
 11 90% percentile increasing while those
 12 at the 50% and 10% percentiles remain
 13 relatively flat.

14 There are also a significant number of
 15 disadvantaged communities in the Bay
 16 Area as identified by the California
 17 Environmental

18 Protection Agency pursuant to Health and Safety Code Section 39711. Over 1.1 million
 19 people, or approximately 14.5% of the population, live in census tracts that have a
 20 CalEnviroScreen 4.0²³ score above 75%, meaning they qualify as Disadvantaged
 21 Communities (DACs) and are in the 25% of communities most burdened by pollution

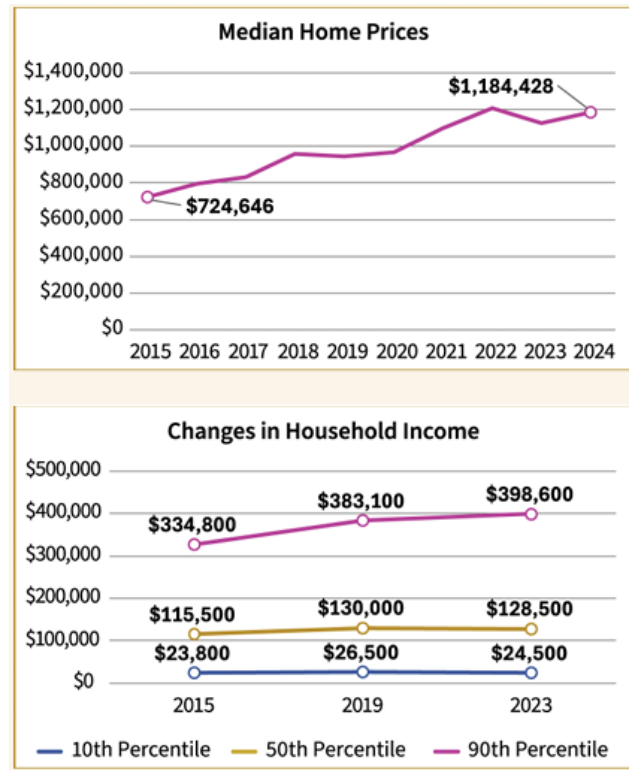


Figure 2.3 Home Prices and Household Incomes, from Draft Plan Bay Area 2050+, p. 54

²¹ American Council for an Energy-Efficient Economy, *Energy Burdens in San Francisco* (Washington, DC: ACEEE, 2020), https://www.aceee.org/sites/default/files/pdfs/aceee-01_energy_burden_-_san_francisco.pdf.

²² ACEEE, *Energy Burdens in San Francisco*, 12.

²³ California Office of Environmental Health Hazard Assessment, *CalEnviroScreen 4.0*. Sacramento: California Environmental Protection Agency, October 2021, <https://oehha.ca.gov/calenviroscreen/report/calenviroscreen-40>.

1 and vulnerable to its effects. These census tracts are generally located in coastal areas
2 along the bayfront and near cities throughout the Bay Area.

3 Similarly, the Equity Analysis Report conducted for Plan Bay Area 2050 by the
4 Metropolitan Transportation Commission (MTC) in 2022²⁴ designated 21% of the
5 region's census tracts as Equity Priority Communities (EPCs)²⁵, and noted that that
6 approximately 21% of the population resides in those census tracts. The methodology
7 for identifying EPC was originally developed with extensive engagement with a Plan Bay
8 Area 2040 Regional Equity Working Group, and MTC continues to update and refine the
9 methodology on a continuing basis.

10 3. Other Program Administrators

11 The nine-county Bay Area is located within the Pacific Gas and Electric Company (PG&E)
12 service area. There are several small publicly-owned utilities in the Bay Area, and
13 BayREN engages with them as appropriate to coordinate on messaging and regional
14 efforts.

²⁴ Metropolitan Transportation Commission and Association of Bay Area Governments, *Plan Bay Area 2050 Equity Analysis Report*, Appendix A-7: Regional Policies: Long-Range Planning (San Francisco: MTC/ABAG, 2022), https://mtc.ca.gov/sites/default/files/documents/2022-07/A-07_Equity_Report_PBA_2050_10-2021.pdf.

²⁵ EPCs are census tracts that have either a concentration of both people of color and people with low incomes, or that have a concentration of people with low incomes and three or more of six other factors (persons with limited English proficiency, zero-vehicle households, seniors aged 75 years and over; persons with one or more disability, single-parent families, and renters paying more than 50% of their household income on housing).

BayREN also overlaps the service areas of all or portions of seven CCAs. One of these, Marin Clean Energy, administers its own portfolio of energy efficiency programs through the Apply to Administer (ATA) process authorized by the CPUC, and another, Peninsula Clean Energy, is applying to administer energy efficiency programs for the first time as part of this business plan cycle. Almost all of the other CCAs administer a limited number of energy efficiency programs through the Elect to Administer (ETA) process authorized by the CPUC.

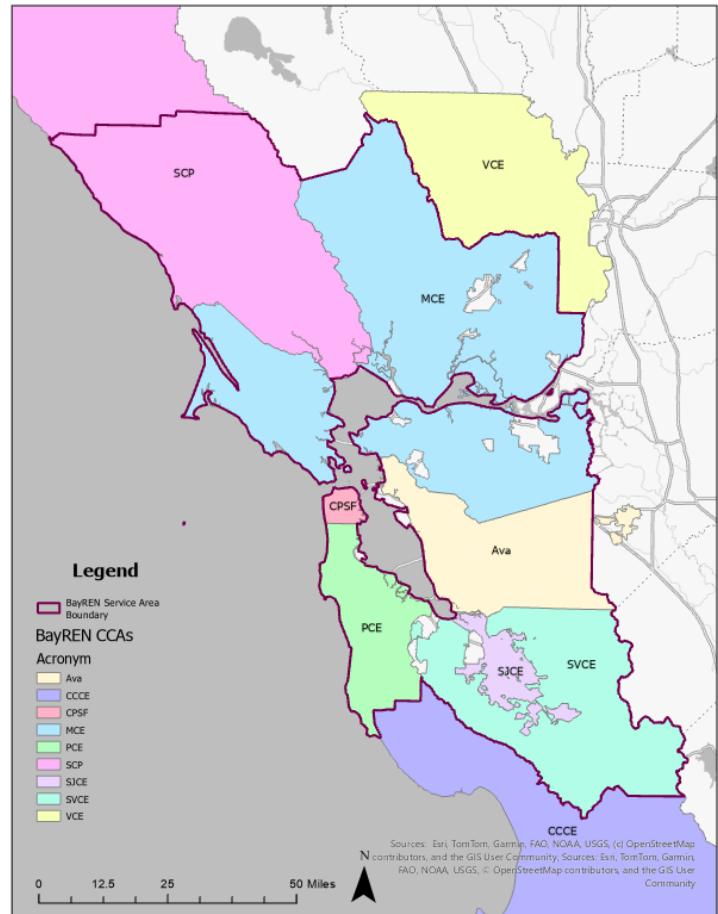


Figure 2.4 CCAs Overlapping with BayREN Region

As is discussed in more detail in Chapter 7, BayREN cooperates and coordinates on an ongoing basis with PG&E as well as all the CCAs that administer energy efficiency programs to ensure the most efficient and effective use of CPUC authorized ratepayer funding.

4. Zero-Emission Appliance Rules

The Bay Area Air District has adopted rules that will prohibit the sale and installation of NO_x-emitting water and space heaters²⁶ in the Bay Area on the following schedule:

- January 1, 2027: Water heaters less than 75,000 BTU/hr (typically residential)
- January 1, 2029: Residential and commercial furnaces
- January 1, 2031: Water heaters between 75,000 and 2 million BTU/hr (commercial and multifamily).

The Air District is currently considering amendments to its rule for water heaters less than 75,000 BTU/hr to allow continued sales of small gas water heaters (less than or equal to 35 gallon) and to provide exemptions for low-income homeowners, some small businesses, and some homes facing particular challenges.²⁷

At the same time, the California Air Resources Board (CARB) is working to develop a zero-greenhouse gas emission standard for space and water heaters, as called for in the 2022 State Strategy for State Implementation Plan,²⁸ including considering how to align with standards such as the Bay Area Air District's rules.

In putting together its Business Plan proposal, BayREN utilized the following approaches and assumptions:

1. BayREN's portfolio does not include incentives for any gas-fueled appliances in the Business Plan period and is therefore fully compliant with the adopted Air District rules.

²⁶ NO_x are nitrogen oxides, regulated air pollutants that can aggravate and potentially cause respiratory conditions.

²⁷ Bay Area Air Quality Management District, "Rules 9-4 and 9-6 Building Appliances," accessed March 3, 2026, <https://www.baaqmd.gov/rules-and-compliance/rule-development/building-appliances>.

²⁸ California Air Resources Board, *2022 State Strategy for the State Implementation Plan*, adopted September 22, 2022, https://ww2.arb.ca.gov/sites/default/files/2022-08/2022_State_SIP_Strategy.pdf.

1 2. BayREN's portfolio provides incentives for heat pump water heaters and heat
2 pump space heating systems throughout the Business Plan period for the
3 following reasons:

- 4 a. The Air District's rules, while legally distinct from reach codes, are similar
5 in that they establish a local code which is above the state standard. The
6 Commission determined in D.09-05-037 that incentives could continue to
7 be provided in jurisdictions where reach codes have been adopted in
8 order to encourage market transformation.²⁹ Therefore, BayREN assumes
9 that incentives for these systems can continue to be provided.
- 10 b. The Air District is in the process of considering amendments to the rules,
11 which include potential exemptions for low-income households and small
12 businesses with high hot water demand, such as restaurants and
13 laundries. BayREN's portfolio is focused on serving the equity segment,
14 including low-income households and small businesses. It is therefore
15 impossible to say at this time how much the rules will affect BayREN's
16 target customers.
- 17 c. CARB rules have not yet been adopted, and it is not clear when that would
18 happen or when they would go into effect.

19 BayREN plans to adjust its programs and incentives as appropriate once more
20 information is available and will reflect any changes in the True-Up Advice Letter due in
21 2027.

²⁹ California Public Utilities Commission, *Interim Decision Determining Policy and Counting Issues for 2009 to 2011 Energy Efficiency Programs*, Decision 09-05-037 (May 21, 2009), 30, https://docs.cpuc.ca.gov/word_pdf/FINAL_DECISION/101543.pdf.

III. Application Summary Tables of Expected Performance Metrics Covering the 4-Year and 8-Year Budget Request

1. Overview

BayREN's proposed portfolio includes regional programs and one statewide program. The regional portfolio consists of nine continuing programs and one proposed new program, covering the residential, commercial and public sectors and all segments. The statewide Home Energy Score (HES) California program, which was authorized in D.23-06-055 and launched in January 2026, is the first statewide program led by a non-Investor-Owned Utility (IOU) PA and is a downstream market support program in the residential sector.

While the statewide HES California program is part of the overall BayREN portfolio, its budget for the business plan period has been input into the Statewide California Energy Data and Reporting System (CEDARS) portal and integrated into the IOUs' portfolios. To provide transparency while also avoiding double-counting, summary tables are provided separately below for the regional BayREN portfolio and for the statewide HES California program.

2. BayREN Regional Program Portfolio and Forecasts

BayREN's regional portfolio is described in detail in Chapter 3, which includes descriptions of all proposed programs as well as how they address portfolio goals and incorporate CPUC-identified strategies. As is discussed in Chapter 4, over two-thirds of BayREN's proposed regional portfolio is in the equity segment, and all programs regardless of segment prioritize equity audiences. BayREN's regional portfolio also includes four programs in the market support segment. Much of the value of equity

- 1 and market support programs is not captured by the forecasts below, and BayREN's
- 2 approaches to addressing this problem are discussed in Chapter 5.

1 *Table 2.1 4-year Portfolio Budget Forecast Summary (2028-2031)—BayREN Regional Programs*

	2028	2029	2030	2031	Total (4 years)
Total Budget	\$44,661,255	\$45,954,680	\$47,531,774	\$48,448,567	\$186,596,277
Resource Acquisition Segment Budget	\$5,930,578	\$6,053,451	\$6,718,038	\$6,807,445	\$25,509,512
Market Support Segment Budget	\$5,327,914	\$5,909,849	\$5,789,359	\$6,185,289	\$23,212,411
Equity Segment Budget	\$29,906,040	\$30,365,043	\$31,261,799	\$31,658,338	\$123,191,220
Codes and Standards Budget	\$1,710,273	\$1,788,150	\$1,861,307	\$1,859,552	\$7,219,282
Evaluation, Measurement, and Verification (EM&V)	\$1,786,450	\$1,838,187	\$1,901,271	\$1,937,943	\$7,463,851
Energy Division (ED) Portfolio Oversight	\$0	\$0	\$0	\$0	\$0
Total Budget	\$44,661,255	\$45,954,680	\$47,531,774	\$48,448,567	\$186,596,277

1 *Table 2.2 4-year Portfolio Forecast Summary (2028-2031) – BayREN Regional Programs**

	2028	2029	2030	2031	Resource Acquisition Segment Only (Total 4-year)	Entire Portfolio (Total 4-year)
Total System Benefit (TSB)	\$8,075,146	\$8,501,568	\$9,222,545	\$9,719,666	\$6,395,652	\$35,518,925
Total Resource Cost (TRC) Ratio	0.22	0.23	0.24	0.24	0.26	0.23
Program Administrator Cost (PAC) Ratio	0.22	0.22	0.23	0.24	0.27	0.23
Societal Cost Test (SCT) Base	0.35	0.35	0.36	0.37	0.33	0.36
Societal Cost Test (SCT) High	0.35	0.35	0.36	0.37	0.33	0.36
Ratepayer Impact Measure Test Ratio (RIM)	0.27	0.28	0.28	0.29	0.17	0.28
Lifecycle GWh	-4.01	-3.88	-2.92	-2.79	63.20	-13.60
First Year MW	18.74	18.74	18.77	18.77	0.63	75.02
Lifecycle MMOTHERMS	0.25	0.25	0.26	0.26	0.04	1.01
Lifecycle Net Electric CO2 Metric Tons	-1,426.67	-1,511.35	-1,363.60	-1,359.04	10,662.40	-5660.66
Lifecycle Net Gas CO2 Metric Tons	27,505.55	27,503.57	27,988.80	27,986.82	4,065.01	110,984.74
Other Benefits Not Reflected Above, such as:	• Unforecasted savings and unclaimed savings from technical assistance and referrals • Below code savings which would not have occurred without BayREN assistance • Non-energy equity and market support benefits, including providing services to ratepayers who face barriers to participation in most programs • Funds leveraged from other sources to augment ratepayer funds					

2 * Forecasts are not comprehensive. Other programs, such as BayREN's public sector programs, calculate but do not claim
3 savings.

1 *Table 2.3 4-year Portfolio Budget Forecast Summary (2032-2035) – BayREN Regional Programs*

	2032	2033	2034	2035	Total (4-year)
Total Budget	\$50,371,875	\$51,250,104	\$52,031,563	\$52,922,917	\$206,576,459
Resource Acquisition Segment Budget	\$7,160,000	\$7,206,100	\$7,531,500	\$7,576,900	\$29,474,500
Market Support Segment Budget	\$6,164,700	\$6,562,800	\$6,465,800	\$6,863,500	\$26,056,800
Equity Segment Budget	\$33,116,400	\$33,457,700	\$33,926,000	\$34,277,900	\$134,778,000
Codes and Standards Budget	\$1,915,900	\$1,973,500	\$2,027,000	\$2,087,700	\$8,004,100
EM&V	\$2,014,875	\$2,050,004	\$2,081,263	\$2,116,917	\$8,263,059
ED Portfolio Oversight	\$0	\$0	\$0	\$0	\$0

- 1 *Table 2.4 4-year and 8-year IOUs Total System Benefit Forecast (without C&S) vs. Goals (IOUs and other PAs, as applicable)*

Year	Total System Benefit Forecast	Total System Benefit Goals	Percent of TSB Goal
2028	\$8,075,146	N/A	N/A
2029	\$8,501,568	N/A	N/A
2030	\$9,222,545	N/A	N/A
2031	\$9,719,666	N/A	N/A
Total (4 years)	\$35,518,925	N/A	N/A
2032	\$10,216,814	N/A	N/A
2033	\$10,729,929	N/A	N/A
2034	\$11,259,147	N/A	N/A
2035	\$11,731,474	N/A	N/A
Total (4 years)	\$43,937,364	N/A	N/A
Cumulative (8 years)	\$79,456,289	N/A	N/A

- 2 Tables 5 and 6 from the Narrative Template are not provided because they are not applicable to BayREN.

3. Statewide HES California Program

The statewide HES California program, while led by BayREN, is included as part of the statewide program portfolio in the IOU Business Plan applications and has been input into the Statewide CEDARS portal. The program is a downstream residential market support program that expands on a nationally-recognized program in the Bay Area to inform homeowners statewide about the energy performance of their homes and the potential for energy savings and electrification. The tables below contain the requested information for the HES California program.

Table 2.5 4-year Portfolio Budget Forecast Summary (2028-2031) – Statewide HES California

	2028	2029	2030	2031	Total (4 years)
Total Budget	\$4,832,515	\$5,489,146	\$6,137,076	\$6,808,393	\$23,267,129
Resource Acquisition Segment Budget	\$0	\$0	\$0	\$0	\$0
Market Support Segment Budget	\$4,639,214	\$5,269,580	\$5,891,593	\$6,536,057	\$22,336,444
Equity Segment Budget	\$0	\$0	\$0	\$0	\$0
Codes and Standards Budget	\$0	\$0	\$0	\$0	\$0
EM&V	\$193,301	\$219,566	\$245,483	\$272,336	\$930,685
Administration	\$0	\$0	\$0	\$0	\$0
ED Portfolio Oversight	\$0	\$0	\$0	\$0	\$0

1 *Table 2.6 4-year Portfolio Forecast Summary (2028-2031) – Statewide HES California**

	2028	2029	2030	2031	Resource Acquisition Segment Only (Total 4-year)	Entire Portfolio (Total 4-year)
Total System Benefit (TSB)	0	0	0	0	0	0
Total Resource Cost (TRC) Ratio	0	0	0	0	0	0
Program Administrator Cost (PAC) Ratio	0	0	0	0	0	0
Societal Cost Test (SCT)	0	0	0	0	0	0
Ratepayer Impact Measure Test Ratio (RIM)	0	0	0	0	0	0
Lifecycle MWh/GWh	0	0	0	0	0	0
First Year MW	0	0	0	0	0	0
Lifecycle MMOTHERMS	0	0	0	0	0	0
Lifecycle CO2 Metric Tons	0	0	0	0	0	0
Other Benefits Not Reflected Above, such as:	• Unclaimed savings from technical assistance and referrals • Non-energy equity and market support benefits					

2 ** Note that the HES California program does not claim savings and therefore program benefits*
3 *are not included in the numbers requested for this table.*

1 *Table 2.7 4-year Portfolio Budget Forecast Summary (2032-2035) – Statewide HES*
 2 *California Program*

Budget Categories	2032	2033	2034	2035	Total (4-year)
Total	\$6,993,646	\$7,516,771	\$8,031,042	\$8,569,271	\$31,110,729
Resource Acquisition Segment	\$0	\$0	\$0	\$0	\$0
Market Support Segment	\$6,713,900	\$7,216,100	\$7,709,800	\$8,226,500	\$29,866,300
Equity Segment	\$0	\$0	\$0	\$0	\$0
Codes and Standards	\$0	\$0	\$0	\$0	\$0
EM&V	\$279,746	\$300,671	\$321,242	\$342,771	\$1,244,429
ED Portfolio Oversight	\$0	\$0	\$0	\$0	\$0

3 Tables 4 through 6 from the Narrative Template are not provided because they are
 4 not applicable to the statewide HES California program.

Chapter 3: Portfolio Strategies

I. Overview of BayREN Portfolio and Goals

BayREN’s proposed 2028-2035 portfolio of programs supports the achievement of state goals for energy efficiency, greenhouse gas reductions, and equity. California has set the ambitious climate goal to reduce greenhouse gas emissions (GHGs) to 40% below 1990 levels by 2030³⁰ and to fully decarbonization of its electric grid by 2045,³¹ together with goals of doubling energy efficiency by 2030,³² with the supporting goal for installation of six million heat pumps by 2030.³³ In its Environmental and Social Justice Action Plan 2.0,³⁴ the Commission recognizes the importance of ensuring that all residents can realize the benefits of energy efficiency and decarbonization.

These goals are related and inseparable. Improving energy efficiency reduces climate impacts and saves money for all ratepayers. Greenhouse gas emissions cannot be effectively addressed without a transition to carbon-free energy like electricity, and making this transition without overburdening the energy infrastructure requires continued and improved energy efficiency. The California Council on Science and Technology recognizes the interconnections between

³⁰ California Global Warming Solutions Act of 2006: emissions limit, SB 32, 2015–2016 Reg. Sess., *Statutes of California 2016*, chap. 249.

³¹ The 100% Clean Energy Act of 2018, SB 100, 2017–2018 Reg. Sess., *Statutes of California 2018*, chap. 312.

³² Clean Energy and Pollution Reduction Act of 2015.

³³ Governor Gavin Newsom to Liane Randolph, Chair, California Air Resources Board, letter regarding climate goal acceleration, July 22, 2022, <https://www.gov.ca.gov/wp-content/uploads/2022/07/07.22.2022-Governors-Letter-to-CARB.pdf> and California Heat Pump Partnership (CAHPP).

³⁴ California Public Utilities Commission, *Environmental & Social Justice Action Plan Version 2.0* (April 7, 2022).

1 efficiency and electrification when it notes that one of the essential elements of
2 decarbonizing energy use in California is to “maximize efficiency and electrify
3 energy use across sectors to the greatest extent possible.”³⁵ Serving low income,
4 hard-to-reach, and underserved residents and businesses, as well as the often-
5 substandard buildings they occupy, not only ensures that all Californians can
6 participate in and benefit from the energy transition but also is necessary to reach
7 the state’s energy efficiency and climate goals. Because of the interrelationships
8 between these goals, they need to be considered and addressed together. Because
9 of the breadth and ambition of the goals, achieving them will require significant
10 contributions from all Portfolio Administrators and particularly Regional Energy
11 Networks like BayREN.

12 California’s target of economy-wide decarbonization by 2045 requires a wide range
13 of actions to occur in tandem, and all of these actions will be needed to approach
14 this goal. Full decarbonization requires more than powering all retail electricity by
15 renewable and zero-carbon resources.³⁶ It also requires more than setting
16 ambitious building codes and standards, which regulate but do not encourage
17 building projects and improvements. Achieving decarbonization goals will also
18 require the transformation of the existing building stock, as identified in the State
19 Joint Agencies³⁷ 2021 SB 100 Joint Agency Report (the SB 100 Report).³⁸ The CEC’s

³⁵ California Council on Science and Technology, *Key Challenges for California’s Energy Future* (Sacramento: CCST, 2025), 3, <https://ccst.us/wp-content/uploads/CCST-Key-Challenges-for-Californias-Energy-Future.pdf>.

³⁶ California Senate Bill 100 (2018). Senate Bill 100 established a landmark policy requiring renewable and zero-carbon resources to supply 100 percent of electric retail sales to end-use customers by 2045.

³⁷ CPUC, CEC, and California Air Resources Board (CARB).

³⁸ California Energy Commission, California Public Utilities Commission, and California Air Resources Board, *2021 SB 100 Joint Agency Report: Achieving 100 Percent Clean Electricity in California: An Initial Assessment* (Sacramento: California Energy Commission, 2021), <https://www.energy.ca.gov/publications/2021/2021-sb-100-joint-agency-report-achieving-100-percent-clean-electricity>.

1 Draft 2025 Building Energy Action Plan notes that “efficient electrification of existing
2 buildings is the primary pathway to GHG reduction.”³⁹ Fossil gas combusting
3 equipment that is installed today with a 20-year useful life will outlive the 19 years
4 left to transform buildings. In addition, the CEC projects that residential gas rates
5 will increase in the Pacific Gas and Electric Company (PG&E) service area by
6 between 10x and 25x during that same period.⁴⁰ Even the *easy-to-reach* buildings
7 and *advantaged* communities will require cost-effective portfolios delivered by IOUs
8 and CCAs in order to make this energy transition. Assistance is therefore even more
9 essential for hard-to-reach, disadvantaged, and equity segments who often face
10 barriers such as limited funds for energy improvements combined with the
11 increased costs inherent in work on older, often substandard buildings. Inaction
12 here would lock in inequitable outcomes while also falling short of the 2045 goals.

13 For these segments, the state’s obligation to regulate is not optional or ancillary—it
14 is foundational, as outlined in the recent CPUC Environmental and Social Action
15 Plan Report.⁴¹ Regulatory authority exists precisely to protect public health, safety,
16 and welfare⁴² where markets fail to deliver equitable outcomes. Addressing the
17 barriers faced by these communities is therefore not only essential to achieving the
18 state’s decarbonization goals, but also central to fulfilling California’s responsibility

³⁹ California Energy Commission, *California Building Energy Action Plan*, Draft Commission Report, Publication No. CEC-400-2025-001-D (December 2025), 3, <https://www.energy.ca.gov/sites/default/files/2025-12/CEC-400-2025-001-CMD.pdf>.

⁴⁰ California Energy Commission, “Presentation - Gas End-Use Rates,” June 6, 2025, 2025 IEPR, Docket No. 25-IEPR-03, TN 264052, 30, <https://efiling.energy.ca.gov/GetDocument.aspx?tn=264052&DocumentContentId=100744>.

⁴¹ California Public Utilities Commission, *Environmental and Social Justice Action Plan Report 2025* (November 28, 2025), 1, <https://www.cpuc.ca.gov/-/media/cpuc-website/divisions/news-and-outreach/documents/news-office/key-issues/esj/2025-esj-action-plan-20-report--112825--final1.pdf>.

⁴² See, e.g., Cal. Pub. Util. Code § 451 (West 2025). Section 451 mandates that all charges for utility services be “just and reasonable,” declaring any unjust charges unlawful. Furthermore, it defines “service” as that which is necessary to promote the safety, health and comfort of its patrons and the public.

1 to ensure that the transition to a clean energy economy is just, sustainable, and
2 inclusive. Indeed, the CEC notes that “maximizing equity in building decarbonization
3 investments is key.”⁴³

4 Non-IOU programs, particularly those offered by RENs, are needed to meet the
5 state’s ambitious energy and climate goals and the CPUC’s Environmental and
6 Social Justice Action Plan (ESJ Action Plan) targets. The Commission acknowledged
7 the need for and importance of different program administrators when first
8 approving RENs in 2012.⁴⁴ As a trade-off for not being held to the traditional cost
9 effectiveness standard, RENs are constrained in which programs they are allowed
10 to offer.⁴⁵ In D.19-12-021, the Commission updated and clarified the limited role of
11 RENs and the criteria that the Commission would use to evaluate whether to
12 approve new or renewed REN business plans:

13 [RENs must show] new or unique value to the Commission’s energy, climate, and/or
14 equity goals, specifically:

- 15 1. Activities that utilities or CCA program administrators cannot or do not
16 intend to undertake.
- 17 2. Pilot activities where there is no current utility or CCA program offering, and
18 where there is potential for scalability to a broader geographic reach, if
19 successful.
- 20 3. Activities serving hard-to-reach markets, whether or not there is another
21 utility or CCA program that may overlap.⁴⁶

⁴³ California Energy Commission, *Building Energy Action Plan*, 3.

⁴⁴ CPUC D.12-11-015.

⁴⁵ CPUC D.12-11-015, 17.

⁴⁶ California Public Utilities Commission, *Decision Establishing Framework for Energy Efficiency Regional Energy Networks*, D.19-12-021 (Rulemaking 13-11-005), December 5, 2019, 32. Where there is overlap of

1 Although limited, this role is not unimportant. The Commission has consistently
2 acknowledged the importance of the REN role within the energy efficiency
3 landscape. In D.19-12-021, the Commission “agree[d]... that the importance of RENs
4 may increase as budgets and roles for LGPs [local government partnerships] are
5 shrinking within the utility portfolios for multiple reasons... The particular areas of
6 unique capacities local governments may bring in the delivery of energy efficiency
7 include, but may not be limited to, public sector buildings, issues surrounding
8 building code compliance, and treating or delivering energy efficiency services to
9 hard-to-reach customers.”⁴⁷ Moreover, when exempting RENs from the budget cap
10 on equity and market support programs, the Commission noted that “[t]he RENs
11 are exempted from this requirement because of the nature of their portfolios,
12 which is already different from the other program administrators. RENS, by their
13 nature and primary purpose, are more likely to have a greater share of their
14 portfolios devoted to market support and/or equity programs.”⁴⁸

15 As RENs serve as an equity engine for the state’s energy efficiency portfolio, BayREN
16 focuses its Plan on a coordinated suite of programs that target the market gaps
17 most critical to the region to advance state decarbonization and energy goals. The
18 portfolio prioritizes affordability by emphasizing interventions that lower actual bills
19 in the face of increasing electric rates⁴⁹ and prevent the dramatic gas rate increases
20 projected by the CEC⁵⁰ from being borne by equity customers. The programs also

programs, the Commission has advised a REN to ‘target[] the hardest-to-reach customers for activities that overlap or are significantly similar to [the IOUs].’ See also California Public Utilities Commission, *Decision Addressing Energy Efficiency Business Plans*, D.18-05-041 (Rulemaking 13-11-005), May 31, 2018, 100.

⁴⁷ CPUC D.19-12-021, 18.

⁴⁸ California Public Utilities Commission, *Decision Assessment of Energy Efficiency Potential and Goals*, D.21-05-031 (Rulemaking 13-11-005), May 20, 2021, 23.

⁴⁹ Little Hoover Commission, *The High Cost of Electricity in California*, 4-9.

⁵⁰ CEC Gas End-Use Rates Presentation, 30.

1 target service area wide interventions to increase code compliance and workforce
2 capacity that enable the reduction of peak electric loads to address the growing
3 costs of transmission and distribution expenditures.

4 BayREN's proposed portfolio includes 10 regional and one statewide program for
5 the four-year portfolio and eight-year business plan periods. BayREN proposes
6 some modifications to its existing programs and proposes one new program:
7 Incubator for Community-Designed Initiatives.⁵¹ The programs are in the
8 residential, commercial, public, and cross-cutting sectors, and are in all segments,
9 with approximately two-thirds in the equity segment. The portfolio mix builds on
10 BayREN's strengths as a REN and the ability to respond to the needs of the region
11 while also helping the state achieve its climate, energy, and equity related goals.

12 The goals and strategies discussed in this chapter inform the full eight-year
13 business plan period. To meet state energy and climate goals for both 2030 and
14 2045 and accomplish the clean energy transition, particularly for the hard-to-reach
15 and underserved portions of the population, work will need to continue through
16 and even beyond 2035. Improving energy efficiency to minimize impacts on the grid
17 and improve affordability will also continue to be essential. At the same time,
18 BayREN anticipates adjusting its portfolio and programs as needed to address any
19 unforeseen circumstances, new direction from the Commission, or changes in state
20 policy or goals.

⁵¹ California Public Utilities Commission, *Decision Authorizing Energy Efficiency Portfolios for 2024–2027 and Business Plans for 2024–2031*, D.23-06-055 (Rulemaking 13-11-005), June 29, 2023, 83 (approving Community-Based Design Collaborative). This program is designed in furtherance of the Community-Based Design Collaborative and allows for community leaders to participate in the development and design of programs with the potential for funding.

1. Overview of Proposed BayREN Programs by Sector

BayREN has been a Program Administrator since 2013, and the proposed programs reflect that experience and the continued commitment to filling gaps in the energy efficiency landscape. The programs complement each other and work with other Bay Area programs to serve the region with effective energy efficiency programs that reach all types of ratepayers and move the region closer to achieving state and local goals. BayREN programs have changed over time to ensure they continue to offer the most value for ratepayers, including the closing of one program during the last Business Plan cycle.⁵² The proposed portfolio of programs focuses on reaching those markets and customers that are traditionally underserved by utility programs, and is consistent with the REN program criteria.

A. RESIDENTIAL SECTOR

Bay Area Multifamily Building Enhancements Program (BAMBE) - BAYREN02

BayREN's award winning⁵³ Bay Area Multifamily Building Enhancements (BAMBE) has been offered since 2013 and is one of the longest running comprehensive multifamily energy efficiency programs in the state. The program has undergone several minor redesigns and changes to focus more on equity and has additional changes planned as well. BAMBE is in the equity segment.

⁵² Bay Area Regional Energy Network, *Bay Area Regional Energy Network's Closure of the Water Upgrades Save Program*, Advice Letter 32-E (California Public Utilities Commission, October 7, 2025).

⁵³ BAMBE had received national recognition for its successful program design and implementation strategies, including the [Exemplary Program Award](#) from the American Council for Energy Efficient Economy. (ACEEE). Further, the successful design of the program has also opened up different research and funding opportunities including technical assistance from ACEEE's [Energy Equity for Renter's Initiative](#), and together with 3C-REN, was awarded a DOE Building Upgrade Prize award (specifically the Equity-Centered Innovation Path), a program that is designed to rapidly scale energy efficiency and efficient electrification building upgrades in communities nationwide.

1 BAMBE prioritizes properties in census tracts burdened by extreme heat, poor air
2 quality, and high housing costs, and by 2028 will focus on smaller buildings (under
3 50 units) as well as those owned by independent, co-op, non-profit, or community
4 land trust organizations. This ensures that the REN criteria of conducting activities
5 serving hard-to-reach markets is met.

6 BAMBE delivers no-cost technical assistance and rebates that are based on project
7 scope and property location.⁵⁴ Measures include energy efficiency and
8 electrification upgrades that reduce energy costs, lower greenhouse gas emissions,
9 and improve resident health, safety, and comfort. By guiding property owners
10 through the specification and installation of advanced systems, BAMBE ensures
11 that multifamily buildings, where renters typically have little decision-making
12 power, receive upgrades that directly benefit residents.

13 Since the program launched, BAMBE has served approximately 50,000 units across
14 700 projects—about 6% of the Bay Area’s multifamily stock. BAMBE will continue to
15 focus on deeper energy savings and decarbonization measures in its target market
16 and will also increase efforts for post-install resident education events to help the
17 residents operate the new equipment properly thereby realizing the energy
18 efficiency benefits.

19 **Efficiency and Sustainable Energy (EASE) Home Program - BAYREN08**

20 BayREN’s EASE Home program, launched in 2025, was a redesign of BayREN’s
21 previous single-family Home+ program. EASE Home is an equity program and is
22 designed to address the most significant barriers to energy upgrades faced by low-

⁵⁴ Small multifamily properties in census tracts experiencing disproportionate heat, air quality and housing cost burdens may be eligible for higher incentives if they install measures that aim to alleviate those burdens.

1 and moderate-income residents: upfront costs and the complexity of home
2 upgrades. By minimizing financial and logistical hurdles, EASE Home allows
3 households to access permanent improvements that deliver whole-home benefits,
4 including energy savings, improved health and comfort, and greater climate
5 resilience. This program meets all of the REN criteria.

6 EASE Home is a direct install program with qualifying energy efficiency measures
7 including whole-home air sealing, insulation and duct sealing, repair, or
8 replacement. An Energy Advisor also makes a preliminary site visit to provide
9 personalized recommendations and is available for post installation support. The
10 program requires prevailing wages and incentivizes high-road workforce practices,
11 ensuring that the transition to clean energy supports good jobs and economic
12 opportunity.

13 Since program launch in 2025, there has been high demand with appointments
14 booked five to eight weeks out.

15 **Health, Energy, and Resiliency Education (HERE) - BAYREN07**

16 BayREN's HERE program, formerly known as the Green Labeling program, is a
17 market support program that has been offered by BayREN since 2018.⁵⁵ The HERE
18 program takes an innovative approach to advancing energy efficiency and
19 electrification by engaging a critical but often overlooked stakeholder group—real
20 estate professionals.

⁵⁵ Since then, BayREN has overseen delivery of more than 30,000 Home Energy Scores via about 45 Home Energy Score Assessors operating throughout the region. In 2026, Home Energy Scores transitioned from a regional offering available through the Green Labeling program to a statewide offering, discussed in more detail below.

1 Through a suite of specialized trainings, including the National Association of
2 Realtors® Green Designation, green home tours, and induction cooking
3 demonstrations, the program equips real estate agents, appraisers, and lenders
4 with the knowledge and tools to become trusted messengers for energy-smart
5 homes. By helping these professionals understand how energy upgrades enhance
6 property value and client satisfaction, the program transforms a historically
7 resistant group into advocates for sustainability. These trainings fill a gap in the
8 marketplace by providing a free pathway to “green” certification for real estate
9 professionals and appraisers, as well as other educational opportunities and
10 firsthand experiences for real estate and design professionals with technologies
11 such as heat pumps and induction stoves.

12 BayREN plans to expand the program to incorporate additional overlooked
13 stakeholders that influence home renovation and technology decisions in existing
14 homes, such as interior designers, architectural designers and architects, in order
15 to further drive market demand for electrification and efficiency. By combining
16 education and strategic partnerships, the HERE program is spurring innovation in
17 an unexpected space: the real estate and home renovation market.

18 **Statewide Home Energy Score (HES) California - BAY_SW_HESC**

19 Authorized by D.23-06-055⁵⁶ and approved as proposed in Advice Letter 28-E,
20 Home Energy Score (HES) California is a downstream market support program and
21 BayREN’s sole statewide program. This offering expands on years of successful
22 implementation through the BayREN Green Labeling program which received
23 national recognition, including winning two Department of Energy Innovation

⁵⁶ CPUC D. 23-06-055, Ordering Paragraph 3, 120.

1 Awards, one for scaling a voluntary program,⁵⁷ and the other for developing the
2 first of its kind Electrification Checklist.⁵⁸ Innovation drives HES California's
3 statewide expansion, and meets the REN criteria of piloting activities where there is
4 potential for scalability to a broader geographic reach if successful.

5 The program aims to inform single-family households about their homes' energy
6 use, how their homes' energy performance can be improved, and the next steps
7 they can take to make home energy upgrades. The program focuses on
8 incentivizing delivery of home energy reports that include the U.S. Department of
9 Energy's Home Energy Score and accompanying information about home energy
10 use, costs, emissions, and opportunities for improvements. HES California recruits
11 and trains HES assessors and also offers a small rebate (\$250) to incentivize Home
12 Energy Score assessments and consumer reports. Rebate fund delivery will be
13 contingent on successful delivery of the HES Report to the recipient customer and
14 being found in good standing within the program's quality assurance review
15 process.

⁵⁷ U.S. Department of Energy, "Better Buildings Innovation Award," awarded to BayREN (April 21, 2020), for successfully building and expanding a voluntary Home Energy Score market in the nine-county San Francisco Bay Area.

⁵⁸ Better Buildings Solution Center, "Bay Area Tackles Climate Goals through Innovative Home Energy Score Program," Beat Blog, June 22, 2021, <https://betterbuildingsolutioncenter.energy.gov/beat-blog/bay-area-tackles-climate-goals-through-innovative-home-energy-score-program>.

B. CROSS-CUTTING

Workforce, Education, and Training

BayREN Works - BAYREN09

BayREN Works is an expansion of BayREN's 2024-2027 workforce, education, and training (WE&T) program, Climate Careers.⁵⁹ The program is within the equity segment of the portfolio, which aligns with Recommendation 4 to "expand equity value through workforce, education, and training integrations" from the CAEECC Equity Advisory Committee.⁶⁰ BayREN Works serves hard-to-reach markets, including disadvantaged youth, renters, seniors, non-English speakers, and multifamily residents. There are two components to BayREN Works: Youth Employment and Contractor Mentorship.

Youth Employment is currently offered for BayREN as Climate Careers, which provides low-income youth with paid career experience in energy efficiency jobs and other energy-related opportunities, increasing their employability while also building the energy workforce. The youth are trained to provide home assessments and installation of energy- and water-saving measures for renters, multifamily residents, and underserved single-family residents. Thereafter, the youth are placed in paid externships, with BayREN supporting those externships in the energy and climate sectors.

⁵⁹ From 2019-2023, BayREN offered Climate Careers as part of its single-family Home+ program. In CPUC D.23-06-055, BayREN was approved to offer Climate Careers as a new WE&T program in its 2024-2027 portfolio.

⁶⁰ CAEECC Equity Advisory Committee, "Initial Memo: Recommendations by the CAEECC Equity Advisory Committee," December 19, 2025.
https://www.caeccc.org/files/ugd/849f65_49c6081166b7453dacc9a73c9d6861dd.pdf

1 The new Contractor Mentorship Program will provide hands-on training to
2 contractors new to electrification to complete their first electrification installations,
3 focusing on heat pump technology. Mentee firms will be paired with experienced
4 installers as mentors. Along with wrap-around training provided by the program,
5 mentors will provide in-field shadowing opportunities. Contractor recruitment will
6 focus on small, local, minority and women contractors and qualify them to
7 participate in public programs such as BayREN's EASE Home and local CCA and
8 utility rebate programs. In addition to helping to grow the contractor base, the
9 training and mentee/mentor relationship will help to ensure proper measure
10 installation so that energy savings and carbon reductions can be fully realized.

11 This program expansion will support both the state's heat pump goal of 6 million
12 installations by 2030⁶¹ and implementation of the Bay Area Air District's Zero-NO_x
13 emission rules⁶² and builds off a 2025 Climate Equity Hub initiative in San Francisco
14 that BayREN supported as a trial project. As a result, this expansion is what was
15 envisioned for RENS: to pilot activities that have the potential for scalability to a
16 broader reach if successful.

17 **Codes & Standards**

18 *Codes & Standards - BAYREN03*

19 BayREN's Codes and Standards Program is an existing program in the Codes &
20 Standards segment. The program fills gaps, pilots activities, and offers activities that
21 other overlapping Program Administrators do not undertake.

⁶¹ California Heat Pump Partnership (CAHPP).

⁶² "Building Appliances Rule Implementation," Bay Area Air Quality Management District, last updated May 8, 2024, <https://www.baaqmd.gov/en/community-health/building-appliances-rule-implementation>.

1 The program assists local governments with improving code compliance and
2 supports the development and implementation of local energy policies such as
3 reach codes. The program also acts as a bridge between local and state agencies,
4 ensuring that local realities are considered when state policies are developed.

5 BayREN members build relationships with building department and sustainability
6 staff within their county, ensuring that staff at all 109 Bay Area jurisdictions are
7 aware of BayREN trainings, forums, and resources. Local government staff also
8 share information about the challenges they face and work with BayREN to identify
9 gaps where training, resources, and demonstration projects would be valuable.

10 The program has strong partnerships with the statewide Codes & Standards
11 program as well as Bay Area CCAs, state agencies, and others. As good stewards of
12 ratepayer funds, BayREN has offered trainings⁶³ together with the statewide Energy
13 Code Ace offering for several years, and in 2025 BayREN partnered with Silicon
14 Valley Clean Energy to develop and offer trainings for building department staff on
15 electrification.⁶⁴ BayREN also shares training curriculum and has other partnerships
16 with other RENs and their Codes and Standards programs.

17 The Codes & Standards Program is constantly developing innovative trainings and
18 resources and testing different approaches to overcoming challenges. In 2025, staff
19 from 78 Bay Area jurisdictions engaged with the BayREN Codes & Standards
20 program, and over 300 unique individuals attended a training.

⁶³ One training is on Quality Insulation Installation and the other is on Accessory Dwelling Units (ADUs).

⁶⁴ Introduction to Residential Building Electrification and Electrical Upgrade Alternatives for Building Retrofits.

Incubator for Community-Designed Initiatives - BAYREN13

The Incubator for Community-Designed Initiatives is a new market support program that seeks to offer community-based organizations and local government agencies opportunities to design, propose, and potentially implement energy efficiency activities in the BayREN region.⁶⁵ This program is modeled after the Southern California Regional Energy Network's (SoCalREN's) Community-Based Design Collaborative.⁶⁶ The program will pilot activities that may be expanded throughout the region if successful. While this program would satisfy all three of the REN criteria, the Commission has indicated that this program proposal is distinct from other REN activities as the communities will be *designing* the programs, rather than being recipients of BayREN programs.⁶⁷

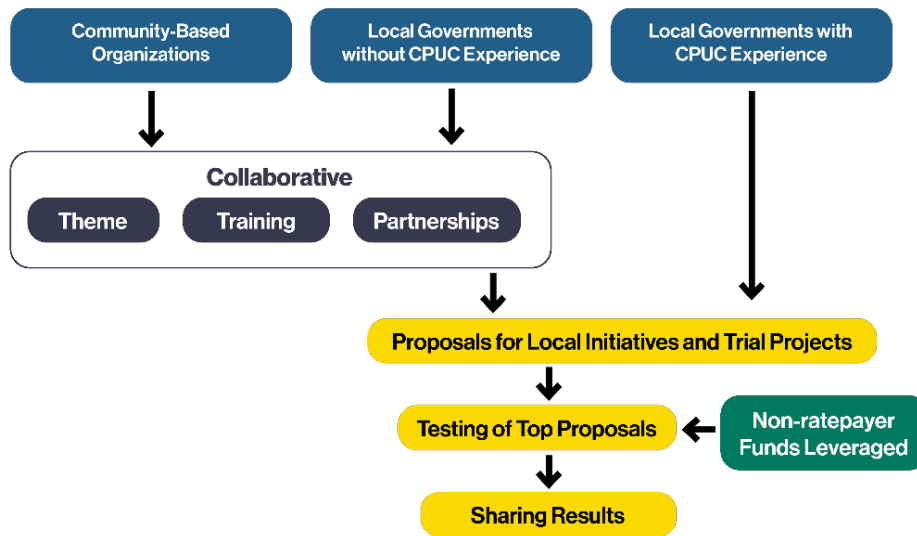
Outreach for potential participants in the collaborative will focus on community-based organizations and local government agencies with different areas of focus such as workforce, health and affordable housing. In addition to sharing ideas and relationship building, the collaborative's goal will be to develop concepts for trial projects that may be funded with BayREN funds or other funding sources. While BayREN will provide administrative support and conduct the outreach for participants, an essential feature of this program is that community-based organizations and local government agencies will be designing activities and leading in implementation. The chart below reflects the Incubator process.

⁶⁵ CPUC D.23-06-055, 81. This program is consistent with the Commission's desire to have Community-Based Design Collaboratives and the expectation that RENs, by their nature of being locally-focused, will make progress on this concept.

⁶⁶ "Collaborative | SoCalREN," accessed February 25, 2026, <https://socalren.org/about/collaborative>.

⁶⁷ CPUC D.23-06-055, 84.

Figure 3.1 Initial Proposed Process for the Incubator for Community-Designed Initiatives



BayREN anticipates that this program will generate a variety of ideas and partnerships, leading to increased innovation, effectiveness, community involvement, and understanding of energy efficiency programs at the local level. In addition, BayREN intends to pursue other sources of funding for this program to supplement ratepayer funds.

C. COMMERCIAL SECTOR

BayREN Business - BAYREN06

The BayREN Business Program is an existing offering and is in the Resource Acquisition segment. The program helps hard-to-reach (HTR) and small and medium businesses (SMB) lower energy use and utility costs through energy efficiency upgrades, focusing on those historically underserved by traditional programs. By simplifying the process and minimizing financial risk, BayREN Business expands access to energy-saving opportunities for HTR SMB as well as non-HTR businesses located in Disadvantaged Communities (DAC) and low-income

1 communities (LIC). These businesses have long supported energy efficiency
2 programs through their ratepayer contributions but have been unable to benefit
3 from them. The program satisfies two REN criteria: serving hard-to-reach markets
4 and testing activities that have the potential for scalability if successful.

5 Innovation is a hallmark of the BayREN Business Program. As one of the first small
6 business programs in the U.S. to implement a pay-for-performance model for
7 SMBs, it ensures incentives are tied to verified energy savings, protecting ratepayer
8 funds and driving measurable results. This data-driven, measure-agnostic approach
9 allows contractors to tailor solutions to diverse business needs, from lighting
10 upgrades to behavioral strategies. The program's pioneering work in population-
11 level Normalized Metered Energy Consumption (NMEC) has helped to influence
12 other resource acquisition programs.

13 BayREN Business serves SMBs located in DACs and LICs. Outside of these
14 geographic areas, BayREN Business exclusively serves HTR businesses; that is,
15 those that speak languages other than English, have 25 or fewer employees, and
16 face barriers such as limited capital and leased spaces. To further support equity,
17 the program recruits contractors certified as small, micro, or veteran-owned
18 businesses and offers multilingual staff support in Chinese and Spanish.

19 The BayREN Business Program plans to integrate artificial intelligence tools to
20 streamline enrollment and quality assurance, enhance cost-effectiveness, and scale
21 impact—continuing its role as a leader in equitable, innovative energy solutions.

BayREN Refrigerant Replacement Program (BRRR) - BAYREN10

The BayREN Refrigerant Replacement Program (BRRR) is an existing program that is part of the equity segment of the portfolio. The program satisfies all three of the REN criteria.

BRRR tackles one of the most pressing challenges for food and floral SMBs: unregulated,⁶⁸ outdated refrigeration systems that leak harmful refrigerants, waste energy, and increase costs. While each individual system is small, in aggregate their refrigerant leaks have an outsized impact on GHG emissions.⁶⁹ The BRRR Program provides direct-install services that include essential system repairs, leak fixes, environmentally friendlier refrigerant replacements, and energy efficiency upgrades. To ensure lasting benefits, participants receive maintenance training covering ongoing system care. The program addresses deferred maintenance that is traditionally a major barrier to energy efficiency, particularly with this customer segment. This approach reduces greenhouse gas emissions, lowers utility bills, and prevents costly emergency repairs, helping businesses remain competitive in a challenging economic landscape.

Like the BayREN Business Program, the BRRR program prioritizes serving HTR and non-HTR SMB within low-income and disadvantaged communities. It also serves SMB located beyond those communities if they qualify as hard-to-reach businesses.

⁶⁸ Commercial refrigeration systems with a refrigerant charge of 50 pounds or more fall under CARB regulations. Most small and medium-sized food and floral businesses use systems with far smaller charges, so they are outside these regulatory requirements.

⁶⁹ DNV, *A Roadmap for Accelerating the Adoption of Low-Global Warming Potential HVAC Refrigerants*, Proposer Defined Study for the California Public Utilities Commission, May 3, 2021, 10, <https://pda.energydataweb.com/#!/documents/2506/view>.

1 The BRRR Program plans to pilot next-generation technologies like natural
2 refrigerants and solid refrigerants, all with very low or zero global warming
3 potential. By combining technical solutions with education and policy alignment,
4 the BRRR Program not only supports SMBs today but also prepares them for a low-
5 carbon future.

6 D. PUBLIC SECTOR

7 **Integrated Energy Services (IES) Program - BAYREN11**

8 BayREN's Integrated Energy Services (IES) program is an existing program and is
9 part of the market support segment of the portfolio. IES fills a gap in the market.

10 The program offers two core services: 1) Energy Concierge, a single point of contact
11 that connects local governments and special districts to the most relevant current
12 energy program offerings, and 2) Energy Roadmapping, which delivers customized
13 engineering assistance and actionable plans for energy-related facility
14 improvements. In 2026 and 2027, the program will also be exploring providing
15 similar services to school districts and increased support for some participants to
16 ensure projects can be realized. The program helps local governments and special
17 districts overcome barriers to upgrading public facilities and community resilience
18 centers (CRCs), enabling them to develop and carry out building energy
19 improvements while leveraging a variety of funding sources including local funds,
20 grant funds, and incentive funds.

21 IES prioritizes equity targeted facilities and supports the development of CRCs—
22 critical lifelines for vulnerable residents during extreme weather and outages, in

furtherance of California goals for these communities.⁷⁰ This approach ensures that the communities most impacted by climate change benefit from safe, reliable spaces even when home-based solutions like solar and storage are out of reach.

Targeted Decarbonization Services (TDS) Program - BAYREN12

BayREN's Targeted Decarbonization Services (TDS) program is an existing program and is part of the market support segment. TDS helps Bay Area local governments and special districts overcome the technical, financial, and capacity barriers that often prevent public buildings from transitioning away from fossil fuels. As one of the few programs offering comprehensive decarbonization support for public buildings, TDS is spurring innovation by filling market gaps, testing scalable solutions, and fostering peer-to-peer learning across jurisdictions. By helping local governments lead by example, TDS accelerates the adoption of clean technologies and sets the stage for a carbon-free future.

Through three core services—Decarbonization Showcases, Decarbonization Education, and Decarbonization Financing—TDS provides hands-on technical assistance, gap funding, and training to move projects from concept to completion, along with detailed case studies.

Showcase projects demonstrate real-world decarbonization strategies in municipal facilities, supported by expert engineering technical assistance. Completed projects are documented through in-depth case studies to create replicable models that other jurisdictions can follow. TDS also offers training to local government finance

⁷⁰ See, e.g., Cal. Gov't Code §8593.3 (West 2026). This section addresses community resilience centers and mandates that such facilities address the requirements of access and functional needs populations.

staff on options for paying for decarbonization technologies, as well as training for facilities management staff on ongoing operations and maintenance.

The program has also been documenting needs and gaps related to financing of decarbonization equipment, and will test initiatives to address these needs, which could include leveraging non-ratepayer funds and providing bridge loans. BayREN will continue to identify funding options for public building decarbonization in the business plan period.

2. BayREN's Portfolio Goals

BayREN's proposed portfolio aligns with the state's energy and climate priorities, the CPUC Environmental and Social Justice (ESJ) Action Plan, and REN directives, and to ensure this, BayREN has identified five overarching portfolio goals. These goals connect directly with the CPUC-identified portfolio strategies (discussed in Section IV below); this comprehensive alignment demonstrates that BayREN's portfolio is purpose-built to advance Commission priorities while leveraging the unique capabilities of a REN to serve the region's diverse communities and building stock.

Goal 1: Prioritize those who are hard-to-reach, have been generally underserved by ratepayer-funded programs, or that face persistent barriers that limit their participation in energy efficiency and electrification programs.

RENs have been charged with filling gaps and delivering services to hard-to-reach customers, and this is an important goal for BayREN's portfolio. By focusing on these areas, BayREN not only ensures that all Bay Area residents, businesses, and local governments are able to participate in the benefits of energy efficiency and decarbonization but also learns more each year about how to better reach and serve these audiences.

BayREN’s proposed portfolio addresses this goal in a variety of ways aligned with the following Commission-Identified Portfolio Strategies, which are further discussed in the next section of this chapter:

2. Advance Building Decarbonization
6. Promote & Deploy Exempt Measures in the Equity Segment
7. Advancing ESJ Action Plan Goals.
10. Reporting Demographic Data.
11. Overcoming Sector and Segment Specific Challenges.
14. Using Community Based Program Design.

Goal 2: Increase energy efficiency of buildings and reduce energy use, particularly at peak times, by encouraging the development of energy-efficient and decarbonized buildings.

Increasing energy efficiency has been BayREN’s goal from our inception. Indeed, one of the original arguments for the creation of BayREN was the need for local governments to collaborate with the CPUC in order to achieve the state’s aggressive energy efficiency goals and achieve market transformation.⁷¹ The purpose of the 2018-2025 Business Plan was “to increase the access and availability of energy efficiency services to a broad range of ratepayers and sectors...”⁷² While the energy landscape has changed greatly over time, the need for energy efficiency continues, both for reducing energy generation and distribution costs for all ratepayers as well as reducing customers’ bills, made even more important with the affordability crisis. As the state works to transition to a decarbonized energy system, energy

⁷¹ *Motion of the San Francisco Bay Area Regional Energy Network*, R.11-05-005 (CPUC July 16, 2012), 1, <https://docs.cpuc.ca.gov/publisheddocs/EFILE/MOTION/171418.pdf>.

⁷² Bay Area Regional Energy Network, *BayREN Energy Efficiency Business Plan 2018–2025* (January 23, 2017), 5, <https://www.bayren.org/sites/default/files/2021-12/BayREN%202018-2025%20Business%20Plan.pdf>.

efficiency and reducing energy use at peak times has become even more important, and BayREN's portfolio is responding to that need as well.

In addressing this goal, BayREN's proposed portfolio supports the following Commission-Identified Portfolio Strategies, discussed in more detail below:

1. Affordability & Rate Mitigation.
2. Cost Effectiveness.
3. Advancement of Building Decarbonization.
4. Electric Savings at Peak Times.
5. Use of Meter-Based Savings Measurement.
8. Supporting Integrated Demand Side Management (IDSM).

Goal 3: Improve health and resilience outcomes for residents and communities.

In 2024 and throughout 2025, BayREN engaged in extensive stakeholder outreach. One of the findings from this engagement was that improving health outcomes and resilience to climate impacts in the built environment is a regional (as well as a state⁷³) priority. BayREN therefore has a goal of considering and integrating health and resilience benefits into its energy programs.

This goal aligns with the following Commission-Driven Portfolio Strategies:

7. Advancing ESJ Action Plan Goals.
8. Supporting Integrated Demand Side Management (IDSM).
11. Overcoming Sector - and Segment-Specific Challenges.
12. Reducing Environmental Impacts of Refrigerants

⁷³ See, e.g., California Natural Resources Agency, *Protecting Californians from Extreme Heat: A State Action Plan to Build Community Resilience* (April 2022), 5, <https://resources.ca.gov/-/media/CNRA-Website/Files/Initiatives/Climate-Resilience/2022-Final-Extreme-Heat-Action-Plan.pdf>.

Goal 4: Reduce greenhouse gas emissions, focusing on building decarbonization.

BayREN's programs reduce greenhouse gas emissions by focusing on building decarbonization. According to a 2025 report from the United Nations Environment Programme (UNEP), global greenhouse gas emissions continue to increase and the world is likely to exceed the goal of keeping global warming below 1.5 degrees Celsius.⁷⁴ The report also notes that "Every fraction of a degree of global warming matters. Each additional 0.1°C of global warming escalates damages, losses and adverse health impacts..."⁷⁵ California has adopted state climate goals, including achieving carbon neutrality by 2045 or earlier, and recognizes that reducing GHG emissions from buildings is necessary to reach those goals.^{76,77} Over 70% jurisdictions in the Bay Area have also adopted climate goals or climate action plans.

While California's strong Energy Code significantly reduces greenhouse gas emissions from new buildings,⁷⁸ BayREN's portfolio focuses on improvements to the existing building stock, including residential, commercial, and public buildings. Reducing emissions from existing buildings is considerably more challenging for a number of reasons, including the number of buildings and property owners

⁷⁴ United Nations Environment Programme, Emissions Gap Report 2025: Off Target (Nairobi: UNEP, 2025), <https://wedocs.unep.org/rest/api/core/bitstreams/4830e1a8-14c0-44a5-a066-cdd2ba5b3e10/content>.

⁷⁵ UNEP, *Emissions Gap Report 2025*.

⁷⁶ California Air Resources Board, *2022 Scoping Plan for Achieving Carbon Neutrality: November 2022 Update* (December 2022), Executive Summary and Appendix F, <https://ww2.arb.ca.gov/our-work/programs/ab-32-climate-change-scoping-plan/2022-scoping-plan-documents>.

⁷⁷ California Energy Commission, *Final 2021 Integrated Energy Policy Report*, vol. 1, Building Decarbonization (Sacramento: California Energy Commission, 2021), <https://efiling.energy.ca.gov/GetDocument.aspx?tn=241599>.

⁷⁸ California Energy Commission, "2025 Energy Code Compliance Initiatives Staff Workshop 2," November 19, 2025, Docket No. 24-BSTD-05, TN 267632, slide 15, <https://efiling.energy.ca.gov/GetDocument.aspx?tn=267632&DocumentContentId=104649>.

involved, the wide variety of existing conditions, the need to encourage and incentivize proactive improvements, and high levels of unpermitted work.^{79,80}

This goal aligns with the following Commission-Driven Portfolio Strategies:

1. Affordability & Rate Mitigation.
3. Advancement of Building Decarbonization.
4. Electric Savings at Peak Times.
6. Promote and Deploy Exempt Measures in the Equity Segment.
8. Supporting IDSM.
12. Reducing Environmental Impacts of Refrigerants.

Goal 5: Fill gaps and spur innovation in order to respond to changing conditions and find better, more effective approaches to meet local needs.

BayREN's fifth goal is to fill gaps and spur innovation by working closely with stakeholders to identify needs as they arise, exploring and testing new solutions locally and regionally, scaling as appropriate, and sharing results. This goal is similar to the REN criteria of piloting activities and filling gaps and serves as a guidepost for program implementation. In particular, BayREN aims to respond quickly to changing conditions and new insights, test solutions as appropriate, and identify and implement improvements at all levels, from program design to individual activities.

This goal aligns with the following Commission-Identified Portfolio Strategies:

⁷⁹ DNV GL, *2014-2016 HVAC Permit and Code Compliance Market Assessment (Work Order 6) Final Report*, CALMAC Study ID: CPU0172.01 (San Francisco: California Public Utilities Commission, 2017), https://www.calmac.org/publications/HVAC_WO6_FINAL_REPORT_VolumeI_22Sept2017.pdf.

⁸⁰ Nathanael Jo et al., "Not (Officially) In My Backyard," *Journal of the American Planning Association*, (June 24, 2024), <https://dho.stanford.edu/wp-content/uploads/JAPA.pdf>.

- | | | |
|---|-----|---|
| 1 | 2. | Cost Effectiveness |
| 2 | 5. | Use of Meter-Based Savings Measurement |
| 3 | 9. | Advancing Workforce, Education, and Training |
| 4 | 11. | Overcoming Sector - and Segment-Specific Challenges |
| 5 | 13. | Spurring Innovation |
| 6 | 14. | Using Community-Based Program Design |

1 *Table 3.1 BayREN Goals and CPUC Strategies Matrix*

CPUC-Identified Strategy	Goal 1: Hard-to-Reach & Underserved	Goal 2: Energy Efficiency & Peak Reduction	Goal 3: Health & Resilience	Goal 4: GHG Reduction & Decarbonization	Goal 5: Innovation & Local Needs
Strategy 1 Affordability & Rate Mitigation	●	●		●	
Strategy 2 Cost Effectiveness		●			●
Strategy 3 Advancement of Building Decarbonization		●		●	
Strategy 4 Electric Savings at Peak Times		●		●	
Strategy 5 Use of Meter Based Savings		●			●
Strategy 6 Promote & Deploy Exempt Measures in the Equity Segment	●			●	
Strategy 7 Advancing ESJ Action Plan Goals	●		●		
Strategy 8 Supporting IDSM		●	●	●	
Strategy 9 Advancing Workforce, Education, and Training					●
Strategy 10 Reporting Demographic Data	●				

CPUC-Identified Strategy	Goal 1: Hard-to-Reach & Underserved	Goal 2: Energy Efficiency & Peak Reduction	Goal 3: Health & Resilience	Goal 4: GHG Reduction & Decarbonization	Goal 5: Innovation & Local Needs
Strategy 11 Overcoming Sector and Segment Specific Challenges	●		●		●
Strategy 12 Reducing Environmental Impacts of Refrigerants			●	●	
Strategy 13 Spurring Innovation					●
Strategy 14 Using Community-Based Program Design	●				●

1 BayREN's success in achieving all of these goals is driven largely by utilizing the
 2 strength, experience, and knowledge of local governments. BayREN applies these
 3 by tapping into related local government activities and partnerships to create
 4 solutions that are holistic, based on local needs, and consistent throughout the
 5 region. These partnerships include existing relationships with state and regional
 6 agencies, utilities, CCAs, local government agencies, and community-based
 7 organizations. County members also work directly with residents, businesses, and
 8 local governments within their counties, gathering information on local needs and
 9 goals and providing information on BayREN and other energy-related resources. To
 10 further BayREN's goals and the CPUC's strategies, BayREN directly coordinates with
 11 and leverages other local government activities. Due to BayREN's efforts, local

1 governments are able to access additional funding sources to further this work.

2 Some examples include the following:

- 3 • San Francisco received \$796,600 in Energy Efficiency and Conservation Block
4 Grant (EECBG) funding for residential electrification and weatherization
5 projects that will supplement BayREN program funding.
- 6 • Santa Clara County was awarded \$1,666,279 as a congressional earmark
7 from the Economic Development Initiative – Community Project Funding for
8 farmworker housing rehabilitation and electrification, which will augment
9 BayREN program funds.
- 10 • San Mateo County utilized a \$40,000 member agency grant from Peninsula
11 Clean Energy to fund one or more supplemental electrification measures for
12 all BayREN single family participants in the county.
- 13 • BayREN is working with Contra Costa County and the City of Pinole to provide
14 additional funding from the City to implement additional energy efficiency,
15 electrification, and resilience measures to properties participating in
16 BayREN’s single family or multifamily programs.

17 II. Commission-Identified Portfolio Strategies

18 The strategies identified by the Commission for this Business Plan Application have
19 been incorporated into BayREN’s five portfolio goals, as discussed above. These
20 strategies are further reflected in the proposed portfolio of programs. This section
21 describes in more detail how the programs directly address each strategy.

1. Affordability and Mitigation of Rate Impacts

The Commission has affirmed that demand side management programs deliver substantial value to all ratepayers.⁸¹ Some key ways that BayREN improves affordability and mitigates rates are by focusing on reducing energy consumption through the implementation of energy efficient measures, providing education and training to market actors, and developing tools for increasing energy code compliance. The role of RENs in the energy efficiency landscape ensures that this value does not only accrue to the easy-to-reach and affluent residents and businesses, but also that those customers that are at the center of the CPUC ESJ Action Plan and Equity and Resolution E-5351 Equity and Market Support⁸² objectives are served.

BayREN's portfolio focuses on the highest needs and gaps in the market, increased program efficiencies, and enhanced reporting of impacts to meet Commission and state policy. Programs have evolved to address increasing electricity and gas rates, to mitigate peak load impacts of electrification, and support the avoidance of grid-driven investment rate pressures which has seen historic disinvestment.⁸³ Looking to the future and consistent with the CEC's long-term fossil gas rate projections and recent fluctuations in commodity prices for fossil gas, BayREN prioritizes electrification measures in all sectors so that the customers most in need are able to participate in the energy transition and avoid future gas rate impacts.

⁸¹ California Public Utilities Commission, *Report on Demand-Side Management Programs Pursuant to PUC Section 913.5* (San Francisco: CPUC, 2024), 4.

⁸² California Public Utilities Commission, Resolution E-5351 (June 12, 2025), 6, <https://docs.cpuc.ca.gov/PublishedDocs/Published/G000/M570/K086/570086609.PDF>.

⁸³ Anna M. Brockway, Jaleila Conde, and Duncan Callaway, "Inequitable Access to Distributed Energy Resources Due to Grid Infrastructure Limits in California," *Nature Energy* 6, no. 9 (September 13, 2021): 892–903, <http://dx.doi.org/10.1038/s41560-021-00887-6>.

1 Select programs also focus on reducing peak usage, including through IDSM. The
2 inclusion of distributed energy resource (DER) technical support and permanent
3 load-shifting provides significant opportunities for bill savings and load
4 management. This in turn saves customers on their bills, saves non-participating
5 customers the program expense, and provides societal benefits of avoided
6 transmission and distribution costs. To further encourage these types of
7 improvements, BayREN is actively seeking to leverage other funding sources to
8 support IDSM measures and further advance affordability.

9 Finally, BayREN has established multiple processes to ensure that its budgets are
10 fully justified and funds are managed appropriately. (See Chapter 4 below for
11 discussion on the zero-based budgeting process used and Chapter 5 for a
12 discussion on the procedures and oversight used to manage portfolio costs.)
13 BayREN tracks the ongoing performance of its programs and takes action as
14 needed to improve, redesign, or close programs.

15 Some program-specific examples of how the BayREN portfolio strategically
16 addresses affordability and rate impacts are:

- 17 • The **multifamily BAMBE Program** incentivizes energy-saving upgrades that
18 help residents and property owners reduce utility bills, protecting those most
19 vulnerable to rate increases. In 2025, BayREN leveraged DOE Buildings
20 Upgrade Prize funding to analyze the bill impacts of combining heat pump
21 water heaters with envelope upgrades.⁸⁴ These findings will inform future
22 offerings, such as adder incentives for combined measures and post-
23 installation resources to navigate rate options. Ongoing benchmarking

⁸⁴ J. Young and A. Aggarwal, *Utility Bill Analysis (UBA) Tool Demonstration* (Chicago: Guidehouse, 2025).

1 ensures accurate tracking of pre- and post-installation consumption, guiding
2 measure prioritization and operations support to maximize downward
3 pressure on bills. At the completion of the projects, renters are provided with
4 information about how they can reduce their energy bill through training on
5 the efficient use of the technology as well as Time of Use.

- 6 • **EASE Home**, BayREN's single family direct-install program, provides
7 weatherization upgrades, such as insulation, duct repair or duct
8 replacement, to single family households that otherwise could not afford
9 them. Surveys confirm that 100% of participants would not have pursued
10 these improvements without BayREN's support. These upgrades lower
11 energy use, thereby mitigating rate impacts for participants. Participants are
12 also provided with information about how to properly use the new
13 technologies to ensure the potential for energy savings is realized.
- 14 • **Home Energy Score (HES) California** statewide program provides modeled
15 information on current energy use and annual energy costs as well as the
16 same data for two different upgrade pathways, allowing homeowners to
17 make a comparison using the estimated annual cost information to identify
18 opportunities for bill savings. As documented in a recent ACEEE White
19 Paper,⁸⁵ home buyers that are more informed about energy features of a
20 home and potential utility costs are less likely to enter into a mortgage or
21 lease that they can't afford, which is particularly important for homebuyers
22 and renters who are stretching their financial limits in a very competitive
23 housing market.

⁸⁵ Steven Nadel, Energy Ratings for Home Sales (Washington, DC: American Council for an Energy-Efficient Economy, 2025), <https://www.aceee.org/white-paper/2025/07/energy-ratings-home-sales>.

- 1 • **BayREN Business** advances affordability through a pay-for-performance
2 design that ensures incentives are tied to verified savings, safeguarding
3 ratepayer funds. Completed projects in 2024 are projected to deliver \$3,000
4 in annual savings per participating business on average⁸⁶, with lifetime
5 savings estimated to exceed \$5.8 million for 2024 participants alone. These
6 savings, coupled with improved equipment reliability, reduce operational
7 costs and mitigate future rate impacts.
- 8 • **The BayREN Refrigerant Replacement (BRRR) Program** promotes
9 affordability by incentivizing system tune-ups, leak repairs⁸⁷, energy
10 efficiency measure installations, and refrigerant replacements, reducing
11 electricity waste and avoiding costly emergency repairs. Projects served by
12 BRRR in 2025 saw average annual utility bill savings of \$3,418.
- 13 • **Integrated Energy Services** supports public agencies through the Energy
14 Concierge and Energy Roadmapping services, which recommend efficiency
15 measures with upfront and lifetime cost considerations, allowing participants
16 to make informed decisions and move forward with energy upgrade projects.
17 By integrating electrification, renewable generation, and storage, these
18 services enable strategic infrastructure planning that minimizes unnecessary
19 electrical upgrades, reducing long-term costs.⁸⁸

⁸⁶ Bay Area Regional Energy Network, *2024 BayREN Annual Report* (BayREN, 2025), 24,
https://www.bayren.org/sites/default/files/documents/2025/BayREN_2024_Annual_Report_Final.pdf.

⁸⁷ Leaking systems consume more electricity due to increased compressor cycling from low refrigerant levels; addressing these leaks results in immediate reductions in electricity use and costs.

⁸⁸ Michael Blonsky et al., "Potential Impacts of Transportation and Building Electrification on the Grid: A Review of Electrification Projections and their Effects on Grid Infrastructure, Operation, and Planning," *Current Sustainable/Renewable Energy Reports* 6, no. 4 (November 13, 2019): 169-76, <https://doi.org/10.1007/s40518-019-00140-5>.

BayREN’s portfolio mitigates rate impacts, improves affordability, protects vulnerable populations from rising rates, and also creates long-term affordability and resilience across the region for residents, businesses, and public agencies. As utility rates continue to rise, primarily due to wildfire mitigation and increased transmission and distribution costs, BayREN continues to provide services designed to reduce energy use, effectively fill gaps, find new and improved approaches to energy efficiency, and serve hard-to-reach and underserved ratepayers to assist with the transition to clean energy.

2. Cost-Effectiveness

Cost-effectiveness, affordability, and total system benefit are deeply connected and have been the subject of much consideration in recent years, including through Governor Newsom’s Order N-5-24, the CPUC PUC §913.5 Report, and the OIR for R.25-04-010. This includes the opportunity to materially change portfolio oversight and cost-effectiveness, noting that “adjustments may be needed to cost-effectiveness policies and their application within energy efficiency portfolios and programs” (Section 2.1.4.2). The Commission has also recently reiterated that it “is committed to equitable energy affordability, particularly for disadvantaged and low-income communities. Ongoing strategic investments in DSM programs, rigorous oversight, and transparent reporting ensure continuous improvement in program effectiveness and equity. Moving forward, the CPUC will continue to refine and expand DSM programs, emphasizing portfolio-wide evaluation, measurement, and verification (EM&V) practices to ensure maximum benefits and cost-effectiveness.”⁸⁹

⁸⁹ California Public Utilities Commission, *Annual Report to the Legislature on Energy Efficiency* (PU Code Section 913.5) (2025), 4.

BayREN, like other RENS, is not held to a cost-effectiveness standard because of the RENS' unique and limited role as CPUC-authorized PAs. As the CPUC found in D.18-05-041:

[W]e do not find it reasonable to impose a minimum cost-effectiveness threshold for REN proposals. As we have maintained in the past, the more limited scope of activities we authorize RENS to undertake, which results in a much lower ability to diversify their portfolios (relative to the IOUs), argues against holding them to a particular cost-effectiveness standard.⁹⁰

The Commission reiterated this position in D.19-12-021:

We approved the existing REN portfolios recently, in D.18-05-041, and at that time reaffirmed that we do not wish to set a specific cost-effectiveness threshold for RENS. This is both because the size of the REN portfolios is smaller, and because the RENS are inherently designed to take on filling gaps in the other larger portfolios or serving the needs of hard-to-reach customer segments/markets that will be naturally less cost-effective to serve. None of this reasoning has changed, and therefore, we continue to decline to set a cost-effectiveness threshold for new or existing RENS now.⁹¹

This approach was further re-affirmed in D.21-05-031 with regards to Resource Acquisition programs, "requir[ing] that all program administrators with energy efficiency resource acquisition programs, excluding RENS whose portfolios have different rules, to show that the resource acquisition segment of their portfolio, with all resource acquisition programs' costs and benefits combined together, is cost-effective on an ex ante basis, with a TRC ratio of at least 1.0 or greater."⁹²

The Commission's policy to not impose a cost effectiveness threshold on RENS, as a result of the established portfolio limitations, has therefore been confirmed multiple times. Not being held to a cost-effectiveness standard allows BayREN to

⁹⁰ CPUC D.18-05-041, 95.

⁹¹ CPUC D.19-12-021, 37.

⁹² CPUC D.21-05-031, 22.

1 serve ratepayers who need extra support to participate in energy efficiency
2 programs and to address some of the persistent barriers to making energy
3 improvements in existing buildings.

4 While not held to a cost-effectiveness standard, BayREN is serious about its
5 responsibility to ensure that ratepayer funds are used wisely and strives to ensure
6 that ratepayer funds deliver maximum value. The portfolio's one Resource
7 Acquisition program aims to improve Total Resource Cost (TRC), while all programs
8 that claim energy savings work to increase their Total System Benefit (TSB):

- 9 • **BayREN Business**, a resource acquisition program, works to reduce
10 administrative costs and improve efficiency through a variety of mechanisms
11 and is exploring the use of advanced technologies, such as artificial
12 intelligence for application scanning and remote inspections. The program
13 focuses on measures and customer types that deliver the highest peak
14 savings. In alignment with the findings from the 2025 California Goals and
15 Potential Study,⁹³ the Program intends to have up to 20% of its annual
16 projects involve fuel substitution measures, which is expected to further
17 increase TSB values while also contributing to regional and statewide
18 decarbonization and grid efficiency goals.
- 19 • **The Refrigerant Replacement Program (BRRR)** will be incorporating fixed-
20 price equipment and installation agreements in order to simplify
21 administration, leverage economies of scale, and reduce costs. In addition,
22 pairing refrigeration system upgrades with complementary energy efficiency

⁹³ California Public Utilities Commission, *2025 California Potential and Goals Study* (San Francisco: CPUC, 2025), xvi–xvii, <https://www.cpuc.ca.gov/-/media/cpuc-website/divisions/energy-division/documents/energy-efficiency/2025-potential-goals-study/2025-group-e-potential--goals-study-final-report-20250717.pdf>.

1 measures, such as door closers, anti-sweat controllers and heaters, and
2 efficient motors, will further enhance energy savings. The program will
3 provide basic do-it-yourself maintenance training to ensure sustained
4 performance and long-term cost benefits. These program improvements will
5 enable the program to deliver more energy savings as well as increased
6 value to program participants.

- 7 • **The Multifamily BAMBE Program** conducts ongoing analysis to identify
8 measures that deliver high TSB. Preliminary findings indicate that fuel
9 substitution measures, such as heat pump water heaters, outperform non-
10 fuel substitution measures in terms of TSB contribution. The program will
11 continue to conduct analysis on this and will consider incentive structure
12 changes to prioritize these high-impact measures for the 2028-2035 program
13 cycle. BAMBE has also been very successful at leveraging other funds and will
14 continue to do so as possible. In 2025, the program provided \$7.4 million in
15 incentives while leveraging another \$9.8 million from other sources, primarily
16 state and federal, for projects undertaken by the program.
- 17 • **BayREN's Single Family EASE Home Program**, like the multifamily program,
18 anticipates increasing its energy savings claims in the portfolio period by
19 adding fuel-substitution measures which are particularly cost-effective to the
20 program, in addition to weatherization measures.

21 Other programs in the proposed portfolio contribute to the cost-effectiveness of
22 overlapping Portfolio Administrators. For example, in the public sector, both of
23 BayREN's programs connect public agencies to programs that reduce energy
24 demand and increase on-site generation. These services streamline coordination,
25 reducing administrative burdens and improving uptake of other ratepayer-funded

1 programs, thereby indirectly boosting cost-effectiveness across the entire energy
2 efficiency portfolio.

3 Other programs that do not calculate TSB or claim savings do nonetheless produce
4 unclaimed energy savings, unique benefits, and value to ratepayers. For example,
5 BayREN's Codes and Standards program has developed relationships with Bay Area
6 building departments and provides needed training and resources for building
7 department staff to ensure compliance, which is critical for realizing energy savings
8 and optimizing TSB.

9 Measuring the value of market support and equity segment programs is an ongoing
10 effort that is addressed at least partially by RENS' Unique Value Metrics (discussed
11 in Chapter 5). Additionally, the CPUC has directed that for market support and
12 equity segment programs, "all program administrators, including the RENS, should
13 focus on developing metrics and criteria for evaluating the progress of those
14 market support and equity programs, in the absence of strict cost-effectiveness
15 limitations."⁹⁴ As is discussed more in Chapter 5, BayREN is also actively working
16 with other RENS and exploring other approaches to measuring and reporting on
17 the performance of its portfolio, starting by identifying and documenting the types
18 of value produced by its programs that are not captured by current methodologies
19 and metrics such as TSB. Reporting the full customer-realized impacts of ratepayer
20 investment remains paramount to demonstrating the uniqueness and value of
21 BayREN programs, and the specific applicability of evaluating demand side
22 management portfolios. BayREN will note progress in the 2026 and 2027 Annual
23 Reports.

⁹⁴ CPUC D.21-05-031, 23.

BayREN’s commitment to the prudent and cost-effective use of ratepayer funds is demonstrated by its data-driven prioritization of high-TSB measures, streamlined program delivery, and market-leveraging strategies, including leveraging non-ratepayer funds. By combining technical innovation, targeted incentives, and operational efficiencies, BayREN ensures that every dollar invested delivers significant value and benefits to ratepayers, the grid, and participating customers.

3. Advancement of Building Decarbonization

California’s economy has been directed to decarbonize by 2045,⁹⁵ and the BayREN portfolio serves as a vehicle for the CPUC to reach populations and buildings that are essential for meeting state decarbonization goals. The Renewable Portfolio Standard (RPS)⁹⁶ achieves decarbonized supply *only* to electric end uses. An aggressive set of building codes and standards regulates *new construction* and *permitted structures* but does not incentivize or encourage energy upgrades in existing buildings. Further, as shown in the CEC’s recent Compliance Gap Analysis, the Energy Code is likely not delivering the full extent of savings and decarbonization that had been previously projected.⁹⁷ Addressing the many buildings and millions of pieces of equipment that are not covered by the above policies are central to BayREN’s portfolio.

BayREN’s programs are tailored specifically for the region’s single family, multifamily, commercial and public buildings and focus on existing buildings that are both more challenging to decarbonize and more likely to be owned or occupied by the equity populations that BayREN targets. Serving these buildings and often

⁹⁵ California Executive Order B-55-18.

⁹⁶ California Senate Bill 100 (2018).

⁹⁷ California Energy Commission, *California Energy Code Compliance Gap Analysis*, July 29, 2025, Docket 24-BSTD-05, TN 265065 15-16.

overlooked customers is necessary for the achievement of the state goals and also supports the nearly 80 Bay Area local governments with adopted Climate Action Plans or greenhouse gas reduction goals.

Specific examples of BayREN's pivotal role in accelerating building decarbonization and reducing greenhouse gas emissions in order to support climate goals and prepare for a clean energy future include:

- **BayREN's Targeted Decarbonization Services Program** accelerates public-sector decarbonization through technical and financial support, including training for local government staff on financing, operating, and maintaining decarbonization equipment.⁹⁸ The Decarbonization Showcase provides real-world data to public agencies on the opportunities and challenges of decarbonizing their buildings. The program is currently identifying gaps and opportunities to support public agencies in financing building decarbonization improvements, such as potential bridge financing, low interest loans, and leveraging non-ratepayer funds, and will test and implement solutions during the Business Plan period.
- **The BayREN Business Program** advances decarbonization in the commercial sector by incentivizing fuel substitution measures and providing wrap-around support to small businesses. The program's pay-for-performance design ensures verified savings while enabling adoption of technologies like heat pumps and induction cooking. The Program aims for up to 20% of its projects to include fuel-substitution measures—both to

⁹⁸ This is a high need given that one in three local government stakeholders reported not being familiar with building decarbonization technologies. A. Dykman, "BayREN 2024 Facility Training Survey" (BayREN, 2025).

1 maximize TSB and to advance building decarbonization activities in the small
2 business sector, where adoption has traditionally been low.

- 3 • **The BayREN Refrigerant Replacement (BRRR) Program** tackles one of the
4 most impactful climate strategies—refrigerant management—by replacing
5 high-global warming potential⁹⁹ (GWP) refrigerants with natural
6 alternatives¹⁰⁰ and pairing these upgrades with energy efficiency measures
7 for small and medium businesses. The program will collaborate with the
8 BayREN Codes & Standards Program to ensure inspectors are prepared to
9 support these advanced systems. Finally, proper recycling and destruction of
10 removed refrigerants prevent harmful emissions. This program also supports
11 local climate goals for refrigerant management, such as those for the cities of
12 San Francisco¹⁰¹ and Oakland.¹⁰²
- 13 • **The Multifamily BAMBE Program** supports both energy efficiency and fuel
14 substitution measures, such as heat pump water heaters, to reduce reliance
15 on fossil fuels. BayREN is considering dedicating incentives for future
16 projects that pursue full electrification or pilot innovative technologies like

⁹⁹ Global Warming Potential (GWP) is a measure of how much heat a greenhouse gas traps in the atmosphere compared to carbon dioxide (CO₂), over a specific period, usually 100 years.

¹⁰⁰ A natural refrigerant is a low- or no-GWP substance used in mechanical refrigeration, air conditioning, or heat pump systems that occurs naturally in the environment and does not rely on synthetic chemicals like hydrofluorocarbons (HFC) or hydrochlorofluorocarbons (HCFC). SB 1383 mandates the reduction of HFCs 40% below 2013 levels by 2030. Despite the high global warming potential, HFCs are the fastest growing greenhouse gases in California, yet reducing these climate pollutants is among the most effective climate mitigation strategies. See F-gas Reduction Incentive Program | California Air Resources Board,” n.d., <https://ww2.arb.ca.gov/our-work/programs/FRIP/about>.

¹⁰¹ City and County of San Francisco, *2021 San Francisco Climate Action Plan* (2021), action Buildings Operation-4, accessed October 16, 2025, <https://www.sfenvironment.org/climateplan>.

¹⁰² City of Oakland, *2030 Oakland Climate Action Plan (ECAP)* (July 2020), action Buildings-3, accessed October 16, 2025, <https://www.oaklandca.gov/Community/Community-Development/Sustainability-Environment/Sustainability-Plans/2030-Equitable-Climate-Action-Plan-ECAP>.

combined water and space heat pump systems—solutions that can serve as scalable models for the sector.

- **The Health, Energy and Resilience Education (HERE) Program** will incorporate and expand courses specific to building decarbonization and electrification, including induction demonstrations, principles of all-electric homes for real estate professionals, interior designers, architectural designers and architects and how appraisers should evaluate features like heat pumps differently than gas appliances.
- **BayREN’s statewide program, HES California**, helps homeowners visualize the benefits of electrification by modeling energy costs, emissions, and consumption under different upgrade scenarios, including replacing all natural gas appliances with high-efficiency electric ones. Homeowners receive a report, which includes the BayREN developed Electrification Checklist¹⁰³ and recommends key electrification products such as heat pump HVAC systems, heat pump water heaters, induction cooking, and heat pump clothes dryers. Field assessors for the program also collect electrification-readiness data, such as panel capacity, to streamline future upgrades.
- **The Codes & Standards Program** advances building decarbonization in the region by offering training to building department staff on topics such as heat pumps and how the building code advances electrification and empowering local governments to adopt reach codes and energy policies, including those that advance building decarbonization, through quarterly Regional Forums¹⁰⁴, bi-monthly calls, and customized technical assistance.

¹⁰³ Better Buildings Beat Team, “Bay Area Tackles Climate Goals.”

¹⁰⁴ A recent forum for example focused on strategies for commercial building decarbonization, equipping jurisdictions with tools to drive systemic changes. See “Commercial Conundrums and Successes in Building Decarbonization,” Bay Area Regional Energy Network, June 5, 2024,

BayREN's Existing Building Study¹⁰⁵ provide Bay Area local governments with data about the existing buildings in their jurisdictions, the probability distributions of equipment inventories, the energy use and greenhouse gas emissions, and the impacts of energy efficiency and electrification measures that can be used to decarbonize the buildings. These resources provide data to support local policies encouraging or requiring building decarbonization.

Through policy support, technical assistance, incentives, and market education, BayREN is driving a regional transformation toward low-carbon buildings. By integrating electrification, efficiency, and refrigerant management strategies, BayREN's programs deliver measurable climate benefits and position the Bay Area as a leader in building decarbonization.

4. Electric Savings at Peak Times

There are policy challenges to electric savings at peak times due to the misalignment between TOU rates and avoided utility costs and the lack of granularity and data access to localized real-time grid constraints that can further maximize grid upgrades.¹⁰⁶ Despite these structural challenges and in furtherance of customer affordability, BayREN strives to reduce peak load both for fuel substitution measures and more traditional energy efficiency interventions.

<https://www.bayren.org/events/commercial-conundrums-and-successes-building-decarbonization-2024-06-05>.

¹⁰⁵ "Existing Buildings Study," Bay Area Regional Energy Network, accessed February 25, 2026, <https://www.bayren.org/existing-buildings-study>.

¹⁰⁶ California Public Utilities Commission, *Energy Division White Paper and Staff Proposal: Advanced Strategies for Demand Flexibility and Customer DER Compensation* (CPUC, June 22, 2022), <https://www.cpuc.ca.gov/-/media/cpuc-website/divisions/energy-division/documents/demand-response/demand-response-workshops/advanced-der---demand-flexibility-management/ed-white-paper---advanced-strategies-for-demand-flexibility-management.pdf>.

1 All of BayREN's programs reduce overall energy use, including at peak times. In
2 addition, programs specifically include approaches to reducing peak electric loads:

- 3 • In the public sector, Roadmaps from the **Integrated Energy Services**
4 **Program** and reports from **Targeted Decarbonization Services** to
5 Showcase participants provide analyses of opportunities for battery use at
6 public facilities, which can support peak shaving.¹⁰⁷ The public sector
7 programs also include peak and bill savings demand flexibility strategies as
8 part of clear information and product specifications which can support grid-
9 interactive efficient buildings (GEBs).
- 10 • The **Multifamily BAMBE Program** incentivizes high-TSB measures such as
11 heat pump water heaters, which improve efficiency and reduce overall load.
12 In post installation engagement with tenants, BAMBE staff provide
13 information about how to reduce utility bills, with an effective strategy being
14 time of use.
- 15 • Three programs (two in the public sector and the multifamily program)
16 provide Integrated Demand Side Management (IDSM) technical assistance to
17 identify opportunities for load shifting, enabling properties to move energy
18 use to off-peak hours and minimize strain on the grid.
- 19 • **BayREN Business** is strategically designed to maximize electric savings
20 during peak hours, where avoided costs and TSB values are greatest. The
21 program targets businesses that operate during these periods, such as retail,
22 food service, and hospitality, and emphasizes fuel-substitution measures that

¹⁰⁷ Matthew Long et al., "A Statistical Analysis of the Economic Drivers of Battery Energy Storage in Commercial Buildings," in *2016 North American Power Symposium (NAPS)* (Piscataway, NJ: IEEE, 2016), <https://doi.org/10.1109/NAPS.2016.7747918>.

1 reduce fossil fuel use while lowering electric load through efficient
2 technologies and controls.

- 3 • The **Refrigerant Replacement (BRRR) Program** significantly reduces peak
4 load with highly efficient equipment as well as controls that optimize retail
5 rate peak charge arbitrage.
- 6 • The **Single Family EASE Home Program** includes envelope measures,
7 provides significant and permanent peak load avoidance by reducing the
8 thermal load capacity and runtime of cooling equipment. The program also
9 educates participants about optimal times to run electrical appliances.

10 BayREN reduces electricity consumption during peak demand hours through
11 strategic program design, targeted incentives, technical assistance, advanced
12 technologies, education and behavior-changing education. These efforts not only
13 lower system costs but also support grid reliability and California's decarbonization
14 goals.

15 5. Use of Meter-Based Savings Measurement

16 BayREN leverages meter-based savings measurement to ensure transparency,
17 accuracy, and accountability in its programs, while driving innovation in energy
18 efficiency measurement and verification. Another, related goal for several BayREN
19 programs is to document and utilize data on actual energy and bill savings as
20 measured by the customer.

21 Launched in 2019, the **BayREN Business Program** was among the first in the
22 nation to apply a population-level Normalized Metered Energy Consumption
23 (NMEC) methodology to the SMB sector. This approach ties incentives to verified
24 energy savings based on actual meter data, ensuring that ratepayer funds deliver
25 measurable benefits. BayREN has strengthened its NMEC framework through

1 collaboration with the U.S. Department of Energy¹⁰⁸ and PG&E's NMEC Working
2 Group, and has incorporated internal process improvements such as fair evaluation
3 of non-routine event claims¹⁰⁹, portfolio sizing, and streamlined payment
4 processes. Contractor training and expanded participant adoption have further
5 enhanced the credibility and scalability of NMEC in the commercial sector. These
6 efforts position BayREN as a leader in advancing meter-based savings
7 measurement and will continue to guide program evolution in the next Business
8 Plan cycle.

9 Though not NMEC programs, **BayREN's Multifamily BAMBE Program** and
10 **Targeted Decarbonization Services Program** both utilize data on participants'
11 energy use and bills. In 2025, the Multifamily program used funding from a DOE
12 Buildings Upgrade Prize to conduct a utility bill impact analysis¹¹⁰ to estimate the
13 impact that heat pump water heaters combined with basic envelope upgrades have
14 on resident utility bills. Findings will help inform future program offerings and
15 considerations, such as providing adder incentives for projects that combine
16 envelope with electrification upgrades and offering post-installation resources to
17 residents on less expensive utility rate options. The Targeted Decarbonization
18 Services Showcase collects utility bill data from before and after public sector
19 project completion, providing insights that will be shared in case studies as well as
20 with program participants. Unlike a utility, BayREN does not have access to energy

¹⁰⁸ In 2022, BayREN completed a grant from the U.S. Department of Energy to implement the Bay Area Regional Energy Network Integrated Commercial Retrofits (BRICR) Project. This project produced a software that quantified energy efficiency impacts by applying the CalTRACK2.0 methods to standardize measurement of normalized metered energy consumption. In doing so, the team were able to adjust for impacts of the effect of COVID-19 on retrofitted buildings in the context of all local buildings of similar size and use.

¹⁰⁹ Non-routine events are changes that significantly affect a site's energy use but are unrelated to the implemented energy efficiency measures.

¹¹⁰ Young and Aggarwal, *UBA Tool Demonstration*.

usage and bill impact data for program participants but instead must either go through a lengthy process to obtain the data from PG&E or collect the data from the participants themselves. Having this data, however, allows BayREN programs to consider and respond to customers' actual energy and bill savings.

Through these efforts, BayREN ensures that energy efficiency investments are grounded in real-world performance. This commitment to data-driven evaluation strengthens program integrity, maximizes system benefits, and supports California's clean energy goals.

6. Promote and Deploy Exempt Measures in the Equity Segment

As directed by the CPUC,¹¹¹ BayREN advances building decarbonization and energy efficiency by promoting exempt measures—those that result in gas savings without burning gas—across multiple programs. These measures can result in direct bill savings and improvements to indoor air quality and health that are particularly important for the HTR and underserved communities that BayREN prioritizes.

- BayREN's redesigned single-family **EASE Home Program** focuses on direct installation of building envelope measures for single family households earning up to 120% of Area Median Income (AMI). These upgrades, including insulation, air sealing, duct sealing, and smart thermostats, reduce heating and cooling loads, lowering gas consumption without relying on combustion-based technologies. By targeting income-qualified households, the program ensures equitable access to energy savings.

¹¹¹ California Public Utilities Commission, *Decision Addressing Codes and Standards Subprograms and Budgets*, D.23-04-035 (Application 22-02-005 et al.), April 6, 2023.

- The **Multifamily BAMBE Program** provides rebates for exempt measures, including insulation, air sealing, smart thermostats, and window upgrades. The program is currently exploring incentive structure updates to increase adoption of these measures,¹¹² particularly when combined with fuel substitution measures, in order to mitigate bill impacts and improve affordability.
- BayREN integrates building envelope fundamentals into nearly all its training offerings, include those for **Codes & Standards** and the **HERE Program**. Courses emphasize building science principles and strategies for reducing energy consumption through airtight construction and insulation as well as code requirements. Advanced sessions, such as the NAR Green Designation training, also cover smart home features and water efficiency, reinforcing the value of non-combustion measures in sustainable building practices.
- The statewide **HES California Program** produces reports that model an upgrade scenario where homeowners retain existing gas equipment but implement envelope improvements such as insulation and air sealing. This helps homeowners understand how non-combustion measures can reduce energy use and costs while maintaining current systems—a practical step toward decarbonization for mixed-fuel homes.

By promoting and deploying exempt measures across sectors, BayREN delivers meaningful gas savings without combustion. These strategies reduce energy costs, improve comfort, and advance California’s decarbonization goals while maintaining affordability and accessibility for all customers.

¹¹² Over the past couple of years, the rate of installation in BayREN MF projects of these exempt measures has been, on average, less than 25% (i.e., each exempt measure was included in less than 25% of completed project scopes).

7. Advancing ESJ Action Plan Goals

The CPUC first adopted an Environmental and Social Justice Action Plan in 2019 and adopted an updated version 2.0 in 2022. Reports on progress were developed in 2020 and 2025.¹¹³ In the 2025 ESJ Action Plan Report, the Commission determined that 80 of 94 actions were successfully completed,¹¹⁴ including establishment of the equity segment of Program Administrators' Energy Efficiency Portfolios. Of all the actions in the plan, this is the most specific to energy efficiency, and one of the handful that connect equity ratepayers directly to funds and services.

The work of the ESJ Action plan is far from complete, however. For example, Goal 2.5.2 "Continue Prioritization of ESJ Communities in Building Decarbonization Programs," is considered a "closed" item, but substantial work in ESJ communities lies ahead. This work is even more critical with rapidly rising electric rates, and projected significant increases in gas rates by 2045.

BayREN is committed to serving those customers and markets that have been traditionally left out of energy efficiency offerings. The proposed portfolio of programs supports the ESJ Action Plan goals in general, and particularly Goals 2, 4, 5, and 7 as discussed below.

¹¹³ For all plans and status reports, see "Environmental and Social Justice Action Plan," California Public Utilities Commission, accessed March 2, 2026, <https://www.cpuc.ca.gov/news-and-updates/newsroom/environmental-and-social-justice-action-plan>.

¹¹⁴ CPUC ESJ Action Plan Report 2025, 1.

1 A. GOAL 2: INCREASE INVESTMENT IN CLEAN ENERGY RESOURCES TO
2 BENEFIT ESJ COMMUNITIES, ESPECIALLY TO IMPROVE LOCAL AIR
3 QUALITY AND PUBLIC HEALTH¹¹⁵

4 Energy efficiency programs have historically underserved low- to moderate-income
5 residents.¹¹⁶ The introduction of the ESJ Action Plan 1.0 in 2019 acknowledged this
6 reality, recognized the need to increase investment beyond ESA programs, and
7 therefore created the equity segment in the EE Portfolio.¹¹⁷

8 Over 60% of the total proposed portfolio budget is within the equity segment, and
9 programs both within the equity segment and in other segments of BayREN's
10 portfolio are working to increase investment in clean energy resources and to
11 improve local air quality and public health to benefit ESJ communities.

12 BayREN's **Multifamily BAMBE Program** will be focusing greater resources on
13 small, below-market-rate properties that are critical housing for low-income
14 residents starting in 2028, and excluding large, market-rate properties from
15 eligibility. The program currently provides higher incentives for projects in burden
16 zones that often overlap with ESJ communities, where residents face air pollution,
17 extreme heat, and high housing costs. Approximately 75% of multifamily projects in
18 2025 were located in at least one burden zone. Upgrades such as building shell
19 improvements and HVAC enhancements not only reduce energy costs but also
20 improve indoor air quality, mitigating health risks associated with high outdoor

¹¹⁵ The importance of this goal is further illustrated by BayREN's portfolio Goal 3: Improving health and resilience outcomes for residents and communities (see discussion above).

¹¹⁶ Eric Daniel Fournier et al., "On energy sufficiency and the need for new policies to combat growing inequities in the residential energy sector," *Elementa Science of the Anthropocene* 8 (January 1, 2020), <https://doi.org/10.1525/elementa.419>.

¹¹⁷ CPUC D.21-05-031, 14-15.

1 pollution.^{118, 119} Future plans include the potential addition of advanced ventilation
2 measures and participating in research to quantify non-energy benefits.

3 BayREN's single family program was redesigned in order to better serve equity
4 participants and re-opened as the **EASE Home Program** in 2025. The program now
5 targets households at or below 120% of Area Median Income and provides them
6 with direct-install, discounted home upgrades. Early customers have included
7 Oakland Community Land Trust homeowners¹²⁰ as well as seniors with limited
8 incomes.¹²¹

9 The **BayREN BRRR** and **Business Programs** both advance ESJ goals by serving
10 small and medium businesses in low-income and disadvantaged communities. The
11 BRRR Program improves air quality by eliminating fugitive refrigerant emissions
12 and upgrading refrigeration systems in food retail establishments. By partnering
13 with health inspectors and providing technical assistance, the program helps
14 businesses meet food safety standards while lowering overhead costs—critical in
15 food deserts where residents rely on these establishments for essential goods. The
16 BayREN Business Program reduces energy and maintenance costs to strengthen
17 financial resilience, helping businesses remain operational and continue serving
18 neighborhoods that often lack access to supermarkets.

¹¹⁸ J. Rotondo et al., "Integrating Health and Energy Efficiency in Multi-Family Buildings" (Washington, DC: US Department of Energy, 2021), <https://policycommons.net/artifacts/29684002/integrating-health-and-energy-efficiency-in-multi-family-buildings/30583848/>.

¹¹⁹ Lina Madaniyazi and Xerxes Seposo, "Outdoor air pollution and the onset and exacerbation of asthma," *Chronic Diseases and Translational Medicine* 7, no. 2 (June 2021): 100-106, <https://onlinelibrary.wiley.com/doi/10.1016/j.cdtm.2021.04.003>.

¹²⁰ "BayREN and OakCLT Partnership Helps Preserve Oakland Home," Bay Area Regional Energy Network, November 14, 2025, <https://www.bayren.org/news/bayren-and-oakclt-partnership-helps-preserve-oakland-home>.

¹²¹ "BayREN's EASE Home Program Supports Older Adults Aging in Place in Marin County," Bay Area Regional Energy Network, January 13, 2026, <https://www.bayren.org/news/ease-home-marin>.

B. GOAL 4: INCREASE CLIMATE RESILIENCY IN ESJ COMMUNITIES

Climate resiliency can be increased by increasing energy efficiency, so that buildings perform better during heat events and other types of climate emergencies.

Additionally, in the Bay Area where many existing buildings have not historically needed air conditioning, electrification of space conditioning often brings cooling capability to a building for the first time, thereby also increasing resilience. As a result, BayREN's efforts to increase energy efficiency and advance building decarbonization (discussed above) contribute towards this goal. Additionally, adoption of solar PV, batteries, and other resilience solutions, which is significantly lower in low-income households and disadvantaged communities,^{122,123} can further help to address this goal.

The **Multifamily BAMBE Program**, for example, provides energy efficiency, fuel substitution, and load-shifting measures to multifamily properties in ESJ communities, together with IDSM technical assistance. This increases resiliency to extreme heat, wildfire smoke, and power outage events among some of the area's most vulnerable residents.

BayREN's public sector programs prioritize public facilities located in or serving ESJ communities. These programs provide technical and financial support for decarbonization projects and resilience planning, including strategies for demand flexibility and backup power. By promoting the creation of Community Resilience Centers equipped with solar PV and battery storage, BayREN ensures that residents

¹²² Jenny Heeter et al., *Affordable and Accessible Solar for All: Barriers, Solutions, and On-Site Adoption Potential* (Golden, CO: National Renewable Energy Laboratory, September 2021), <https://doi.org/10.2172/1820098>.

¹²³ David Brown, "Socioeconomic and Demographic Disparities in Residential Battery Storage Adoption: Evidence from California," *Energy Policy* 164, no. C (May 2022): 112885, econpapers.repec.org/article/eeeeenepol/v_3a164_3ay_3a2022_3ai_3ac_3as0301421522001021.htm.

1 in disadvantaged areas have access to safe, reliable spaces during extreme weather
2 events and power outages.¹²⁴ Further, support for Community Resilience Centers in
3 these communities aligns with state priorities for ensuring the most vulnerable
4 communities are supported during extreme weather events, power shut offs, and
5 similar events.¹²⁵

6 C. GOAL 5: ENHANCE OUTREACH AND PUBLIC PARTICIPATION 7 OPPORTUNITIES FOR ESJ COMMUNITIES TO MEANINGFULLY PARTICIPATE 8 IN THE CPUC'S DESIGN-MAKING PROCESS AND BENEFIT FROM CPUC 9 PROGRAMS

10 BayREN carries out extensive engagement with its target populations in order to
11 ensure that their needs are understood and addressed. As discussed in Chapter 8,
12 more than 40 community-based organizations, 70 partner organizations, and
13 survey responses from over 1,300 single family residents were involved in the
14 redesign of BayREN's single family program in order to better align the program
15 with equity goals. The **Multifamily BAMBE Program** has participated in the
16 Retrofits for Rentals Coalition and engaged with multifamily tenants of properties
17 participating in the program. In the commercial sector, BayREN has reached out to
18 and heard from small businesses to learn about their needs.

19 In addition to this ongoing and portfolio-wide engagement, BayREN is proposing a
20 new program, **Incubator for Community-Driven Initiatives**, that will allow
21 interested community-based organizations as well as local government agencies to
22 learn about energy efficiency programs and program design and to develop
23 proposals for activities that could potentially be funded and implemented. The final

¹²⁴ Urban Sustainability Directors Network, *Guide to Developing Resilience Hubs* (N.p.: Urban Sustainability Directors Network, 2019), https://resilience-hub.org/wp-content/uploads/2019/10/USDN_ResilienceHubsGuidance-1.pdf.

¹²⁵ See, e.g., Cal. Gov't Code §8593.3; CPUC ESJ Action Plan Version 2.0, 21-22.

1 design of the program will be shaped with ideas and input from potential program
2 participants to ensure that it will meet relevant local needs.

3 D. GOAL 7: PROMOTE HIGH ROAD CAREER PATHS AND ECONOMIC 4 OPPORTUNITY FOR RESIDENTS OF ESJ COMMUNITIES

5 BayREN has been part of the Bay Area's High Road Training Partnership (HTRP)¹²⁶
6 for residential building decarbonization since 2021 and has helped develop and
7 advocate for high road labor standards as part of that group. As a result of that
8 work, BayREN's single family **EASE Home Program** incorporates high road job
9 standards that were set in collaboration with the HTRP, through a mix of
10 requirements and incentives. EASE Home installing contractors are required to
11 meet prevailing wage requirements, must be based in the region of work, and are
12 incentivized to employ targeted hiring strategies, provide pre-apprenticeship
13 opportunities, and have MWDBE¹²⁷ certifications. In addition, aggregating demand
14 through a direct install program enables the program to partner closely with like-
15 minded DBE businesses ready to grow and willing to invest in their employees.

16 BayREN's expanded workforce, education and training program **BayREN Works**
17 serves ESJ communities in several ways. Disadvantaged youth are recruited for the
18 program, trained in basic energy efficiency improvements, paid a living wage, and
19 employed for the summer to provide no-cost services to residents in their
20 communities. After the summer program is complete, graduates are eligible to
21 continue into a paid energy-related externship. Because early work experience

¹²⁶ Rising Sun Center for Opportunity, "Building Decarbonization High Road Training Program Summary," Rising Sun Center for Opportunity, accessed March 2, 2026, <https://risingsunopp.org/wp-content/uploads/Building-Decarb-HRTP-Summary-v3.pdf>.

¹²⁷ Minority, Women, and Disadvantaged Business Enterprise.

1 contributes to higher earnings as an adult and wealth accumulation over time,¹²⁸
2 this program provides not only short-term job opportunities but can have a lasting
3 impact on youth participants' long-term careers. In addition, ESJ contractors will be
4 able to utilize BayREN's contractor workforce hubs to receive training on how to
5 install clean technologies such as heat pumps, as well as mentoring and shadowing
6 opportunities with other contractors.

7 Through these combined efforts, BayREN meaningfully advances Goal 7 of the ESJ
8 Action Plan by ensuring that the region's transition to clean energy creates
9 equitable, high-quality career pathways for residents of ESJ communities. By
10 embedding high road labor standards into program design, strengthening
11 partnerships with mission-aligned contractors, and expanding hands-on training
12 and paid work opportunities for disadvantaged youth and local workers, BayREN
13 helps cultivate a more inclusive clean energy workforce. These strategies not only
14 improve job quality and access for underrepresented groups but also support the
15 growth and resilience of ESJ-based contractors, ensuring that the economic benefits
16 of building decarbonization are shared across the communities that need them
17 most.

18 8. Supporting Integrated Demand-Side Management (IDSM)

19 BayREN advances Integrated Demand-Side Management (IDSM) strategies across
20 multiple sectors by combining energy efficiency, electrification, and load
21 management measures to optimize building performance and reduce peak
22 demand. Three of BayREN's programs are utilizing the IDSM funding provided by

¹²⁸ Martha Ross et al., *Pathways to High-Quality Jobs for Young Adults* (Washington, DC: Brookings Institution, October 2018), <https://www.brookings.edu/articles/pathways-to-high-quality-jobs-for-young-adults/>.

1 D.23-06-055 and propose to continue this work in the 2028-2031 Portfolio Plan
2 period.

3 The **BayREN Multifamily BAMBE Program** is supporting IDSM by offering
4 technical assistance to properties interested in or most likely to benefit from
5 integrated solutions such as solar, battery storage, and electric vehicle charging.
6 Projects that electrify gas end uses are prioritized, as they present significant
7 opportunities for load shifting and demand response. The program helps identify
8 strategies to bundle upgraded electric space and water heating systems with on-
9 site generation and EV infrastructure, while analyzing utility bill savings and rate
10 structures. Additionally, BayREN monitors emerging IDSM technologies to pilot
11 within its portfolio, aiming to mitigate the impact of rising electricity rates for
12 vulnerable multifamily residents.

13 BayREN also delivers technical assistance for IDSM measures in public buildings.
14 The Energy Concierge provides information to local governments, special districts,
15 and school districts on all available programs (ratepayer, CCA, and other) including
16 those for IDSM measures such as solar and storage. Roadmaps provided by the
17 **Integrated Energy Services Program** outline phased, cost-effective approaches
18 that combine energy efficiency, distributed energy resources (DERs), demand
19 response strategies, and EV charging, addressing the siloed nature of most current
20 programs.¹²⁹ BayREN's **Targeted Decarbonization Services Program** provides
21 training and technical assistance on how advanced controls, electric equipment,
22 and DERs can work together to reduce peak demand and improve resilience. TDS

¹²⁹ Jennifer Potter et al., *Barriers and Opportunities to Broader Adoption of Integrated Demand Side Management at Electric Utilities: A Scoping Study* (Berkeley, CA: Lawrence Berkeley National Laboratory, February 2018).

1 also provides data and best practices to demonstrate the cost-effectiveness of
2 coordinated measures.

3 As BayREN's IDSM Advice Letter was approved by Energy Division with Resolution E-
4 5387 on September 23, 2025, these services have only recently launched and
5 program insights have yet to inform BayREN's IDSM framework and goal of creating
6 a holistic approach to electrifying, decarbonizing, and creating resilient buildings
7 and communities. BayREN is therefore proposing to continue this work in the 2028-
8 2031 Portfolio Plan period. BayREN will continue to develop and advance IDSM
9 concepts in the appropriate regulatory venues, potentially including exploring
10 methods to quantify energy and bill savings and to identify locations where IDSM
11 measures can best provide grid benefits.

12 Through this work, BayREN fosters a holistic approach to energy management that
13 aligns with California's climate goals. By integrating technologies and strategies
14 across sectors, BayREN helps reduce costs, improve grid reliability, and support
15 equitable access to clean energy solutions.

16 9. Advancing Workforce, Education, and Training

17 A trained, available, and qualified workforce is necessary to achieve California's
18 climate goals of greenhouse gas reductions, an electrification transition and
19 affordability. Indeed, workforce is crucial for achieving goals across all sectors.

20 BayREN has a multi-pronged approach to Workforce, Education, and Training that
21 begins with youth and others having their first jobs and continues with contractors,
22 building department staff, and other market actors, all of whom are necessary to
23 achieve the energy and climate goals of the state. In this work, BayREN aims to
24 provide high road career paths and economic opportunities for members of ESJ
25 communities.

1 The youth component of **BayREN Works**, currently provided as Climate Careers
2 through Rising Sun, is the beginning of the workforce journey. This program
3 recruits disadvantaged youth and trains them to visit homes in their communities
4 and carry out basic energy upgrades as a summer job, with many continuing into
5 energy-related externships, often giving youth their first job while also growing the
6 workforce.

7 BayREN Works also includes a contractor component. The new Electrification
8 Mentorship Program will increase the number of contractors familiar with
9 electrification equipment and confident in how to install it correctly. This program
10 offers hands-on training to contractors new to electrification to complete their first
11 electrification installations, focusing on heat pump technology. Mentee firms will be
12 paired with experienced installers as mentors. Along with wrap-around training
13 provided by the program, mentors will provide in-field shadowing opportunities.
14 Contractor recruitment will focus on small, local, minority and women contractors.

15 BayREN further provides contractor training in relation to its commercial sector
16 programs. In particular, BayREN's **Refrigerant Replacement (BRRR) Program** has
17 identified a need to prepare refrigeration contractors for upcoming regulations on
18 low global warming potential (GWP) refrigerants. Contractors must learn new
19 technologies, sourcing practices, and technical processes to utilize these
20 refrigerants safely. To address these needs, BayREN plans to partner with the North
21 American Sustainable Refrigerant Council to sponsor workshops and training,
22 collaborate with local unions, and connect contractors with community college
23 graduates. Stipends may be offered to encourage hiring these graduates to
24 complete BRRR measure installations. This approach will not only build technical
25 capacity but also create pathways for new entrants into the clean energy workforce.

1 The **BayREN Business Program** also depends on and supports aggregators and
2 commercial sector contractors. To meet projected energy savings targets, the
3 BayREN Business Program is working to expand the pool of qualified aggregators¹³⁰
4 and installation contractors. The program will actively recruit new aggregators in
5 2026 and 2027, prioritizing small and veteran-owned businesses. Strategies include
6 enhanced concierge services, time-limited incentives, and targeted marketing to
7 boost adoption of key measures such as Heating, Ventilation, and Air Conditioning
8 (HVAC) control upgrades and hot water heat pumps. BayREN Business will also
9 work on recruiting HVAC and plumbing contractors, as the program's cost-
10 effectiveness relies on completing full-service installations. Both the Business and
11 BRRR programs employ a user-first approach by interviewing and shadowing
12 contractors and aggregators to understand real-world workflows. Insights from
13 these engagements inform process improvements that enhance program
14 accessibility while maintaining data quality and oversight.

15 Other BayREN programs also provide training and education to build different
16 components of the workforce. BayREN's **Codes & Standards Program** builds
17 relationships with and trains local government building department staff on Energy
18 Code and other code requirements to ensure that building improvements are
19 installed to code and anticipated energy and GHG savings are realized.^{131,132} The

¹³⁰ An aggregator is the party that supplies energy savings projects to a procuring entity and generally takes on the associated performance risk.

¹³¹ BayREN's 2015 Permit Resource Opportunity Program (PROP) Final Report reviewed a selection of projects at fifteen jurisdictions in the Bay Area and found that fully compliance with Energy Code documentation requirements is rare and half of projects reviewed performed worse than anticipated. Bay Area Regional Energy Network, *Permit Resource Opportunity Program (PROP) Final Report* (San Francisco: BayREN, 2015), https://www.bayren.org/sites/default/files/2021-11/bayren_cs_prop_final_report_2015_0401_0.pdf.

¹³² CEC, *California Energy Code Compliance Gap Analysis*. This report documents the need for better data on energy code compliance, including both process-based compliance and energy performance-based compliance and notes that past studies have found widely varying compliance rates.

1 **Targeted Decarbonization Services Program** educates and trains local
2 government staff on how to pay for, operate, and maintain electrification
3 equipment. BayREN's **HERE Program** trains overlooked professionals such as real
4 estate professionals, assessors, and designers on the value of energy-efficient and
5 electric equipment, thereby influencing both the real estate market and decisions
6 about home renovations and improvements.

7 Together, these efforts demonstrate how BayREN advances a comprehensive
8 Workforce, Education, and Training strategy that supports California's energy and
9 climate goals while expanding economic opportunity across the region. By
10 cultivating early exposure and hands-on experience for disadvantaged youth,
11 providing structured mentorship and technical training for emerging and ESJ-based
12 contractors, preparing refrigeration and commercial trades for upcoming
13 regulatory shifts, and equipping local government and other professionals with the
14 knowledge needed to support the clean energy transition, BayREN builds capacity
15 across the entire ecosystem of market actors. This multi-pronged approach both
16 strengthens the workforce needed to implement electrification and
17 decarbonization at scale and ensures that ESJ community members and small, local
18 firms benefit from the transition to a cleaner, more resilient energy future.

19 10. Reporting Demographic Data

20 In Ordering Paragraph 23 of D.23-06-055, PAs were directed to work with the
21 Reporting Policy Coordination Group (PCG) Demographic Data Working Group to
22 submit a report addressing specific demographic sections. Based on the analysis in
23 the report, PAs are then directed to propose their preferred approaches to regular
24 reporting of demographic energy efficiency program participation data. The OP23

1 Joint Demographic Data Report was completed in August 2025 and can be found in
2 Exhibit 5.

3 BayREN agrees with the recommendation in the report that using geographic and
4 publicly available data is the most cost-effective and scalable method for assessing
5 energy efficiency (EE) program participation by demographic and agrees that data
6 collection should be voluntary and not a requirement for program participation.

7 Further, BayREN is also aligned with the report's consensus on collecting minimal
8 information like census tract information that can be matched to other
9 demographic information and analyzed in an efficient and systematic way.

10 Additionally, BayREN notes that some programs inherently require specific data to
11 be collected to verify program eligibility, particularly to confirm equity customers
12 meet CPUC and program definitions of DAC, HTR, and underserved.

13 Based on the recommendations from the OP23 Joint Demographic Data Report,
14 BayREN plans to report on the demographics of energy efficiency program
15 participation information by utilizing the following:

- 16 1. **Publicly available geographic and demographic data**, including those
17 available through the Metropolitan Transportation Commission's Data Tools
18 and US Census data. Data to be collected via public data sources is expected
19 to include census tracts and disadvantaged community status.
- 20 2. **Utility bills and customer data shared by participants or via PG&E data**
21 **requests** over the course of project development when necessary for
22 program eligibility screening and applicable incentive approvals. Data to be
23 collected via customer bills and/or PG&E data requests may include facility
24 addresses, rate code, participation in California Alternative Rates for Energy

(CARE), Family Electric Rate Assistance (FERA), or Energy Savings Assistance (ESA) participation, and preferred billing language.

3. **Optional and voluntary demographic data collection questions** will be incorporated into existing program participant satisfaction surveys. Data to be collected via participant engagement and survey methodology may include age, gender, income, race/ethnicity, disability and primary language.

BayREN proposes to tailor its data collection approach to individual sectors. For example, individualized participant data points such as age, gender, income, race/ethnicity and primary language may be most appropriate for sectors that serve individuals, such as Residential and Workforce, Education, and Training programs. Commercial data collection may involve survey data points such as language, the number of full-time staff and annual revenue. Public sector data will focus on the people served by a building and/or the location of a building.

In alignment with the report recommendations, BayREN proposes that demographic data points should be captured through existing reporting processes for claims and metrics wherever possible rather than establishing new processes, in order to reduce administrative burden. Demographic data should be reported only after clear CPUC guidance is provided, and PAs should be given six months to implement new collection processes. To the extent possible, BayREN will utilize existing data collection and reporting processes, including claims, to minimize additional administrative time. BayREN proposes to report all non-claims-related demographic data on an annual basis.

11. Overcoming Sector- and Segment-Specific Challenges

The programs in BayREN's proposed portfolio are specifically designed to address the specific challenges associated with their sectors and segments. Rather than

1 assuming that barriers are uniform or that additional incentives alone will drive
2 participation, BayREN's approach is based on over a decade of experience and
3 extensive stakeholder engagement and reflects deep understanding of our region
4 and the key challenges to achieving state, regional, and local energy and climate
5 goals. While the challenges, and the approaches to addressing them, vary between
6 sectors and segments, they fall into four broad categories: 1) reaching the hard-to-
7 reach; 2) minimizing costs; 3) providing information and technical assistance; and 4)
8 navigating complexity.

9 A. EQUITY SEGMENT CHALLENGES: REACHING THE HARD-TO-REACH AND 10 SERVING THE UNDERSERVED

11 With over two-thirds of the proposed budget devoted to equity programs, BayREN
12 has a strong focus on reaching those who are often unable to participate in
13 traditional, cost-effective energy efficiency programs because of the barriers they
14 experience. BayREN has residential, commercial, and workforce programs in the
15 equity segment.

16 The single family **EASE Home Program** was specifically designed to address the top
17 two barriers facing the equity segment: minimizing upfront costs and streamlining
18 services for residents.¹³³ In addition to limiting participant costs to 20% of total
19 project costs, the program also has an out-of-pocket maximum cap of \$1,000 for
20 participants. The direct install approach has been streamlined by utilizing vetted

¹³³ Determined by an extensive stakeholder engagement process in Q1, 2024, including a household survey to over 1,300 single-family residents in the Bay Area. See Grounded Research, CivicMakers, and ILLUME Advising, *BayREN 2023-2024 Defining Underserved in the Bay Area: Single Family Moderate Income Report* (San Francisco: Bay Area Regional Energy Network, 2025), https://pda.energydataweb.com/api/view/4128/BayREN%20Single%20Family%20Moderate%20Income%20Report%202025_0331.pdf.

1 contractors to deliver benefits like lower energy bills, improved comfort, and better
2 indoor air quality.

3 Multifamily property owners often lack information about energy efficiency
4 improvements, incentives to help pay for those improvements, and the potential
5 savings and benefits that can result¹³⁴ and need assistance in order to participate in
6 a program. BayREN's **Multifamily BAMBE Program** addresses the challenge of
7 engaging with multifamily property owners by assigning each enrolled property a
8 dedicated technical assistant (TA) to provide support at every step of the process.
9 The potential for unexpected bill increases as a result of installing electrification
10 equipment is also a challenge. To guard against this, the program is piloting post-
11 installation monitoring and support, including education and training offerings to
12 help both residents and owners understand how to use and maintain new
13 equipment to maximize energy savings.

14 Focusing on workforce education and training, **BayREN Works** addresses
15 challenges in multiple dimensions, assisting local, low-income youth to become
16 familiar with green energy jobs while building a pipeline of workers to local industry
17 employers. At the same time, the program also helps overcome barriers to reaching
18 customers living in disadvantaged or underserved communities or who are
19 otherwise hard to reach by training people from their own communities to assist
20 them.

¹³⁴ Energy Programs Consortium, *Multifamily Energy Efficiency: Reported Barriers and Emerging Practices* (Washington, DC: Energy Programs Consortium, 2013),
<https://efiling.energy.ca.gov/GetDocument.aspx?tn=211065&DocumentContentId=25100>.

B. MARKET SUPPORT SEGMENT CHALLENGES: ADDRESSING KNOWLEDGE, COSTS, AND COMPLEXITY

In the market support segment of programs, BayREN addresses challenges in both the public and residential sectors. Public agencies often struggle with limited technical knowledge and high upfront costs for decarbonization projects. BayREN's **Targeted Decarbonization Services (TDS)** and **Integrated Energy Services (IES)** programs address these challenges through tailored guidance, training, and project-specific support. Services like Energy Concierge, Energy Roadmapping, and the Decarbonization Showcase help agencies navigate complex program offerings and develop holistic plans that integrate efficiency, electrification, and resilience strategies. This is essential as staff bandwidth is often one of the key barriers to implementing public facility energy projects.¹³⁵

BayREN's **HERE Program** supports the market for energy efficiency and electrification by addressing a little-known challenge: lack of knowledge on the part of often-overlooked professionals who influence home energy improvements. Homebuyers spend more than \$8,000 per year on home improvements in the first two years of buying a home,¹³⁶ providing a clear window of opportunity for energy

¹³⁵ National Renewable Energy Laboratory, *Lessons Learned from the Clean Energy to Communities Peer-Learning Cohort on Evaluating and Prioritizing Municipal Buildings for Energy Efficiency and Decarbonization Investment* (Golden, CO: NREL, 2024), <https://research-hub.nrel.gov/en/publications/lessons-learned-from-the-clean-energy-to-communities-c2c-peer-learning/fingerprints/?sortBy=alphabetically>.

¹³⁶ Joint Center for Housing Studies of Harvard University, *Improving America's Housing 2015: Emerging Trends in the Remodeling Market* (Cambridge, MA: Harvard University, 2015), https://www.jchs.harvard.edu/sites/default/files/media/imp/jchs_improving_americas_housing_2015_final_0.pdf.

1 upgrades. Stakeholders including real estate agents,¹³⁷ appraisers,¹³⁸ and interior
2 designers¹³⁹ are often unfamiliar with energy efficiency improvements and electric
3 systems and their benefits, but these professionals strongly influence how energy
4 features are valued and whether they are included—or not—in home renovation
5 projects.

6 BayREN’s statewide **HES California Program** improves energy literacy among
7 homeowners by providing standardized energy performance data and actionable
8 upgrade recommendations. Studies show that homeowners who receive these
9 reports have a better understanding of the potential impact of energy
10 improvements to their homes than those who do not receive a Home Energy
11 Score.¹⁴⁰ These efforts strengthen market confidence and expand participation in
12 energy programs.

13 The proposed **Incubator for Community-Designed Initiatives** will further address
14 these challenges by supporting the community-based organizations and local
15 government agencies most familiar with the challenges in developing and testing
16 approaches for addressing them.

¹³⁷ “Why Remodeling Homeowners Need a Real Estate Agent’s Guidance,” March 4, 2025, <https://www.nar.realtor/magazine/real-estate-news/sales-marketing/why-remodeling-homeowners-need-a-real-estate-agents-guidance>.

¹³⁸ “Guide to Appraisals - Green,” Green, January 10, 2025, <https://green.realtor/guide-to-appraisals/>.

¹³⁹ “A New Study Shows That Interior Designers Have a Major Impact on Climate Change,” Business of Home, December 17, 2020, <https://businessofhome.com/articles/a-new-study-shows-that-interior-designers-have-a-major-impact-on-climate-change>.

¹⁴⁰ Various studies available here: Better Buildings Solution Center, “Home Energy Score Fact Sheets, Links, and Other Resources,” U.S. Department of Energy, accessed February 25, 2026, <https://betterbuildingssolutioncenter.energy.gov/home-energy-score/resources-factsheets>.

C. COMMERCIAL SECTOR CHALLENGES: LIMITED RESOURCES AND INFORMATION

In the commercial sector, BayREN addresses significant challenges to reaching small businesses such as limited capital, time constraints, and lack of awareness. Another challenge in some communities is a lack of trust in publicly funded energy efficiency programs, often due to past disappointments.¹⁴¹ These barriers make the sector not only hard to reach but expensive to serve. To address these challenges, BayREN provides financial incentives, targeted marketing, and hands-on support from program staff and contractors. Outreach through trusted messengers, including local governments and community-based organizations, helps build trust and engagement, especially in underserved communities.

D. CODES & STANDARDS SECTOR CHALLENGES: SIMPLIFYING COMPLEXITY AND PROVIDING TRAINING

BayREN's **Codes & Standards Program** focuses on addressing the challenges local governments face relative to both the California Energy Code and locally adopted energy policies such as reach codes. Originally based on an initial survey in 2013¹⁴² that was supplemented by an in-depth study of building departments and code enforcement in 2015,¹⁴³ the program was designed to address barriers including

¹⁴¹ Emily Kubiak, "Overcoming Barriers to Small Commercial Energy Efficiency and Electrification," in *Proceedings of the 2024 ACEEE Summer Study on Energy Efficiency in Buildings* (Washington, DC: American Council for an Energy-Efficient Economy, 2024), https://www.aceee.org/sites/default/files/proceedings/ssb24/pdfs/20240722163127361_a14f9c29-bb3e-4992-ae79-32da7aa23249.pdf.

¹⁴² Bay Area Regional Energy Network, *2020-21 Survey Report* (San Francisco: BayREN, 2021), <https://www.bayren.org/sites/default/files/2021-11/bayren-cs-202013-survey-report-for-bayren-website.pdf>.

¹⁴³ Benningfield Group, Inc., BKi, and Association of Bay Area Governments, *BayREN Codes & Standards Permit Resource Opportunity Program: PROP Final Report and Energy Code Resource Guide* (BayREN, 2015), https://www.bayren.org/sites/default/files/2021-11/bayren_cs_prop_final_report_2015_0401_0.pdf.

the complexity of the code and confusion related to the required forms, as well as lack of staff time, by providing training on key topics as well as permit guides for common energy-related projects such as re-roofing and water heater replacement. A comprehensive survey in 2021¹⁴⁴ identified additional barriers such as contractor and homeowner knowledge, and surveys are planned every five years to keep the program current. In addition to continuing to provide training and resources, the program has also been working to improve permitting processes and procedures, for example through partnership with the TECH Clean California¹⁴⁵ Permitting Pilot and through a pilot project in San Mateo County to document permitting requirements for heat pump water heaters in the county's 21 jurisdictions and develop a single, simplified, consistent process to be implemented and tested by seven jurisdictions' building departments.

BayREN recognizes that different market segments face unique barriers to implementing energy efficiency and decarbonization measures. Through tailored programs and services, BayREN addresses these challenges with strategies that reduce costs, build capacity, and streamline processes.

12. Reducing Environmental Impacts of Refrigerants

BayREN is taking proactive steps to address the climate and environmental impacts of refrigerants, which are among the most potent greenhouse gases and their

¹⁴⁴ Frontier Energy, Inc., *BayREN 2021 Building Department Survey: External Report* (Frontier Energy, 2021), [https://www.bayren.org/sites/default/files/2022-05/BayREN%202021%20C%2BS%20Survey%20Report External.pdf](https://www.bayren.org/sites/default/files/2022-05/BayREN%202021%20C%2BS%20Survey%20Report%20Report%20External.pdf).

¹⁴⁵ Technology and Equipment for Clean Heating (TECH) Initiative, otherwise known as TECH Clean California.

1 removal is a state priority.¹⁴⁶ Through its **BRRR Program** and complementary
2 efforts in other programs, BayREN promotes responsible refrigerant management
3 and accelerates the transition to low- and no-GWP alternatives.

4 BayREN incentivizes small businesses to replace systems using hydroflourocarbons
5 (HFCs) or hydrochlorofluorocarbons (HCFCs) with natural refrigerants that have low
6 or zero global warming potential. By 2028, the BRRR Program aims to evolve into a
7 natural-refrigerant-only initiative. A no-GWP refrigeration pilot project at a San
8 Francisco food retailer, scheduled for completion in 2026, will provide critical
9 insights to guide this transition.

10 The BRRR Program also tackles fugitive refrigerant emissions by repairing leaks and
11 replacing defective remote refrigeration units when necessary. These measures
12 prevent harmful emissions while also improving energy efficiency. Contractors
13 participating in the program are currently required to attest that evacuated
14 refrigerants are responsibly recycled, and future requirements will mandate
15 certification of HFC and HCFC destruction to ensure permanent removal of high-
16 GWP substances from circulation. To further reduce emissions, BayREN is exploring
17 incentives for installing automatic leak detection systems—an uncommon feature
18 in sub-small¹⁴⁷ refrigeration systems typical of small businesses. These technologies
19 will help prevent leaks before they become significant sources of emissions.

¹⁴⁶ “California Introduces Groundbreaking Program to Reduce Climate ‘Super Pollutants’ | California Air Resources Board,” December 10, 2020, <https://ww2.arb.ca.gov/news/california-introduces-groundbreaking-program-reduce-climate-super-pollutants>.

¹⁴⁷ The term “sub-small” refers to systems under 50 pounds and comes from the California Public Utilities Commission’s Refrigerant Avoided Cost Calculator and Fuel-Sub Calculator v3.1. See “Supporting Files - CEDARS,” California Public Utilities Commission, accessed January 1, 2025, <https://cedars.cpuc.ca.gov/deer-resources/tools/supporting-files/>.

BayREN’s **Multifamily BAMBE Program** also addresses refrigerant disposal for replaced appliances. While current requirements call for “proper disposal,” enforcement and tracking have been challenging. By 2028, the program plans to strengthen contractor performance requirements with detailed guidance and may introduce incentives to encourage best practices.

Through leak prevention, responsible disposal, and a strategic shift toward natural refrigerants, BayREN is reducing the climate impact of refrigeration systems while improving energy efficiency. These efforts align with California’s climate goals and demonstrate BayREN’s commitment to sustainability and innovation.

13. Spurring Innovation

The Commission has tasked RENS with piloting activities to achieve broader deployment, and BayREN is dedicated to spurring this innovation. BayREN combines research, stakeholder engagement, and demonstration projects across its programs to develop innovative approaches to advance energy efficiency, decarbonization, and healthy and resilient buildings, as exemplified below.

- The **Multifamily BAMBE Program** plans to allocate a portion of its incentive budget to pilot advanced decarbonization technologies—such as combination heat pump systems—creating real-world test cases for broader adoption. The program is also exploring partnerships for basic home repairs to address deferred maintenance and enable fuel substitution and efficiency upgrades, as well as investigating opportunities to promote mechanical ventilation and heat recovery ventilation technologies in combination with building envelope improvements, consistent with the Passive House

1 standard and analysis currently underway at the California Energy
2 Commission pursuant to AB368.¹⁴⁸

- 3 • The **Home Energy Score Program** operated successfully in the Bay Area and
4 was approved as BayREN's first statewide program in the last Business Plan
5 application as the first statewide program to be led by a non-IOU Portfolio
6 Administrator. This program developed an innovative new electrification
7 checklist in 2020 to support state and local decarbonization goals.¹⁴⁹
8 Nationally recognized, the checklist is included in the Home Energy Report
9 and recommends key electrification products such as heat pump HVAC
10 systems, heat pump water heaters, induction cooking, and heat pump
11 clothes dryers. The checklist continues to be offered in the new statewide
12 HES California program and has influenced the U.S. Department of Energy to
13 investigate how electrification can be addressed more directly in the national
14 standard.
- 15 • BayREN's **Targeted Decarbonization Services Program** accelerates
16 innovation by testing diverse decarbonization approaches in public facilities
17 through its Decarbonization Showcase. These real-world demonstration
18 projects fill a critical market gap, providing replicable models and lessons
19 learned that can be scaled regionally. By documenting outcomes, TDS fosters
20 confidence in emerging technologies and speeds their adoption across the
21 public sector and beyond.
- 22 • The **BRRR Program** is proactively addressing the transition to low- and no-
23 GWP refrigerants for small businesses. By incentivizing systems using natural
24 refrigerants like CO₂ (R-744) and propane (R-290), and preparing trials for

¹⁴⁸ Energy: building standards: passive house standards, AB 368 (Ward), 2025–2026 Reg. Sess., *Statutes of California 2025*, chap. 145.

¹⁴⁹ Better Buildings Beat Team, "Bay Area Tackles Climate Goals."

1 solid refrigerant technologies, the BRRR Program mitigates stranded asset
2 risks and positions small businesses for compliance with future
3 regulations.^{150,151} These efforts include partnerships with CalNext¹⁵² and
4 other stakeholders to explore scalability and real-world performance.

- 5 • Both commercial sector programs are also exploring the creation and sale of
6 Energy Attribute Certificates (EAC) to monetize verified energy savings and
7 emissions reductions. Bundling energy and refrigerant EAC could create a
8 compelling value proposition for buyers, supporting higher project
9 throughput and reducing reliance on public funds. This approach aligns
10 program impact with financial resilience, enabling BayREN to deliver lasting
11 climate benefits while fostering participation in voluntary and compliance-
12 driven carbon markets.
- 13 • The new **Incubator for Community-Designed Initiatives Program** will
14 directly spur innovation by creating collaboratives of CBOs and local
15 government agencies around relevant themes, such as health and resilience.
16 Participants can develop and potentially partner on designing and proposing
17 energy efficiency activities, with results to be shared and successful activities
18 potentially scaled to larger regions. BayREN anticipates that this program will
19 generate a variety of ideas and partnerships, leading to increased

¹⁵⁰ The U.S. Environmental Protection Agency initially set a GWP limit of 300 for systems with a charge size of less than 200 pounds, and is now proposing a near-term GWP limit of 1,400 for new remote condensing units starting January 1, 2026. See “Regulatory Actions for Technology Transitions | US EPA,” US EPA, January 5, 2026, <https://www.epa.gov/climate-hfcs-reduction/regulatory-actions-technology-transitions>.

¹⁵¹ Hydrofluorocarbon gases: sale or distribution, Senate Bill 1206 (Skinner), 2021–2022 Reg. Sess., *Statutes of California 2022*, chap. 884. Senate Bill 1206 prohibits the sale of virgin or new bulk HFCs with GWP greater than 1,500 beginning on January 1, 2030.

¹⁵² CalNEXT is a statewide emerging technology program designed to identify, test, and grow electric technologies and delivery methods to support California’s decarbonized future. See CalNEXT, “Home - CalNEXT,” October 29, 2025, <https://calnext.com/>.

involvement with energy efficiency programs at the local level and new approaches for effective interventions.

BayREN’s commitment to innovation spans technology pilots, health-focused retrofits, professional training, and market-based solutions. By addressing systemic barriers and creating replicable models, BayREN is shaping a resilient, low-carbon future for California.

14. Using Community-Based Program Design

As Chapter 8 describes in detail, BayREN engages with its communities on a continual and ongoing basis. This engagement is focused primarily on reaching and involving target audiences, which are primarily ESJ communities and HTR customers. Programs are designed to address the challenges shared by community participants and evolve based on ongoing feedback. In this way, BayREN’s entire portfolio is community-based.

BayREN’s proposed portfolio includes a new program that creates the opportunity for community-based organizations and local government agencies to directly design and carry out trial projects. The proposed **Incubator for Community-Designed Initiatives Program** is based largely on SoCalREN’s Community-Based Design Collaborative as described in Advice Letter 22-E/22-G, the workshop on October 7, and materials posted online¹⁵³ and intended to address the CPUC’s stated objectives¹⁵⁴ in a way customized for the Bay Area. Like the SoCalREN model, this program will support CBOs in learning about, designing, and potentially implementing energy efficiency projects while being fairly compensated for their

¹⁵³ “Collaborative | SoCalREN.”

¹⁵⁴ CPUC D.23-06-055, 81-84.

time and receiving appropriate support throughout the process. BayREN's Incubator program is would also include local governmental agencies, identify a theme for each year's collaborative, provide limited funding to test each project, and include an annual BayREN Innovations event for sharing out results. Importantly, the program design will only be finalized after incorporating ideas and feedback from potential participants.

III. Conclusion

BayREN's 2028–2035 portfolio is designed to meet the moment created by California's ambitious climate, energy, and equity goals. Achieving full decarbonization by 2045, doubling energy efficiency by 2030, and deploying six million heat pumps across the state requires unprecedented collaboration and a diverse set of program administrators working in concert. As the state accelerates toward these targets, the need for complementary strategies—beyond code requirements, beyond renewable electricity procurement, and beyond traditional utility programs—has never been clearer. The transformation of the existing building stock, particularly in the face of rising gas rates and aging infrastructure, is indispensable to meeting the state's climate commitments. Yet without targeted support, many of California's hard-to-reach and environmentally and socially vulnerable communities face insurmountable barriers to participating in, and benefiting from, this transition.

Within this context, RENs such as BayREN play a uniquely valuable and increasingly necessary role. RENs were created to fill gaps that utilities and CCAs cannot or do not intend to address, to test new approaches with potential for broader scale, and to serve hard-to-reach markets that traditional programs have historically struggled to reach. BayREN's proposed portfolio reflects this mandate: a coordinated suite of

1 programs that confront the most persistent barriers to building decarbonization,
2 expand access to services for equity customers, support workforce development,
3 and build local government capacity. The Commission has repeatedly recognized
4 that RENs are essential to the state’s success.

5 With ten regional and one statewide program proposed—and nearly two-thirds of
6 portfolio resources directed to equity segments—BayREN’s 2028–2035 plan builds
7 on more than a decade of experience delivering high-impact,
8 community-responsive programs. The proposed portfolio addresses BayREN’s five
9 goals, which incorporate the CPUC’s identified strategies, as discussed above.

10 Collectively, these programs reflect BayREN’s continued commitment to addressing
11 unmet needs, supporting local capacity, and ensuring that all communities can
12 benefit from California’s clean energy future. As the state moves toward its 2030
13 and 2045 mandates, BayREN remains a vital partner in accomplishing California’s
14 energy transition in an effective and equitable manner.

Chapter 4: Forecast Methodology and Zero-based Budgeting

I. Demonstration of the Reasonableness of the Request

1. Overview

BayREN's proposed budget is reasonably and appropriately sized to support the state's goals for energy efficiency, greenhouse gas reductions, and equity within the Bay Area region. BayREN recognizes there are multiple Portfolio Administrators within the Bay Area and through coordination and collaboration, BayREN's portfolio complements those operating within the same space. RENS are constrained in which programs they are allowed to offer, and while the criteria by which RENS can operate is limited, BayREN's offerings are essential and produce impactful results. Through its coordinated suite of new and unique programs, BayREN targets the market gaps most critical to the region to advance state decarbonization and energy goals. Approximately two-thirds of BayREN's total proposed regional portfolio budget is within the equity segment. Through serving low income, hard-to-reach, and underserved residents and businesses, BayREN's regional portfolio ensures everyone can participate in and benefit from the energy transition.

BayREN's requested budget was developed using a zero-based budgeting (ZBB) approach, consistent with Commission direction in D.21-05-031. Each program budget reflects the minimum resources required to deliver the proposed activities and achieve forecast benefits, accounting for delivery type, measurement method, segment objectives, and sector-specific barriers.

The budget request for regional programs is largely consistent with the 2028-2031 budgets as approved by D.23-06-055, with a modest increase, mainly attributed to additional incentive funds. BayREN has decreased its administrative and marketing/outreach budgets below what was previously estimated for this time period. For all programs that provide incentives, BayREN is proposing increases in order to reach more of the priority equity population and better assist them with reducing their utility costs through energy efficiency while also ensuring they are not left behind in the energy transition. BayREN's proposed budget increases the Total System Benefit (TSB) from \$29,555,934¹⁵⁵ to \$35,518,925. The table below compares the approved regional program budget from D.23-06-055 with the proposed regional budget in terms of administration, implementation, and marketing/outreach and shows the relative increases and decreases.

*Table 4.1 2028-2031 Regional Budget from D.23-06-055 vs. Proposed Regional 2028-2031 Budget by Cost Category**

Expense Type	2028-31 Budget from D.23-06-055	Proposed 2028-31 Budget	Difference
Administration	\$11,995,976	\$11,669,120	- \$326,856
Implementation	\$67,314,864	\$67,946,923	\$632,059
Marketing/Outreach	\$18,375,952	\$16,238,035	-\$2,137,917
Incentives	\$72,060,002	\$83,248,347	\$11,188,345
Regional Subtotal	\$169,746,794	\$179,132,425	\$9,355,631

* Budget figures do not include Evaluation, Measurement, and Verification (EM&V)

BayREN's statewide Home Energy Score program, which launched at the start of 2026, was not included the budget prepared for the 2024-2031 Business Plan. The Commission awarded \$9.9 million for the program in D.23-06-055 and approved BayREN's request for authorization to develop and implement the program,

¹⁵⁵ This is the TSB estimated for 2024-2027 in BayREN's approved 2025 Mid-Cycle Advice Letter.

submitted as Advice Letter 28-E, in 2024. Given that this funding covered two years of program operations, the proposed four-year budget of \$23,267,129 represents a modest increase due to inflation as well as conservative estimates of increased demand as the program gains traction throughout the state. The table below shows both BayREN's proposed budget for regional programs and its proposed budget for the statewide program.

Table 4.2 Total Portfolio Budget Request, including EM&V

Year	2028-2031	2031-3035	2028-2035 Total
Regional Budget	\$186,596,276	\$206,576,458	\$393,172,734
Statewide Budget	\$23,267,129	\$31,110,729	\$54,377,858
Total Budget	\$209,863,405	\$237,687,188	\$447,550,593

Because the budget for BayREN's statewide program has been incorporated into the statewide programs presented in the IOU portfolios, the remainder of this chapter focuses on BayREN's proposed regional portfolio of programs. BayREN's distribution of budget among portfolio segments and sectors, as discussed in more detail below, is based on CPUC guidance, a desire to support deeper energy savings and greenhouse gas emission reductions, advance equitable access to energy efficiency and decarbonization, and the Bay Area's local context and needs. Chapter 6 provides additional information on BayREN's sector and segment strategies.

BayREN's requested budget for the 2028–2035 portfolio period reflects its role as a REN: filling gaps left by Investor-Owned Utility (IOU) and CCA programs, serving hard-to-reach and historically underserved markets,¹⁵⁶ and piloting innovative approaches.

¹⁵⁶ CPUC D.19-12-021, 37 (noting that these customer segments and markets are naturally less cost-effective to serve).

A. BUDGET STRUCTURE AND COST CATEGORIES

BayREN's budget forecasts conform to the Energy Efficiency Policy Manual cost categories and caps. The budget breakdown in the BayREN 2028-2035 EE Application Excel Sheets includes the following categories of costs:

Administration: Portfolio-level and program-level administrative functions required for governance, compliance, reporting, coordination, and portfolio oversight. BayREN allocates a total of 6% of its total 2028-2031 regional portfolio budget to administrative activities.

Marketing, Education, and Outreach (ME&O): Outreach, enrollment support, educational materials, workshops, trainings, and in-language engagement activities where appropriate. ME&O activities are designed to support equitable access and reduce participation barriers, particularly across underserved and hard-to-reach customers. BayREN allocates a total of 9% of its total 2028-2031 regional portfolio budget to ME&O activities.

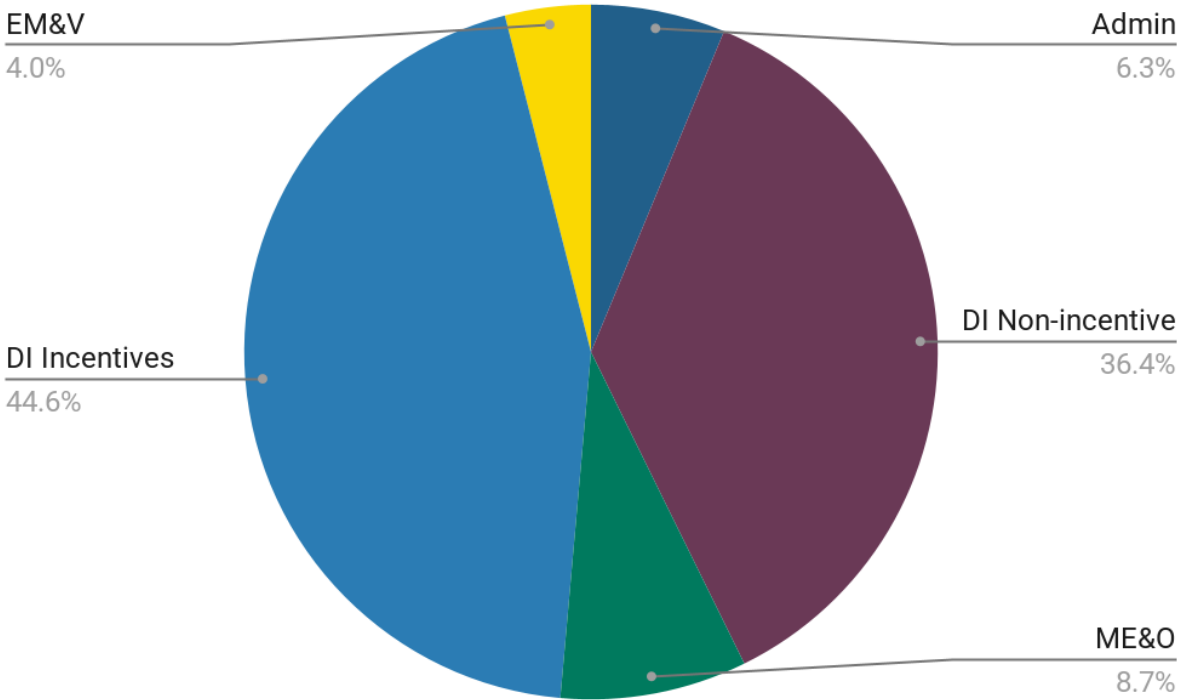
Direct Implementation (DI) – Incentives: Incentives and rebates for measures that deliver measurable energy savings or TSB, where applicable. BayREN allocates a total of 45% of its total 2028-2031 regional portfolio budget to Direct Implementation incentives, with higher incentive shares concentrated in Equity segment programs where first-cost and split incentive barriers are most pronounced.

Direct Implementation – Non-Incentives: Implementer labor, technical assistance, inspections and quality assurance, workforce education and training delivery, contractor support, and other services required to deliver programs.

BayREN allocates a total of 36% of its total 2028-2031 regional portfolio budget to direct implementation non-incentive activities.

Evaluation, Measurement, and Verification: BayREN EM&V activities represent 4% of the total 2028-2031 portfolio budget, consistent with D.21-05-031 and the Commission’s EM&V guidance.

Figure 4.1 Regional 2028-2031 Budget Allocation by Cost Category



B. ZERO-BASED, FUNCTION-DRIVEN FORECASTING METHODOLOGY OVERVIEW

To ensure the reasonableness of its funding request, BayREN applied a zero-based justification framework aligned with D.21-05-031. Rather than simply carrying forward historical budgets, BayREN assessed each program for its specific contribution to portfolio goals, market demand, alignment with CPUC directives, and necessity to achieve measurable customer and system benefits.

Program budget forecasts were then built assuming the minimum resources required to deliver services by segment and sector, accounting for:

- Anticipated participation levels
- Delivery type (e.g., direct install, incentive-based, technical assistance, training, education)
- Measurement method (e.g., deemed savings, population-level Normalized Metered Energy Consumption (NMEC), non-energy benefits)
- Equity-driven delivery requirements, including in-language outreach and higher-touch customer support
- Sector and sub-sector specific barriers such as multifamily versus single family barriers

BayREN staff further reviewed the program budget forecasts across the portfolio to ensure consistency and efficiency, revising budgets as necessary and appropriate.

C. DELIVERY TYPE AND MEASUREMENT METHOD INTEGRATION

BayREN's programs span multiple delivery and measurement approaches, each with distinct cost drivers:

Direct-install and turnkey delivery (e.g., Efficiency and Sustainable Energy (EASE) Home; elements of the BayREN Refrigerant Replacement (BRRR) Program). Forecasts link outreach and engagement activities to completed installations, with unit costs informed by contractor pricing, quality assurance requirements, and customer support needs.

Incentive plus technical assistance models (e.g., Bay Area Multifamily Building Enhancements (BAMBE) Program). Forecasts reflect conversion rates from

technical assistance to installed projects, incentive levels required to overcome first-cost barriers, and inspection and verification intensity.

Meter-based savings measurement (NMEC) (BayREN Business). Forecasts incorporate costs of aggregator management including required resources and tools, data processing requirements, ongoing measurement and verification (M&V), and performance-based incentive payments tied to verified savings.

Market support and capacity-building delivery (Integrated Energy Services (IES), Targeted Decarbonization Services (TDS), Health, Energy and Resilience Education (HERE), BayREN Works, Incubator, Home Energy Score (HES) California). Forecasts are based on discrete, service-level outputs, including Energy Concierge engagements, Energy Roadmaps delivered, technical assistance provided, implementation support hours, trainings delivered, agencies served, pilot projects supported, and Home Energy Score reports provided.

Codes & Standards (C&S) support. Forecasts are based on anticipated jurisdiction participation, technical assistance needs, forum and training cadences, and planned projects, all linked to local government capacity-building outcomes.

Inflation and Escalation

For the 2032-2035 period, BayREN assumed cost escalations between 2% and 3% for various components of its budget to account for anticipated increases in labor, materials, and delivery costs, while maintaining steady-state program delivery and continuity of service. This approach preserves cost reasonableness over the full 2028–2035 period.

II. Zero-Based Budgeting Methodology (D.21-05-031, COL 22, OP 8)

In accordance with CPUC Decision D.21-05-031, BayREN developed its program and portfolio budgets using a ZBB framework rather than carrying forward existing budgets. No costs were assumed by default.

BayREN's budgeting process included:

- 1) **Defining core functions and objectives:** each program element was reviewed to confirm alignment with CPUC directives and BayREN's portfolio goals.
- 2) **Quantifying minimum resource requirements** needed to deliver forecast participation and outcomes.
- 3) **Building labor costs** from staffing plans and fully loaded labor rates provided by BayREN member agencies.
- 4) **Itemizing non-labor costs** based on unit costs and forecast quantities.
- 5) **Validating cost reasonableness** through proportionality and benchmarking against comparable REN activities.

Across all segments and sectors, the resulting portfolio reflects only those expenditures required to deliver the proposed programs and achieve BayREN's desired outcomes.

III. Methodologies to Forecast and Allocate Budget and Benefits by Segment

BayREN's portfolio includes programs across all four portfolio segments including Resource Acquisition, Equity, Market Support, and Codes & Standards (C&S).

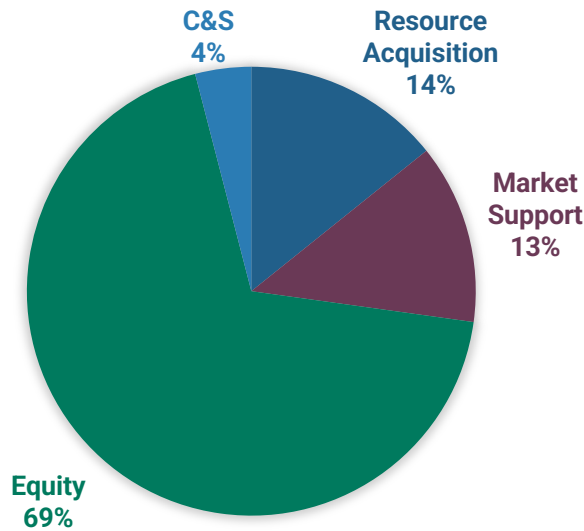
1 Segment level budgets were derived from BayREN's assessment of how each
2 program's activities contribute to measurable outcomes under each of the
3 segments.

4 Consistent with the REN criteria and BayREN's goals and approach as described in
5 Chapter 3, BayREN utilizes its strength as a coalition of local governments to build
6 and leverage partnerships to prioritize hard-to-reach (HTR) customers and
7 communities facing persistent barriers to energy efficiency program participation
8 and spur innovation. As a result, approximately 66% of BayREN's proposed regional
9 portfolio budget (69% when EM&V is not included) is devoted to the equity
10 segment, with the remainder allocated across the other segments.¹⁵⁷

11 Allocations to each segment reflect the level of investment necessary to support the
12 efficient and equitable achievement of California's climate and energy goals while
13 ensuring alignment with segment objectives. BayREN's segmentation strategy and
14 budget distribution are consistent with broader portfolio goals outlined in Chapter
15 3 and are discussed further in Chapter 6. The budget allocation by segment is
16 depicted in the figure below.

¹⁵⁷ CPUC D.21-05-031, 23 (stating that "RENs, by their nature and primary purposes, are more likely to have a greater share of their portfolio devoted to market support and/or equity programs").

Figure 4.2 2028-2031 Regional Budget Allocation by Segment*



*Includes Portfolio Admin and statewide program budget; does not include EM&V

Table 4.3 Regional Portfolio Budget and TSB by Segment, 2028-2031*

Segment	2028-2031 Forecasted TSB	2028-2031 Proposed Budget
Resource Acquisition	\$6,395,652	\$25,509,511
Market Support	\$0	\$23,212,412
Equity	\$29,123,272	\$123,191,223
Codes & Standards	\$0	\$7,219,280
Total	\$35,518,925	\$179,132,425

*Includes Portfolio Admin; does not include EM&V

The TSB estimates shown above show some of the benefits produced by BayREN's portfolio. Some of the benefits that are not captured by TSB include the following:

- Unclaimed savings from technical assistance and referrals
- Below-code savings which would not have occurred without BayREN assistance
- Non-energy equity and market support benefits, including providing services to ratepayers who face barriers to participation in most programs
- Funds leveraged from other sources to augment ratepayer funds

1. Resource Acquisition

BayREN Business is the sole resource acquisition program in the portfolio, with a requested budget of \$25,509,511, representing 14% of BayREN's proposed 2028-2031 regional budget.¹⁵⁸ The budget forecast is driven by the resources required to deliver cost-effective avoided benefits and verified energy savings to disadvantaged communities (DAC), low-income communities (LIC) and (DAC) and hard-to-reach (HTR) small and medium-sized businesses (SMBs).

BayREN Business is a gap-filling, equity-focused program designed to help DAC, LIC and HTR businesses overcome persistent barriers to addressing energy efficiency and reducing their energy costs. This Resource Acquisition program uses a pay-for-performance NMEC approach that pays installation contractors, or "aggregators," for energy savings measured at the meter. To maximize persistent grid benefits, aggregators are committed to sustaining equipment performance throughout the NMEC 12-month monitoring period.

Forecasts for BayREN's Resource Acquisition segment programs are consistent with the ZBB framework outlined in D.21-05-031. The methodology to forecast budget and savings include:

- Incentive levels tied to TSB performance;
- Estimated number of enrolled businesses and completed projects;
- Estimated savings potential based on projected program update;
- Resources required to engage and strengthen trust across DAC, LIC and HTR businesses, e.g., in-language services;

¹⁵⁸ Total includes Resource Acquisition segment Portfolio Admin; does not include EM&V.

- Implementor labor costs including administrative and M&V labor associated with NMEC data processing, verification, and incentive payment processing; and
- BayREN staff time allocations to manage the program.

This approach ensures that requested funding levels are commensurate with achievable TSB and proportional to the market potential in the Bay Area's DAC, LIC and HTR SMB sector.

2. Equity

BayREN's portfolio includes four equity segment programs, with a budget of \$123,191,223, representing 69% of the requested regional 2028-2031 budget.¹⁵⁹

The equity segment portfolio is consistent with BayREN's portfolio strategy to prioritize customers and communities that are underserved and HTR and advance the CPUC's ESJ Action Plan. BayREN's equity segment programs span the residential, commercial, and workforce sectors and employ strategies to improve energy affordability and address barriers such as upfront costs, split incentives, language access, deferred maintenance, and limited customer capacity.

Forecasts for BayREN's equity segment programs are consistent with the ZBB framework outlined in D.21-05-031. The methodology for these forecasts includes the following factors:

- High-touch outreach and enrollment, including in-language support.
- Hands-on, specialized disadvantaged youth and workforce training.
- Delivery model including turnkey direct-install where applicable.

¹⁵⁹ Total includes Equity segment Portfolio Admin; does not include EM&V.

- Measure cost assumptions based on statewide workpapers and implementation pricing.
- Incentive levels calibrated to first-cost barriers.
- Incorporation of measures that reduce greenhouse gas (GHG) emissions through electrification and replacement of high global warming potential (high-GWP) refrigerants.
- Technical assistance right-sized to support renters, small multifamily property owners, and hard-to-reach businesses.
- Savings estimated using deemed savings values from the Electronic Technical Reference Manual (eTRM), where applicable, with recognition that several Equity programs also prioritize non-energy benefits such as health, safety, resilience, and GHG reductions.
- Forecasted participation rates based on historical insights and unmet needs.

Nearly 55% of the equity segment budget is allocated to incentives. This significant incentive budget allocation is aligned with BayREN's priority to help equity segment customers overcome barriers to decarbonization and advance ESJ Action Plan goals by increasing investment in clean energy resources to benefit ESJ communities and increasing climate resiliency in ESJ communities.

3. Market Support

BayREN's portfolio includes four regional market support programs serving the residential, public and cross-cutting sectors, as well as one statewide residential sector program. The four regional market support segment programs have a combined requested budget of \$23,212,412, representing 13% of the 2028-2031

1 budget.¹⁶⁰ In addition, the statewide market support program has a proposed
2 budget of \$22,336,444.

3 Each of these programs was designed in alignment with market support segment
4 objectives and sub-objectives to enable the long-term success of the energy
5 efficiency market by educating customers, strengthening market capacity, and
6 creating conditions for sustained adoption of energy efficiency and decarbonization
7 measures.

8 Forecasts for BayREN's Market Support segment programs are consistent with the
9 ZBB framework outlined in D.21-05-031. The methodology to forecast budget and
10 benefits is based on the following factors:

- 11 • Anticipated number of public agencies provided with Energy Concierge
12 services, Energy Roadmaps, roadmap implementation support, and technical
13 assistance through IES and TDS, informed by historical participation rates
14 and documented unmet demand.
- 15 • Development of public agency decarbonization case studies designed to
16 educate customers and increase market engagement in pursuing energy
17 efficiency and decarbonization activities.
- 18 • Gap funding needs to move public sector projects from concept to
19 completion.
- 20 • Forecasted energy efficiency savings energy and bill savings identified and
21 delivered through technical assistance.

¹⁶⁰ Total includes Market Support segment Portfolio Admin.

- Number of trainings and resources to be provided to local government staff, real estate professionals, and others who help shape the built environment, based on historical training data and estimates for reaching new audiences.
- Number of estimated local governments and community-based organizations (CBOs) served per cohort in the new Incubator for Community-Driven Initiatives program; services include education, technical assistance, and approved initiative funding.
- Insights gleaned from SoCalREN's Community Based Design Collaborative (CBDC) findings as described in Advice Letter 22-E/22-G as an external reference point for best practices in community-designed programming, adapted to BayREN's regional and governance context.
- CBO compensation for time and participation, informed by CBDC.
- Number of HES reports provided statewide and in each region, estimated based on BayREN's experience providing HES reports in the Bay Area since 2018 combined with housing data for the state.

By linking costs to tangible participation, education and training, and technical assistance, BayREN's forecasts demonstrate alignment with the CPUC's market support objective to support the long-term success of the energy efficiency market,¹⁶¹ and is proportional to achievable regional benefits.

4. Codes & Standards (C&S)

BayREN's portfolio includes one C&S segment program, with a requested budget of \$7,219,280, representing about 4% of the regional 2028-2031 budget.¹⁶² BayREN's C&S cross-cutting program has been operating since 2013, serving as an enabling

¹⁶¹ CPUC D.21-05-031, 14.

¹⁶² Total includes C&S Portfolio Admin.

investment that improves realization of savings embedded in the energy code and local energy policies rather than producing directly claimed savings. As California's codes and standards evolve, BayREN consistently innovates to deliver new trainings and resources, while testing different approaches to overcome challenges.

Forecasts for BayREN's C&S segment were developed in alignment with the Commission's ZBB framework (D.21-05-031). The methodology for budget and benefits are based on:

- Experience and expertise based on over a decade of program implementation;
- Expected number of jurisdictions and individuals engaged;
- Technical assistance and training hours delivered;
- Regional forums produced;
- Development and maintenance of tools and resources to support both compliance improvement and local energy policy development and implementation; and
- Coordination with statewide and IOU C&S efforts, CEC staff, area CCAs, and others such as the Building Decarbonization Coalition and the San Francisco Bay Area Planning and Urban Research Association (SPUR).

The inputs informing BayREN's budget ensure that the request is reasonable to advance BayREN's mission to empower our communities to build healthy, resilient buildings that improve lives and reduce energy use.

IV. Methodologies to Forecast and Allocate Program Budget and Benefits by Sector

BayREN's methodologies to forecast and allocate program budgets and benefits by sector are grounded in its ZBB framework and reflect sector-specific delivery requirements, equity considerations, market conditions, and the role each sector plays in advancing BayREN's overall portfolio objectives. Sector-level allocations are designed to ensure that requested funding levels are proportional to achievable outcomes within each sector, responsive to local needs and market conditions, and aligned with Commission guidance regarding delivery type and measurement methods.

Role of the Existing Buildings Study

BayREN's Existing Building Study provides data on building stock characteristics for each jurisdiction in the Bay Area across the residential, commercial, and public sectors. The study, along with other factors, was considered in reviewing and refining BayREN's budget forecasts to ensure that the proposed budget appropriately reflects regional needs.

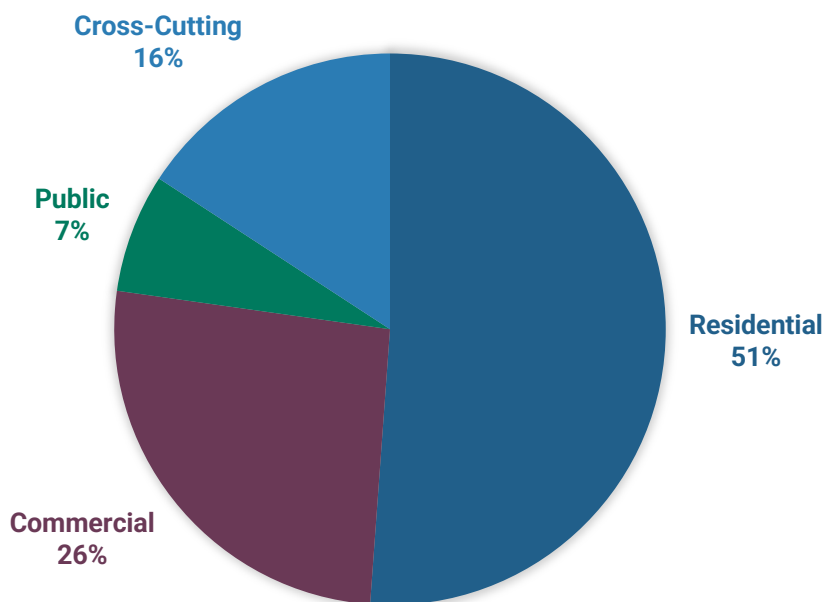
Consistent with Commission direction, sector-level budget and benefit allocations reflect the markets and building types served by programs while remaining aligned with segment-level objectives described elsewhere in this chapter.

1. Sector-Level Forecasting Framework

Across all sectors, BayREN applies a consistent methodological framework to forecast budgets and benefits, while tailoring assumptions to sector-specific conditions. Sector-level allocations reflect:

- 1 **Delivery pathway requirements**, including whether programs rely on direct-
- 2 install, incentive-based, technical assistance, training, or market support models.
- 3 **Measurement and verification approaches**, such as deemed savings, NMEC
- 4 population-level measurement, or non-savings-based outputs.
- 5 **Equity considerations**, including the prevalence of HTR customers, renters, small
- 6 property owners, and underserved communities.
- 7 **Program maturity and scaling potential**, informed by historical performance and
- 8 anticipated market evolution.
- 9 Local government capacity and institutional constraints, particularly in the public
- 10 sector.
- 11 Together, these inputs support differentiated sector strategies and proportional
- 12 allocation of resources that are commensurate with achievable outcomes and
- 13 delivery requirements.

1 *Figure 4.3 Regional Budget Allocation by Sector*



2 *Table 4.4 Regional Programs and Budgets by Sector**

Sector	Number of Programs	2028-2031 Budget	% of Regional Portfolio
Residential	3	\$91,627,488	51%
Commercial	2	\$46,717,282	26%
Public	2	\$12,485,222	7%
Cross-Cutting	3	\$28,302,434	16%
Total	10	\$179,132,425	100%

3 * Does not include Portfolio Admin or EM&V

4 **2. Residential Sector**

5 BayREN’s residential sector programs are designed to make energy efficiency and
6 electrification upgrades understandable, accessible, and affordable across a diverse
7 housing stock that includes single-family homes, multifamily properties, renters,
8 and owner-occupied households. Two of the four residential sector programs, and
9 approximately 75% of the budget, are in the equity segment. Sector-level forecasts
10 reflect differing delivery intensities, customer support needs, and cost structures

across income-qualified and market-rate populations, informed by the distinct delivery roles of EASE Home (direct install), BAMBE (technical assistance and incentives), and HERE (market education and information).

Residential sector budget forecasts incorporate:

Direct-install labor, materials, and quality assurance requirements for income-qualified households.

Incentive levels calibrated to overcome first-cost and split-incentive barriers in multifamily properties.

Technical assistance and customer support needs, including in-language services and coordination with other programs.

Market education and data collection activities that support long-term market transformation and informed customer decision-making.

Savings and benefits are estimated using deemed savings values where applicable.

3. Commercial Sector

BayREN's commercial sector programs focus on advancing energy affordability, resilience, and equity for SMBs, particularly those that are HTR or located in disadvantaged and low-income communities. Budget and benefit forecasts reflect the complexity and higher cost of serving this segment, as well as the delivery and measurement approaches required to achieve persistent savings.

Forecasts for commercial programs incorporate:

NMEC population-level measurement requirements for BayREN Business, including aggregator management, data access, performance tracking, and ongoing verification.

Direct-install and equipment replacement complexities associated with the BayREN Refrigerant Replacement (BRRR) program, including system condition variability and costs of refrigerant replacement and leak management.

Higher-touch outreach and enrollment needs, including in-language services and trusted community partner engagement.

Contractor recruitment, training, and quality assurance costs, particularly for culturally competent and locally based contractors.

Budgets are built from the minimum resources required to achieve forecasted participation levels and verified benefits including achievable TSBs within the Bay Area's small business sector.

4. Public Sector

BayREN's public sector programs focus on overcoming time and capacity constraints, limited technical expertise, and capital barriers that prevent local governments, special districts, and school districts from implementing energy efficiency, decarbonization, and resilience projects. Unlike incentive-driven programs, public sector forecasting emphasizes service volumes and enabling outcomes rather than near-term claimed savings.

Forecasts for public sector programs reflect:

Expected Energy Concierge service uptake, including the number of agencies supported with program navigation, application assistance, and funding coordination.

Energy Roadmapping and Decarbonization Showcase activities, including technical and engineering assistance, project scoping, and implementation support.

Training and capacity-building activities that improve long-term public agency readiness and enable future project deployment.

Equity prioritization, including support for facilities located in disadvantaged, hard-to-reach, or underserved communities and the development of Community Resilience Centers.

Budgets are allocated based on forecast participation, staffing requirements, and technical assistance intensity, with benefits captured through lifecycle savings estimates, improved project uptake, and increased participation in other ratepayer and non-ratepayer funded programs.

V. Cross-Cutting Sector

BayREN's cross-cutting programs include workforce development, C&S, and community innovation incubation. These activities support all sectors by strengthening delivery infrastructure, building institutional capacity, and piloting innovative and community-informed approaches. Forecasts for these programs are driven by service delivery volumes expected outcomes.

Budgets are based on:

C&S capacity-building activities, including code compliance training and support and local energy policy and reach code assistance for local jurisdiction staff, which

1 reduce implementation risk, improve realization of savings embedded in adopted
2 codes, and enable public agencies to effectively enforce and operationalize state
3 and local energy policies.

4 **Expected jurisdiction participation**, training cadence, and technical assistance
5 hours for C&S activities.

6 **Forecast cohort sizes and training volumes** for workforce education, contractor
7 readiness, and community incubator programs.

8 **Pilot scope, duration, and support needs** for innovation and community-driven
9 initiatives.

10 These investments enable broader portfolio performance by increasing
11 participation, improving compliance, and reducing long-term market barriers.

12 VI. Program Modifications from 2024-2027 13 Portfolio Cycle

14 BayREN closed the Water Upgrades Save program via AL-32-E on October 7, 2025.
15 The Program faced significant unforeseen challenges that prevented new customer
16 projects, achieving program designated savings goals and enrolling new utility
17 partners, as described in the Advice Letter. The program's closure aligns with CPUC
18 goals by redirecting ratepayer funds to existing successful BayREN programs that
19 are meeting goals and delivering benefits, as well as returning \$1.5 million in
20 unspent funds to the CPUC and ratepayers.¹⁶³

¹⁶³ These funds were returned via BayREN's Advice Letter (AL) 34-E, the *2024-2027 Portfolio Mid-Cycle (MCAL) Advice Letter*, which was approved December 29, 2025, 12.

1 *Table 4.5 Closed Programs from the 2024-2027 Cycle*

Name of Closed Program	Segment	Sector	Unspent Budget of the Closed Program ¹⁶⁴	Total EE budget from the 2024-2027 cycle ¹⁶⁵	Rationale for Program Closure	Underperformance and Remediation
Water Upgrades Save Program	Market Support	Residential	\$1,468,008	\$3,688,850	See AL 32-E	The Program faced significant unforeseen challenges ¹⁶⁶ and could not meet its targets, despite efforts to integrate changes to accommodate the identified needs of participating utility partners and potential new partners.

- 2 BayREN is proposing one new program for the 2028-2035 Business Plan period: the
3 Incubator for Community-Driven Initiatives. The program is designed specifically to
4 encourage local, community-driven innovations in the energy efficiency arena.
5 BayREN plans to engage with potential program participants, particularly CBOs, to
6 incorporate their ideas and input into the program design itself. More details on the
7 program are outlined in table 4.6 below, Chapter 3, and the program's
8 corresponding Program Card in Exhibit 2.

¹⁶⁴ The amount shown in this column is the estimated unspent for the program based on available information in February 2026. The final amount may vary slightly. These unspent funds will be reallocated to other successful BayREN activities and programs.

¹⁶⁵ The amount shown in the table is the revised budget per the 2025 MCAL filing and reflects both the return of \$1.5M to the CPUC and ratepayers, and the reallocation of funds from 2026 and 2027 to other successful programs and activities.

¹⁶⁶ BayREN, AL 32-E (WUSave Closure), 2-3.

1 *Table 4.6 New Programs in 2028-2032 Application Cycle*

New Program	Segment	Sector	High Level Program Description/Purpose
Incubator for Community-Designed Initiatives	Market Support	Cross-cutting	The Incubator for Community-Designed Initiatives is designed to encourage local, community-driven innovations in energy efficiency. Based in part on SoCalREN's Community-Based Design Collaborative, intended to address the CPUC's stated objectives, ¹⁶⁷ and customized for the Bay Area, this program would allow local governments and community based organizations (CBOs) to design, propose, and potentially implement energy efficiency activities. Importantly, the program design will only be finalized after incorporating ideas and feedback from potential participants. Results will be shared out and successful activities potentially scaled to larger areas.

¹⁶⁷ CPUC D.23-06-055, 81-84.

Chapter 5: Portfolio Management

I. Overview of BayREN's Approach to Portfolio Management

BayREN continuously monitors and manages its programs to ensure that the portfolio is aligned with Commission directives and show advancement towards stated goals. As discussed in Chapter 3, BayREN has ensured that its proposed portfolio aligns with state energy efficiency, climate and equity goals by establishing five portfolio goals which also incorporate the Commission's identified portfolio strategies. This chapter discusses how BayREN intends to measure and report on progress, at the portfolio level, towards these goals.

The approach described here, while tailored to the proposed portfolio, builds on previous work. In 2019-2020, BayREN developed an "Overarching Value Construct" that served as the foundation of its measurement framework. This framework was designed to demonstrate how BayREN's work builds lasting capacity in Bay Area communities (by gap filling), serves hard-to-reach (HTR) and underserved populations, and tests innovative solutions for the future (i.e., the CPUC's three-criteria for RENs).¹⁶⁸ The framework ensured BayREN's portfolio aligned with both the REN criteria while also providing energy savings and the reduction of greenhouse gases (GHGs).

In late 2020, BayREN undertook a comprehensive effort to develop metrics to measure the value that BayREN's portfolio provides. This work included the

¹⁶⁸ Opinion Dynamics, *Bay Area Regional Energy Network (BayREN) 2019 Process Evaluation* (Oakland: Opinion Dynamics, 2020), www.calmac.org/publications/BayREN_2019_Process_Evaluation_2020_0305.pdf.

1 development of detailed logic models, defined metrics and indicators, and multi-
2 year roadmaps for each program and the portfolio that rolled up to the Overall
3 Value Construct.¹⁶⁹ The result was a rigorous approach that showed the
4 interconnections between BayREN's programs and outcomes, which allowed
5 BayREN to tell a story about its full value, all while maintaining clear alignment with
6 CPUC goals.

7 In mid-2021, the CPUC issued D.21-05-031, which required PAs to segment their
8 portfolio into Resource Acquisition, Market Support and Equity Programs. Following
9 this Decision, BayREN reviewed its portfolio and adjusted all logic models and
10 metrics to ensure alignment with the CPUC's stated objectives for these three
11 segments. Examples of BayREN's logic models and metrics revised based on D.21-
12 05-031 can be found within the CPUC's *Assessment of Regional Energy Networks*
13 *(Group B)* evaluation report.¹⁷⁰ In addition to reviewing the structure of BayREN's
14 metric framework, this report also examined BayREN's data tracking, reporting that
15 "all BayREN programs have well-established methods for documenting and
16 explaining data flows and data management" and that BayREN's program tracking
17 data is "of high quality."¹⁷¹

18 Following D.21-05-031, the CPUC asked the California Energy Efficiency
19 Coordinating Committee (CAEECC) to develop a new set of metrics and indicators

¹⁶⁹ Bay Area Regional Energy Network, *BayREN Core Value and Proposed Value Metrics (Descriptive)* (BayREN, 2020), https://pda.energydataweb.com/api/view/2399/Overview%20of%20BayREN%20Value%20Metrics_070620.pdf.

¹⁷⁰ Resource Innovations, *Group B Year 3 Regional Energy Network (REN) Assessment: Final Report*, CALMAC Study ID: CPU0356.01 (San Francisco: California Public Utilities Commission, 2023), 6, https://www.calmac.org/publications/Group_B_YR_3_REN_Assessment_FINAL_REPORT_2023-1-26-23.pdf.

¹⁷¹ Resource Innovations, *REN Assessment*, 6.

for the Market Support and Equity Program to complement the Common Metrics. BayREN participated in these discussions and then in 2022, BayREN proactively reviewed all BayREN logic models and metrics to ensure alignment with the CAEECC Working Group’s guidance. Following the release of the official Market Support and Equity indicators (in D.23-06-055) and again after the release of CPUC’s 2025 Resolution E-5351, BayREN revised and updated its metrics and indicators to ensure that the portfolio was collecting data and managing to the metrics required by the CPUC.

BayREN’s work in this area demonstrates a deep commitment to accountability and alignment with CPUC directives and goals. BayREN will continue leveraging the adaptive measurement framework described above to meet evolving CPUC requirements in the 2028-2035 planning period.

II. Accountability for 2028-2035

In response to the CPUC’s request within the Business Plan template, BayREN created a portfolio logic model, portfolio-level outcomes, and portfolio-level value metrics to: (1) measure progress towards the goals described in Chapter 3 and (2) ensure accountability for the 2028-2035 period. During the process of developing this Business Plan proposal, BayREN staff considered the overall portfolio goals and approach, as based on the Commission’s stated goals and strategies, within the Bay Area’s geographic and demographic context, as well as lessons learned from over a decade of experience managing programs. The portfolio-level logic model, shown below, provides a visual depiction of BayREN’s inputs, activities, outputs, and outcomes.

1. BayREN's Portfolio-Level Logic Model Explained

The portfolio-level logic model presented below summarizes and shows the inputs, activities, outputs, and outcomes for BayREN's overall proposed portfolio, as described below.

A. INPUTS

BayREN brings unique regional strengths to the table: deep local government expertise, strong relationships with city and county members across the Bay Area, trusted community connections, and the ability to work at a regional scale that allows BayREN to customize solutions while keeping costs down through efficiency.

B. ACTIVITIES

Programs operate across three main sectors—residential, commercial, and public buildings. BayREN also works on cross-cutting initiatives like Codes & Standards, Workforce, Education and Training, and innovation pilots. All of this is coordinated with consistent messaging across the region.

C. OUTPUTS

This work generates tangible results: reaching and training priority audiences who have been historically underserved; saving energy and reducing greenhouse gas emissions; creating health and resilience benefits for communities; designing and testing innovations; piloting solutions that fill market gaps; and engaging counties and local governments throughout the Bay Area.

D. OUTCOMES

These results are anticipated to bring about real change. Because of BayREN's activities, audiences will adopt energy efficiency practices and make the transition to electrification. Buildings will operate more efficiently over time with sustained reductions. Bay Area communities will experience better air quality and become more resilient to climate challenges as the region advances towards carbon neutrality. Market gaps that once existed will start to close, and successful new and innovative approaches will spread regionally with a potential to scale statewide. Lastly, local governments will be able to integrate energy efficiency into their ongoing policies and day-to-day operations.

BayREN's Portfolio-Level Logic Model

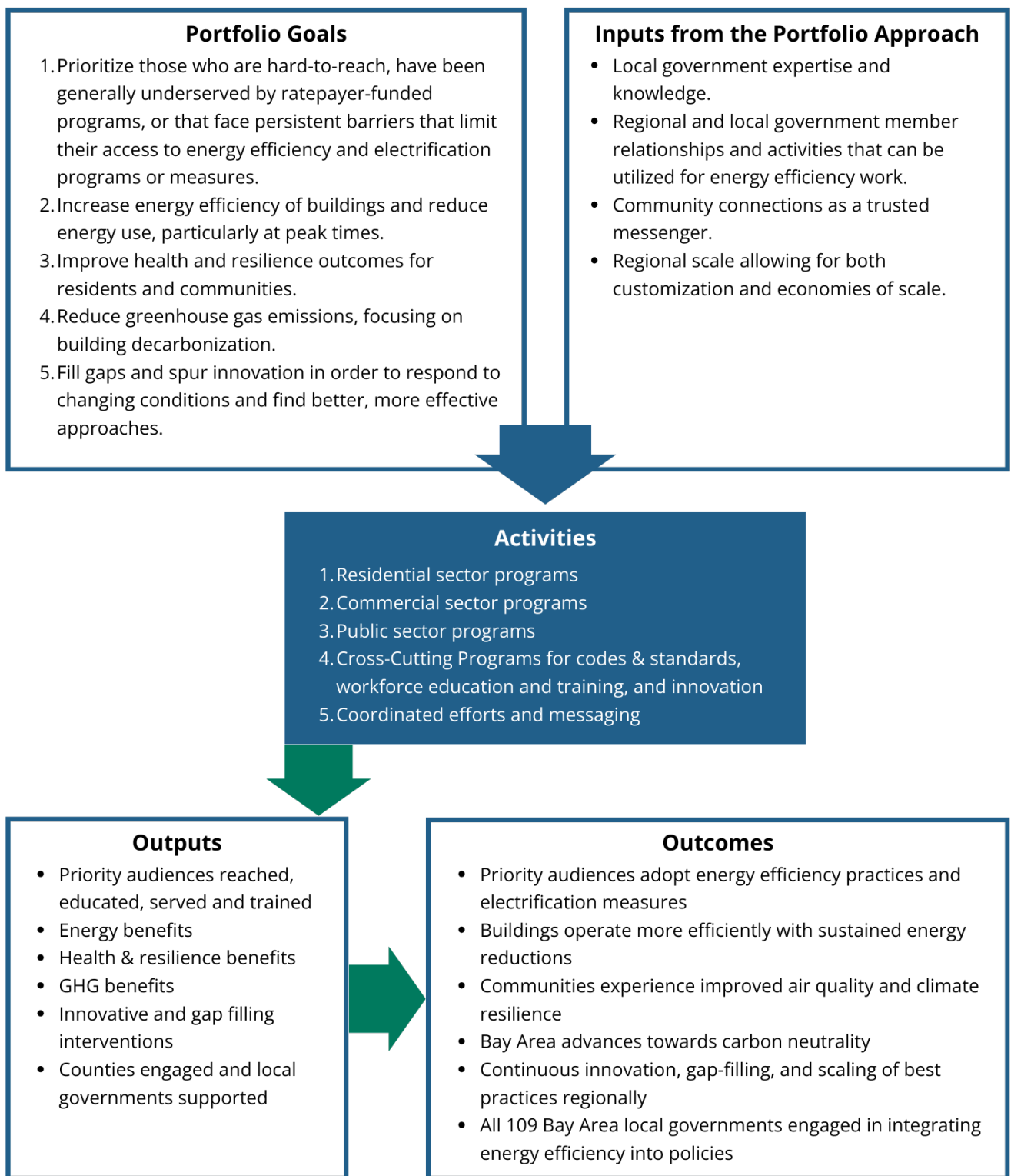


Figure 5.1 Portfolio Logic Model

2. Key Metrics and Outcomes for 2028-2035

BayREN has three distinct types of metrics that it uses to measure progress and report outcomes:

1. **Comprehensive program-level metrics and indicators.** BayREN has developed program level metrics and indicators, including unique value metrics, that are connected to the logic models for each program and provide a comprehensive view of BayREN's portfolio. Taken together, these metrics demonstrate BayREN's clear strategic thinking, deep understanding of different types of value, and commitment to transparency and accountability. BayREN collects and tracks all of these metrics and indicators, and the program cards list key program-level metrics as well as the most important CPUC-requirement metrics for each program.
2. **CPUC-required metrics.** BayREN's comprehensive program-level metrics and indicators include all CPUC-required metrics and indicators. When looked at across the portfolio and by sector, BayREN's metrics roll up to the CPUC required metrics (listed in Tab 10 of the Application Tables in Exhibit 4 and in the Application Excel Sheets). Key among these CPUC-required metrics for BayREN are total lifecycle net kWh and Therm savings, and total greenhouse gas (GHG) emission reductions.
3. **Portfolio-level value metrics.** In addition, at the request of the CPUC, BayREN is putting forward a smaller list of portfolio-level value metrics that highlight the RENs' role within the energy landscape. The portfolio-level value metrics will be presented in addition to, and in the context of, all CPUC-requirement metrics and reflect the outputs of the logic model and are shown in Table 5.1 below.

A. UNIQUE VALUE METRICS AND REN'S ROLE IN CALIFORNIA'S ENERGY EFFICIENCY LANDSCAPE

Regional Energy Networks have a unique role in California's energy efficiency landscape: to carry out activities that utilities or CCAs cannot or do not intend to undertake; to pilot activities where there is a potential for scalability; and to serve hard-to-reach markets.¹⁷² The Commission has consistently acknowledged the importance of this role. In D.19-12-021, the Commission "agree[d]... that the importance of RENs may increase as budgets and roles for LGPs are shrinking within the utility portfolios for multiple reasons... The particular areas of unique capacities local governments may bring in the delivery of energy efficiency include, but may not be limited to, public sector buildings, issues surrounding building code compliance, and treating or delivering energy efficiency services to hard-to-reach customers."¹⁷³ Because of this, the Commission has noted that "RENS, by their nature and primary purpose, are more likely to have a greater share of their portfolios devoted to market support and/or equity programs."¹⁷⁴

This unique role means that the value of RENs' work goes beyond simply counting kilowatt-hours saved. Measuring the type of value that BayREN provides requires different metrics than traditional energy efficiency programs use, and BayREN has been developing and reporting on program-level Unique Value Metrics (UVMs) since 2020, as was discussed above.

¹⁷² CPUC D.19-12-021, 32 (advising that where there is overlap of programs, a REN should "target the hardest-to-reach customers for activities that overlap or are significantly similar to [the IOU's]"). See also CPUC D.18-05-041, 100.

¹⁷³ CPUC D.19-12-021, 18.

¹⁷⁴ CPUC D.21-05-031, 23.

With this business plan and the Commission’s direction to provide a portfolio-level logic model including inputs, BayREN has developed a set of related portfolio-level value metrics that reflect and demonstrate BayREN’s role. The portfolio-level value metrics address all of the stated goals for the proposed portfolio and also include and report on value BayREN provides because of its unique structure as a coalition of local governments, which enables community-based program design, trusted partnerships, and the ability to address sector-specific barriers that utilities cannot or do not serve.

BayREN will continue to refine and improve its unique value metrics and the ways it can measure the performance of its programs and portfolio leading up to and throughout the 2028-2035 period. To support this work, BayREN has started reviewing program and portfolio outputs to identify all types of outputs, including 1) those that can be monetized; 2) those that can be quantified but not monetized; and 3) those that cannot be easily quantified. In this work, BayREN will coordinate with and align efforts with other RENs, with progress and any changes to the unique value metrics noted as appropriate in the Annual Reports.

Table 5.1 BayREN Portfolio Value Metrics Overview and Reporting Approaches

Portfolio Value Metric (UVM)	Description	Tracking and Reporting Approach	Strategic Importance
Priority Audiences Reached, Educated, Served and Trained (excluding public agencies)	Reported as a % of all participants Numerator = Count of priority households (EASE, BAMBE combined) + priority commercial (BayREN Business and BRRR combined) + those trained or mentored that come from priority populations (BayREN Works)	Tracked in program databases; Reported in Annual Report. Metric with target of >85%	Demonstrate BayREN’s focus on Goal 1: Prioritize those who are hard-to-reach, have been generally underserved by ratepayer-funded programs, or that face persistent barriers

Portfolio Value Metric (UVM)	Description	Tracking and Reporting Approach	Strategic Importance
	Denominator = All (priority and non-priority) participants served by these programs		
Energy Benefits	% of all lifecycle net kWh and therms (claimed and unclaimed) for priority targeted populations (EASE, BAMBE, Business, BRRR, TDS)**	Tracked in program databases (claimed and unclaimed tracked separately); Reported in Annual Report [Indicator]	Demonstrate Goal 2: Increase energy efficiency of buildings and reduce energy use (particularly the focus on priority audiences)
Health and Resilience Benefits	Expressed as % unique participants with a NEB (including all programs/participants where there are savings) Numerator = Count of unique residential participants receiving non-energy benefits (NEBs) (EASE, BAMBE) + unique commercial participants receiving NEBs (BayREN Business, BRRR) + TDS participants* Denominator = All participants for all of the programs listed in numerator description	Surveys & tracking in program databases; Reported in Annual Report [Indicator]	Demonstrate Goal 3: Improve health & resilience, specifically while increasing EE of building
GHG Benefits	GHG reductions from Local Governments, Residential, and Commercial*	Calculated from CEDARs/program databases (CO2-equivalent of net annual kWh and net annual therms); Reported in Annual Report [Indicator]	Demonstrate Goal 4: Reduce GHG emissions, specifically those that contribute to local and regional Climate Action Plans and other sustainability goals
Innovative and gap filling interventions	Sum of the: Number of demonstration projects or community-based projects; and Number of market support activities that fill gaps, with	Tracked in program databases and reported in Annual Report [Indicator]	Demonstrate Goal 5: Fill gaps and spur innovation (in alignment with key REN criteria set out by the CPUC)

Portfolio Value Metric (UVM)	Description	Tracking and Reporting Approach	Strategic Importance
	reporting on TBD metrics designed specifically for that initiative or market support activity		
Bay Area Counties Engaged	% of BayREN counties engaged in the design and implementation of BayREN’s programs	Tracked in program databases; Reported in Annual Report. Metric with target of 100%	Demonstrate approach (described in chapter 3) of leveraging the strength, experience, and knowledge of local governments
Bay Area Local Governments Supported	% of all 109 local governments supported by BayREN	Tracked in program databases; Reported in Annual Report Metric with target of >65% (70 local governments) each year	
*Net lifecycle GHG reductions from kWh and therms from claimed savings. This may also include unclaimed in the future.			
**This will be presented with the CPUC-metrics for lifecycle net kWh and therms.			

III. Strategies to Optimize the Portfolio and Manage Risk

To ensure optimal allocation, management and oversight of ratepayer funds, BayREN has a number of practices and processes that it utilizes.

1. Use of Goals, including Total System Benefits (TSB)

As discussed above, BayREN's portfolio goals are tied directly to anticipated outcomes and metrics. Each program lead is responsible for collecting and reviewing all metrics on an ongoing basis. Although RENs are not held to a cost-

effectiveness standard and not all programs report on TSB, these are tracked and reviewed along with other metrics to identify any issues and opportunities for improvement. For programs that are not on track, BayREN's structure allows for flexibility to adjust the program in order to better meet performance goals. For established programs, BayREN will work with program implementers to utilize past performance patterns when forecasting goals and metrics, thereby accounting for factors such as seasonal variation. Additionally, every year each program holds an annual meeting of all member agency staff working on the program in order to review the program's goals, metrics, targets, and progress and identify any needed changes to the program.

BayREN has also been developing a Data Aggregation and Reporting Tool to collect data on progress and results from all programs and program implementers and display it in a series of dashboards accessible to program, county, and regional BayREN staff. This enables easier tracking and analysis of data across the portfolio.

2. Managing the Risk of Underperformance

Managing underperformance starts with identifying potential risks. To do this, BayREN program leads review monthly expenses as well as relevant metrics for each of their programs. Regional staff review all expenditures in relation to program and portfolio budgets and track program progress and achievements on an ongoing basis. Each year, in addition to the annual program meetings discussed above, the metrics and progress for each program are reviewed and discussed as part of the Annual Report process. BayREN also conducts bi-annual budget true-ups in which all programs and members review their budgets and expenditures to identify any issues and ensure that BayREN's budget is allocated appropriately. Further, BayREN conducts Evaluation, Measurement, and Verification (EM&V)

assessments of its programs on an ongoing basis to identify areas for improvement.

These assessments can result in program adjustments, redesigns, or closures as appropriate. For example, BayREN closed the Water Upgrades Save program in 2025 when performance suffered due to unforeseen challenges related to state-level changes in the water sector and related changes with utilities.¹⁷⁵ With the closure of the program and as part of its Mid-Cycle Advice Letter (MCAL),¹⁷⁶ BayREN returned \$1.5M to the CPUC from the unspent program funds, reallocating much of the remainder to the multifamily program in order to serve more properties. BayREN also redesigned its single family program, moving from the previous Home+ program to the new Efficiency And Sustainable Energy (EASE) Home program in order to better reach its target audience as an equity program.

3. Procurement and Related Practices

Unlike Investor-Owned Utilities (IOUs), RENs are not required to have a percentage of their programs designed and run by external 3rd-party implementers since the premise of a REN is local government-led program design and implementation. In general, BayREN staff begin with community and stakeholder engagement to clearly identify needs and shape the framework and guiding principles for a program or initiative. The identified needs are then used to guide the competitive procurement process to select an implementer with relevant experience and expertise. Once selected, the implementer works with BayREN staff to finalize the design and carry out the effort.

¹⁷⁵ BayREN, AL 32-E (WUSave Closure).

¹⁷⁶ BayREN, AL 34-E.

Because BayREN is a coalition of government agencies, all procurement practices follow the required procedures of the agency that leads the program or initiative undertaking the procurement. The procurement policies for BayREN contracts held by the Association of Bay Area Governments (ABAG) are governed by strict agency policies, including extensive internal review by staff from the procurement, legal, finance, and executive sections of the agency. These practices are generally designed to ensure that the best price is obtained for the work needed, with more complex procurement procedures and public board approval reserved for higher dollar amounts in order to reduce administrative costs for smaller procurements. These requirements of BayREN as a public agency Portfolio Administrator ensure transparency and provide an additional layer of control that serves to reduce the risk of our activities.

IV. Statewide Programs

1. BayREN's Statewide Portfolio and Alignment with BayREN Goals

BayREN has one statewide program, the Home Energy Score (HES) California program. HES California is a residential market support program which enhances energy literacy among homeowners by providing clear, unbiased information about home energy performance and actionable steps for improvement, including electrification. By promoting the value of home energy labels and offering rebates to reduce cost barriers, HES California builds consumer demand for energy and electrification upgrades while simultaneously expanding the supply of qualified assessors through targeted workforce training.

1 This program aligns with BayREN's goals of increasing energy efficiency and
2 reducing greenhouse gas emissions. HES California provides homeowners with
3 reports that contain two upgrade scenarios, one that involves retaining existing
4 water heating and HVAC equipment while implementing envelope improvements
5 such as insulation and air sealing, and the other that models replacing any natural
6 gas appliances with high-efficiency electric ones. The report provides estimated
7 energy costs, emissions, and consumption to help homeowners visualize the
8 benefits of these improvements and determine the best path forward for their
9 situation. In addition, HES California is an example of how BayREN has spurred
10 innovation, in that what began as a project with the City of Berkeley over a decade
11 ago evolved into a BayREN regional program and now a statewide program.
12 BayREN staff have worked with U.S. Department of Energy staff closely over the
13 years to customize and test the HES product, helping it evolve to better address
14 real-world conditions and reflect California's energy and climate goals.

15 BayREN underwent an extensive evaluation process of its HES program before filing
16 the Tier 2 Advice Letter¹⁷⁷ required to approve the statewide HES California
17 program. This included an analysis of how often scores led to participation in select
18 home upgrade rebate programs, listening sessions with local governments, and
19 interviews with potential workforce for assessors. Since this round of outreach and
20 evaluation, BayREN has also completed a third-party evaluation of the Green

¹⁷⁷ Bay Area Regional Energy Network, *Bay Area Regional Energy Network's Request for Authorization to Develop and Implement the Statewide Home Energy Score Program*, Advice Letter 28-E (California Public Utilities Commission, October 3, 2024), <https://www.bayren.org/sites/default/files/documents/2024/BayREN%20Home%20Energy%20Score%20CA%20AL%2028-E%20Final.pdf>.

Labeling program, which previously housed its HES activities. That evaluation was filed with the CPUC in February 2025.¹⁷⁸

2. Proposed Changes to Funding Allocation, Funding Levels, and Lead PA

The previous Business Plan Decision allocated a total of \$9.9 million across the IOUs by dollar amount to fund the HES California program. When converting these dollar amounts into percentages, they were slightly different than the allocations typically used for statewide programs. To bring the HES California program into conformance with the other statewide programs that use an 80% electric allocation, new allocations are proposed which have been agreed upon by the IOUs. A comparison of the 2024-2027 and 2028-2031 allocations by IOU are provided below.

Table 5.2 IOU Allocation Comparison

IOU	2024-2027 Allocation	2028-2031 Allocation
PG&E	31.30%	31.49%
SDG&E	10.10%	9.92%
SCE	49.50%	49.75%
SoCalGas	9.10%	8.84%

The \$9.9 million HES California budget approved as part of the 2024-2031 Business Plan was for program years 2026 and 2027. BayREN is proposing a full four-year budget for the program for this Business Plan, with a slight increase to allow the program to scale as it reaches maturity. Estimates for Home Energy Score incentives under the statewide program were calculated using the number of

¹⁷⁸ “CPUC Energy Evaluation Public Comment,” March 2025, <https://pda.energydataweb.com/#!/documents/4115/view>.

single-family homes in California¹⁷⁹ and using similar escalation rates for homes scored per year in the Bay Area. Since 2018, the BayREN HES program has scored about 1.7% of single-family homes in the nine Bay Area counties. This has scaled from approximately 0.17% of homes in 2018 to 0.26% in 2024. The 2028 budget for HES California allows for about 0.1% of homes in California to receive a rebate, increasing to 0.18% in 2031.

While BayREN has been operating an HES program in the Bay Area since 2018, the statewide program just launched at the start of 2026. Therefore, no changes are proposed at this time to the designated lead PA or to the program.

3. Coordination with Other Programs

Before preparing the Tier 2 Advice Letter approving the program, BayREN conducted a landscape analysis of the other Portfolio Administrators' portfolios to assess if there were any similar programs and found none. BayREN also participates in the bi-weekly Statewide Energy Efficiency Team (SWEET) meetings, hosted by the utilities, to coordinate on statewide programs.

V. Statewide Assessment

PG&E led a working group of participating PAs to refine an IOU-developed proposal for evaluating statewide energy efficiency programs pursuant to Ordering Paragraph (OP) 2 of D.23-06-055.¹⁸⁰ The original draft of the proposal was

¹⁷⁹ "E-5 Population and Housing Estimates for Cities, Counties, and the State, 2020-2025 | California Department of Finance," updated May 2025, <https://dof.ca.gov/forecasting/demographics/estimates/e-5-population-and-housing-estimates-for-cities-counties-and-the-state-2020-2025/>.

¹⁸⁰ The portfolio administrators (PAs) must coordinate among themselves and propose a statewide program portfolio assessment process to review and recommend changes to the portfolio of statewide programs. This proposed assessment process shall be included in the PAs' portfolio applications to be

1 developed in the summer of 2025 by a small IOU-only working group that did not
2 include non-IOU PAs. The draft proposal was circulated to all PAs on October 16,
3 2025, and all PAs starting an inclusive working group in November. The goal was to
4 further refine the IOU-developed proposal and identify issues that the Commission
5 would potentially need to address as part of this process. All PAs had the
6 opportunity to participate in the working group from November through January,
7 with the proposal being finalized at the end of January 2026.¹⁸¹ The final proposal is
8 provided in Exhibit 4 as Appendix B. BayREN appreciated the participation of the
9 PAs and collaborative effort that occurred, and BayREN is able to provide qualified
10 support for the final proposal. Areas of agreement and recommended revisions are
11 detailed below.

12 1. Areas of Agreement

13 In alignment with the OP2 Statewide Assessment Framework, BayREN agrees with
14 the proposed Statewide EE Program Administrator Responsibilities. BayREN also
15 supports the Guiding Principles and believes programs supporting customer fuel
16 diversity should remain discretionary depending upon the goal(s) of the program.

17 BayREN is generally aligned with the items in the report listed below.

- 18 1. Objective of the framework - To provide a comprehensive, structured, and
19 transparent framework for assessing statewide energy efficiency programs
20 across all portfolio administrators. This framework ensures that each
21 program is evaluated for statewide suitability, delivery efficiency, strategic
22 alignment, equity, and market impact.

filed in 2026 or may be filed as a motion in Rulemaking 13-11-005 or its successor, if the proposal is ready before the next portfolio application filing.

¹⁸¹ CPUC D.23-06-055, Ordering Paragraph 2.

2. Guidelines for Assessment

- **Customer Affordability:** Identify programs that help customers achieve measurable energy and demand reductions that translate into lower utility bills.
- **Ratepayer Affordability:** Identify programs that deliver measurable value to ratepayers, with a focus on maximizing energy savings, benefits per dollar spent, and bill relief.
- **Efficient Program Delivery:** Focus on optimizing resource acquisition and/or customer benefits as appropriate based on program segmentation, and minimizing *redundant*¹⁸² programs.
- **Equity:** Design programs to deliver to disadvantaged, underserved, and hard-to-reach communities (collectively referred to in this document as “equity criteria”).
- **Transparency:** Use standardized, data-driven methodologies across all PAs, including customer data sharing to support claimable EE results.
- **Timing:** Assessment should be completed in time for results to be incorporated into Application, True-Up Advice Letter, or MCAL cycles.

Additionally, BayREN agrees with the proposed sections of the Framework and has no objections, recommendations or edits for the Assessment Recommendations or the Selection/Transition of Lead PA. Further, BayREN generally agrees with the issues cited in Appendix A of the working group’s report that either need further development or clarification from the Commission.

¹⁸² BayREN recognizes there may be some level of strategic overlap that is acceptable based on a program’s profile.

2. Recommended Revisions

In the Statewide Assessment Framework, BayREN recommends revisions to the questions to be used as part of Section 1 so that the questions are parallel to each other and similar to the Resource Acquisition questions as appropriate. In particular, the questions for Section 1 should focus on four areas:

1. that the program is in the right segment,
2. that the program fills a need,
3. that the program is measurable in a manner required by the CPUC, and
4. that it would provide cost efficiencies to run a statewide program.

Proposed revisions to the questions in the tables for **Section 1** are shown by segment in the tables below.

Table 5.3 Proposed Revisions and BayREN Notes for Market Support Segment Questions

For Market Support ¹⁶ Programs	Yes/No	BayREN Notes
Is the program's primary objective to support the statewide market rather than deliver immediate resource savings?		This question is intended to make sure that the program should be in the Market Support segment. Given this, this should always be "YES"
Does the program target a statewide market failure or gap that cannot be addressed effectively by resource acquisition programs? (e.g., lack of supply chain readiness, emerging tech adoption, training/workforce?)		This question is intended to make sure that there is really a need for a separate market support (MS) program, rather than merging with an existing resource acquisition (RA) program. Given this, this should always be "YES"
Are there measurable market transformation support * indicators (market share, cost declines, codes/standards advancement consistent with the CPUC requirements for MS programs) that can be tracked and are consistent throughout the state?		This question is to ensure that you can provide measurements that will speak to the program's success. Given this, this should always be "YES"
Is there detailed evidence that statewide delivery would accelerate		This question should be similar to the RA question (shown here, with one change "cost efficiencies"). It

For Market Support ¹⁶ Programs	Yes/No	BayREN Notes
or amplify measurable market effects compared to local delivery? <u>Does implementing statewide delivery significantly improve cost efficiencies or enhance customer access compared to a local or regional delivery model?</u>		is not clear why MS programs would need to amplify. They just need to be able to be delivered in a way that saves ratepayer dollars or improves access. Given this, this should always be "YES"

¹⁶ Decision 21-05-031 at p.14 defines Market Support as "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."

* There is a different market transformation initiative funded by the CPUC. These programs are Market Support programs, as described in the footnote above. This language should be aligned with the Decision.

Table 5.4 Proposed Revisions and BayREN Notes for Equity Segment Questions

For Equity ¹⁷ Programs	Yes/No	BayREN Notes
Is the program's primary objective to improve access, affordability, or resilience for meeting the needs of equity criteria populations (<u>Disadvantaged Community (DAC)</u> , Hard-to-Reach, Underserved) statewide, rather than delivering energy savings or cost-effective benefits?		This question is intended to make sure that the program should be in the Equity segment. Given this, this should always be "YES"
Is the program reaching <u>or expected to reach</u> the intended equity criteria <u>targeted</u> populations?		This question is essentially redundant with the question above since Equity segment programs can reach a broad audience but need to focus on equity targeted customers. Given this, this should always be "YES"
Are incentives and program processes aligned with accessibility and ease of participation for equity criteria <u>targeted</u> participants?		Is this question about the program delivery model? While this question could stay, BayREN recommends moving or removing.
Does the program address statewide barriers (financial or geographic) that limit participation by equity criteria <u>targeted</u> communities?		This question should be similar to the RA Question (shown here, with one change in language tracked). Given this, this should always be "YES"
Is there a clear plan to engage trusted messengers (e.g. <u>community-based organizations</u> (CBOs), tribal organizations, local governments) across the entire state?		This question appears to be about the program delivery model. Move to that section.

For Equity ¹⁷ Programs	Yes/No	BayREN Notes
Is there detailed evidence that statewide delivery can create measurable improvements in equity criteria outcomes for the specific program, when compared to local-only delivery? <u>Are there measurable equity indicators (consistent with the CPUC requirements for equity programs that can be tracked and are consistent throughout the state?)</u>		This question seems to be combining two ideas...that the outcomes are measurable and some comparison between statewide and local. BayREN suggests splitting into this and the next question and making parallel to the MS questions. Given this, this should always be "YES"
Does implementing statewide delivery significantly improve cost-effectiveness <u>cost efficiencies</u> or enhance customer access compared to a local or regional delivery model?		This question should be similar to the RA Question (shown here, with one change in language tracked). Given this, this should always be "YES"

¹⁷ Decision 21-05-031 at p. 14-15 defines Equity as "Programs with a primary purpose of providing energy efficiency to hard-to-reach or underserved customers and disadvantaged communities in advancement of the Commission's Environmental and Social Justice (ESJ) Action Plan; Improving access to energy efficiency for ESJ communities, as defined in the ESJ Action Plan, 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.

Additionally, BayREN also recommends that all answers within the segment (Resource Acquisition (RA), Market Support (MS), Equity (EQ)) for **Section 1** should be answered "Yes" in order to progress to Section 2. Responding to any of these questions with a "No" would indicate that the assessment should not continue to Section 2.

For **Section 2** on Delivery Model and Risk Evaluation, BayREN notes that Per D.16-08-019 "some, but not all, downstream (at the customer level or via contractors or installers) approaches are also appropriate for statewide administration." The questions listed may be relevant to RA programs, but most do not appear to be relevant to MS and EQ programs. As such, BayREN is uncertain whether this section should be included when considering MS and EQ programs. Please refer to the table below and BayREN's notes for each of the questions.

1 *Table 5.5 Proposed Revisions and BayREN Notes for Section 2 Questions*

Question	Consideration	Yes/No	BayREN Notes
Does the program use a midstream delivery model?	Sales-only (midstream/upstream) vs. install-based (downstream/direct install) Midstream= Yes Downstream= No Upstream= Yes		Statewide programs are allowed to be downstream programs, as such, Yes/No here is fine and (while this may be a consideration) this should not be a criterion.
Is the model still aligned with CPUC policy?	E.g., does it still meet the intent of midstream?		Which CPUC policies? Are these for EQ and MS programs? Do you want to pull in the model-related issues (even though they aren't required), such as using trusted market actors for EQ programs?
Is downstream data collection or quality verification unnecessary for this program?	If yes, it may be feasible for statewide. Although, gathering downstream data for all participants is complex and burdensome in <u>statewide</u> SW offerings.		While it may be complex for some mid- or upstream programs, the current statewide HES California program does already collect downstream data (i.e., from customer sites). As such, Yes/No here is fine and (while this may be a consideration) this should not be a criterion.
Is the administrative burden on the lead PA proportionate to the value delivered?	Legal, regulatory, <u>quality assurance/quality control</u> QA/QC , EM&V risk, data sharing, etc.		

2 For **Section 3**. Strategic Fit, BayREN recommends the change shown in the table
 3 below:

1 *Table 5.6 Proposed Revisions for Section 3 Questions*

Question	Yes/No
Does the program align with the (or latest) <u>Lead PA's</u> Business Plan (e.g., decarbonization, equity, electrification)?	
Does the program align with the CPUC's policy objectives as stated in decision language or Public Utilities Code statute?	
Does the program avoid overlapping with or negatively impacting existing local delivery options?	

2 For **Section 4** on Performance and Accountability Assessment, BayREN notes that
3 several of the metrics appear to be specific to the Resource Acquisition segment, as
4 noted in the table below. Clarification should be provided that these questions are
5 intended to apply only to RA programs, or guidance should be provided as to how
6 to apply these questions to other types of programs.

7 *Table 5.7 Proposed Revisions for Section 4 Questions*

Metric	Assessment Notes	Yes/No
Is the program achieving program goals and metrics? (TSB, GWh, MW) (<u>only RA or other types of metrics?</u>)	Is it performing as expected?	Yes/No
Is the program contributing to the <u>Lead PA's</u> portfolio goals?	Is it advancing decarbonization, fuel substitution, etc.?	Yes/No
Is the program cost-effective (applies only to RA)?	Is it successfully delivering cost effective savings, or failing the <u>Total Resource Cost (TRC)</u> tests?	Yes/No
Is the program forecasting accurately? (<u>Applies only to RA?</u>)	Is the program accurately forecasting TSB, GWh, MW and budget?	Yes/No
Is the program demonstrating clear signs of growth and scalability?	Is it scaling or stalling?	Yes/No
Are there minimal barriers to participation or savings realization?	Market, tech, permitting, site-specific issues?	Yes/No
Have past corrective actions, if any, been successful in correcting program performance?	Have the actions been successful in correcting program performance?	Yes/No

- 1 BayREN provides recommended edits and notes for **Section 5** on Market Support
- 2 and Equity Assessment as shown in the table below.

3 *Table 5.8 Proposed Revisions and BayREN Notes for Section 5 Questions*

Question	Yes/No	BayREN Notes
Market Support – Focus on supporting long-term success of the market, enabling market viability and innovation		
Does statewide administration reduce market confusion and create consistent signals to <u>the targeted audience, e.g., manufacturers, distributors, and contractors and customers?</u>		It is possible that a very good future statewide program would be a statewide ME&O effort that targets customers (similar to what has been done in the past).
Are the risks of statewide delivery (e.g., uneven market maturity, inconsistent supply chains) outweighed by benefits of a local/regional approach? Can program risks (such as differing local needs or reliance on CBOs) be managed affordably and effectively at a statewide scale?		This question seems to compare two different things. As such, BayREN recommends having this question be parallel to the similar question under EQ (as written here).
Are there clear measurable indicators of long-term success of the energy efficiency market that can be tracked at a statewide level?		This appears to be the same question as asked in Section 1 (worded slightly differently). See Section 1, Q3. It could easily be deleted and not affect whether a program is statewide or local
Would statewide delivery meaningfully accelerate innovation or technology adoption compared to local implementation?		
Equity – Focuses on equity criteria population		
Would statewide delivery ensure consistent access and reduce inequities across service territories?		
Can program risks (such as differing local needs or reliance on CBOs) be managed affordably and effectively at a statewide scale?		
Are there equity specific outcomes that can be measured and reported consistently statewide?		BayREN proposes that a question like this be asked in Stage 1. As such, this question could be dropped

Question	Yes/No	BayREN Notes
Market Support – Focus on supporting long-term success of the market, enabling market viability and innovation		
Has or will the program demonstrate the ability to overcome participation barriers at scale?		
Would statewide delivery expand reach and scale and benefits in a way local delivery could not?		

Chapter 6: Segmentation and Sector Strategy

I. Overview

BayREN's proposed portfolio includes 10 regional programs and one statewide program, with four in the residential sector (including BayREN's statewide program), three in the cross-cutting sector, and two each in the commercial and public sectors, as shown in the diagram.

These programs are further divided with four in the equity segment, one resource acquisition program, one codes and standards (C&S) program, and five market support programs.

As discussed in Chapter 4, nearly 70% of BayREN's regional programs budget is proposed for the equity segment, reflecting BayREN's equity focus.

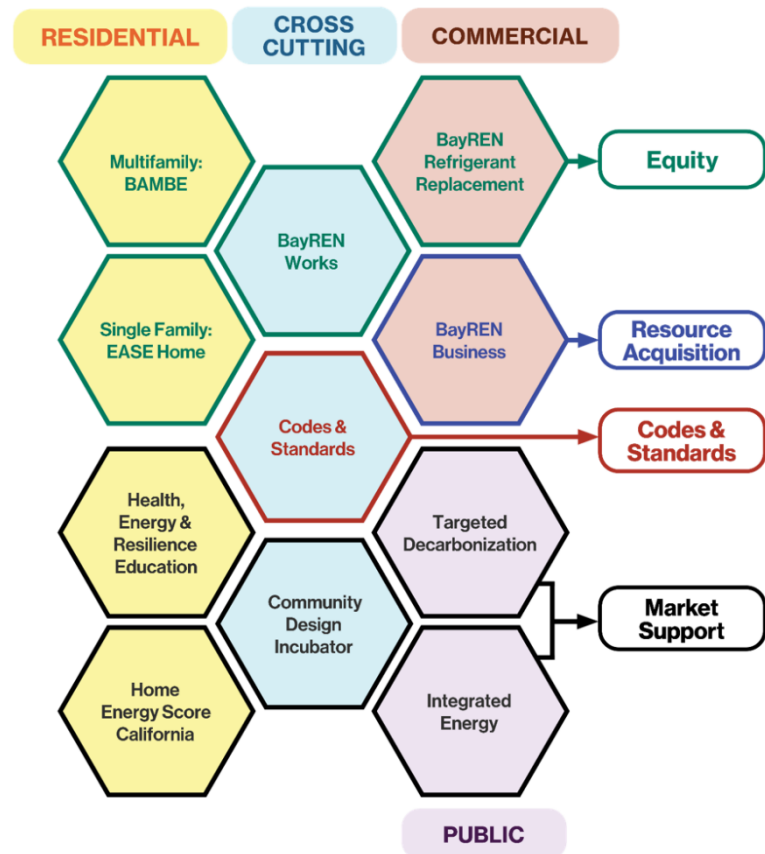


Figure 6.1 Proposed BayREN Programs by Segment and Sector

II. Portfolio Sector Strategy

This section provides brief descriptions of the high-level strategies and approaches used in each sector, including key target populations and end-uses.

1. Residential Sector

At the regional level, BayREN has three programs that operate in the residential sector: the single family program Efficiency And Sustainable Energy (EASE) Home which serves residential buildings with up to 4 units; the BayREN Multifamily Building Enhancements (BAMBE) program, which prioritizes multifamily properties with 5 to 50 units; and the Health, Energy, and Resilience Education (HERE) program, which educates overlooked stakeholders who influence residential market decisions. These programs focus on making energy efficiency and electrification upgrades understandable, accessible, and affordable for both single-family and multifamily households.

The EASE Home and BAMBE programs are both equity segment programs focused on helping those who face persistent barriers to upgrades. EASE Home provides direct-install, discounted home upgrades for households with an income of 120% of Area Median income or lower. BAMBE provides rebates to help cover a significant portion of the cost of installing energy efficiency and electrification measures (both in-unit and central/common area) for properties with 5 or more units. Starting in 2028, BAMBE will focus greater resources on small, below-market-rate properties that are critical housing for low-income residents and excluding large, market-rate properties from eligibility.

All three programs provide significant education and support. EASE Home recipients receive personalized support from Energy Advisors who provide site

1 assessments, tailored recommendations, and end-to-end project management,
2 including permitting and rebate assistance. In the BAMBE program, each enrolled
3 property is assigned a dedicated technical assistant to guide the process—from
4 pre-installation assessments and contractor recommendations to post-installation
5 verification and rebate processing. BayREN's HERE program educates real estate
6 professionals and lenders, with plans to expand the program to incorporate
7 additional overlooked stakeholders that influence home renovation and technology
8 decisions in existing homes, such as interior designers, architectural designers, and
9 architects so that they can influence market decisions toward healthy, energy-
10 efficient, and all-electric homes. Providing more tailored and personalized attention
11 helps to overcome a significant barrier to participating in energy programs.

12 BayREN also has a statewide program in the residential sector, Home Energy Score
13 (HES) California. This program delivers personalized audits, financial incentives, and
14 targeted outreach to make home energy performance more transparent and
15 actionable. With a \$250 incentive available to reduce cost barriers to receiving a
16 home energy assessment, participants receive a report prepared by a certified
17 assessor that helps them easily understand their home's current efficiency,
18 estimated energy consumption, energy costs, and greenhouse gas (GHG)
19 emissions. In addition, the report provides recommendations for energy and
20 electrification upgrades. To ensure these reports are available to all, HES California
21 will recruit, train, and support assessors in all parts of the state, intentionally
22 building on, rather than duplicating or competing with, delivery and communication
23 pathways already established by existing home energy businesses and programs.

2. Commercial Sector

BayREN's commercial programs—BayREN Business and the BayREN Refrigerant Replacement (BRRR) Program—focus on advancing energy affordability and equity for small and medium-sized businesses (SMB), particularly those located in disadvantaged communities (DAC) and low-income communities (LIC) or are considered hard-to-reach (HTR). BayREN Business provides no-cost energy assessments, incentives, and in-language technical support to help qualifying businesses implement high-impact measures such as HVAC, refrigeration, lighting, and water heating upgrades. Using a population-level Normalized Metered Energy Consumption (NMEC) approach, the program ties incentives to measured performance improvements based on Total System Benefits (TSB), ensuring real energy savings and emissions reductions.

The BRRR Program complements these efforts by accelerating the transition to low- and no-global warming potential refrigerants in the food and floral sectors, offering right-sized incentives and wraparound services including contractor referrals, technical assistance, and quality assurance. Both programs reduce greenhouse gas emissions, lower operating costs, test innovative and result-driven strategies, and promote best practices in energy efficiency and refrigerant management while supporting workforce training in emerging technologies.

3. Industrial Sector

BayREN does not have any programs in the industrial sector.

4. Agricultural Sector

BayREN does not have any programs in the agricultural sector.

5. Public Sector

BayREN's public sector initiatives focus on reducing barriers for local agencies to implement energy efficiency, decarbonization, and resilience projects^{183,184} through comprehensive technical assistance, planning, and demonstration efforts. The Integrated Energy Services (IES) program provides centralized support via its Energy Concierge service, which is an objective single-point-of-contact assistance program that helps agencies navigate complex and fragmented incentive and financing options to find the offerings best suited to their needs. The Energy Roadmapping service delivers customized plans based on no cost engineering technical assistance to reduce energy use, cut emissions, and enhance resilience at public buildings and Community Resilience Centers. Starting in 2028, these services will expand to include full application assistance for eligible programs and roadmap implementation support to address staff capacity challenges.

Complementing this, the Targeted Decarbonization Services (TDS) program addresses barriers to public building decarbonization by providing information about decarbonization technologies¹⁸⁵ and practical strategies for managing the higher upfront costs often associated with these types of equipment.¹⁸⁶ The program also accelerates building decarbonization by

¹⁸³ NREL, *Lessons Learned*.

¹⁸⁴ Louise Bedsworth et al., *Getting to Implementation: The Status of Local Climate Action in California* (Berkeley, CA: Center for Law, Energy, & the Environment / Institute for Local Government, 2023), https://www.law.berkeley.edu/wp-content/uploads/2023/10/Report_Getting_to_Implementation_Local_Climate_Action_Nov_2023.pdf.

¹⁸⁵ In a 2024 online survey, one in three local government facility staff said they are not familiar with building decarbonization technologies and half said they are somewhat familiar. See Dykman, BayREN 2024 Facility Training Survey.

¹⁸⁶ In a 2024 online survey, three in four local government finance staff said they are not familiar with energy-related financing mechanisms available to local governments. See Alexandra Dykman, *BayREN 2024 Finance Training Survey* (San Francisco: Bay Area Regional Energy Network, 2025).

1 providing technical assistance from planning through commissioning and gap
2 funding to develop showcase projects that model best practices, generate real-
3 world performance data, and create replicable case studies. Both programs
4 leverage localized outreach by BayREN member counties to engage public agencies
5 and promote participation, ensuring solutions are tailored to community needs
6 while advancing climate and equity goals.

7 6. Cross-Cutting Sector

8 BayREN has three programs that work across all sectors: the workforce, education
9 and training program, BayREN Works; the Codes & Standards (C&S) program; and
10 the proposed new Incubator for Community-Driven Initiatives program. All three of
11 these programs support and are informed by BayREN's programs in other sectors.
12 For example, the C&S program improves code compliance and encourages local
13 energy policies in all sectors, while also being informed by the realities that
14 BayREN's residential and public programs encounter in the field. The BayREN Works
15 program focuses on building the energy workforce pipeline, particularly in DACs
16 and LICs, and training local and minority contractors on clean energy technologies.
17 Workforce needs addressed by the program are also informed by other BayREN
18 programs. Finally, the Incubator for Community-Driven Initiatives is expected to
19 generate new approaches and ideas from both community-based organizations
20 (CBOs) and government agencies across sectors, with initiatives being connected to
21 relevant programs in each sector. By generating new ideas, supporting workforce
22 development, and improving local code compliance and energy policy adoption,
23 these cross-cutting programs support all sectors.

1 *Table 6.1 Regional Budget Distribution by Sector**

Budget	Residential	Commercial	Public	Cross-Cutting	EM&V	Portfolio Support	Total Budget
2028	\$21,374,188	\$10,255,491	\$2,724,754	\$6,274,782	\$1,786,450	\$2,245,590	\$44,661,255
2029	\$21,634,262	\$10,420,045	\$3,039,368	\$6,675,567	\$1,838,187	\$2,347,251	\$45,954,680
2030	\$21,811,192	\$11,740,284	\$2,869,408	\$6,874,390	\$1,901,271	\$2,335,229	\$47,531,774
2031	\$22,027,816	\$11,865,930	\$3,200,246	\$7,001,484	\$1,937,943	\$2,415,148	\$48,448,567
Total (4-Year)	\$86,847,458	\$44,281,750	\$11,833,776	\$26,826,223	\$7,463,851	\$9,343,218	\$186,596,276
2032	\$22,915,200	\$12,631,600	\$3,040,400	\$7,261,200	\$2,014,875	\$2,508,600	\$50,371,875
2033	\$23,092,600	\$12,682,100	\$3,368,400	\$7,455,100	\$2,050,004	\$2,601,900	\$51,250,104
2034	\$23,274,100	\$13,221,900	\$3,216,600	\$7,649,600	\$2,081,263	\$2,588,100	\$52,031,563
2035	\$23,461,400	\$13,270,100	\$3,541,500	\$7,855,000	\$2,116,917	\$2,678,000	\$52,922,917
Total (4-Year)	\$92,743,300	\$41,805,700	\$13,166,900	\$30,220,900	\$8,263,058	\$10,376,600	\$206,576,458
Cumulative Total (8-Year)	\$179,590,758	\$96,087,450	\$25,000,676	\$57,047,123	\$15,726,909	\$19,719,818	\$393,172,734

2 * Columns for the Industrial and Agricultural Sectors have been removed as BayREN does not serve those sectors.

III. Portfolio Segmentation Strategy

As described in Chapter 4, BayREN followed a zero-based budgeting approach to establishing the overall portfolio budget. This included consideration of both what is needed to support the state's goals for energy efficiency, GHG reductions, and equity within the Bay Area region, through achieving BayREN's goals of serving priority audiences, improving energy efficiency, reducing GHG emissions, increasing health and resilience benefits, and filling gaps and spurring innovation, and what is reasonably achievable given specific conditions in the Bay Area and BayREN's size and constraints.

BayREN reduced its administrative and marketing costs to improve the efficiency of our portfolio. At the same time, BayREN is proposing to increase incentives in order to serve more customers, especially within equity communities.

BayREN's distribution of budget among segments is further determined by CPUC guidance. In D.12-11-015 and again in D.21-05-031, the CPUC acknowledged that REN Portfolio Administrators have different considerations given the types or programs that they have been directed to offer. The foundational language from the CPUC regarding RENs informs the types of programs that BayREN seeks to provide and provides some direction to the distribution of budget among the segments.

Consistent with the REN criteria and portfolio goals (see Chapter 3), BayREN prioritizes HTR customers and communities facing persistent barriers to energy efficiency program participation. As a result, nearly 70% of BayREN's proposed regional programs budget continues to be devoted to the equity segment.

Of the remainder, approximately 4% is allocated to Codes and Standards, while the rest is split approximately evenly between the resource acquisition and market support segments. BayREN has a single resource acquisition program that serves small and medium businesses that either meet the HTR criteria or are located within DACs and LICs. The market support segment includes five programs that fill a variety of gaps in the public, residential, and cross-cutting sectors.

1. Resource Acquisition

The Bay Area Regional Energy Network Business Program is the sole resource acquisition and pay-for-performance offering within the BayREN portfolio. Its primary mission is to deliver cost-effective, verifiable energy savings while advancing equity objectives across the San Francisco Bay Area. By focusing on small- and medium-sized businesses, the program addresses a critical segment of the commercial market that faces persistent barriers to energy efficiency adoption.

The program serves all SMBs within DACs and LICs, as well as HTR SMBs throughout the Bay Area. BayREN Business targets SMBs with modest energy consumption—typically under 300,000 kWh annually or 50,000 therms of natural gas—as well as business owners that speak a language other than English; have 25 or fewer employees; operate in leased or rented spaces; or are owned, operated, or located on California Native Lands. Typical participants include restaurants, retail stores, beauty salons, and specialized sectors such as food service and floral businesses, where refrigeration and other energy-intensive equipment are common.

These businesses face persistent barriers to upgrading energy efficiency and reducing their energy costs, making them difficult and costly to serve. The barriers include limited access to capital for equipment upgrades, constrained decision-

1 maker time and capacity, and limited awareness of the economic benefits
2 associated with energy efficiency investments. Additionally, their relatively small
3 opportunities for savings, compared to large commercial or industrial sectors,
4 dissuade contractor engagement. In some communities, a lack of trust in utility or
5 government programs, stemming from prior negative experiences, further
6 hinders participation.¹⁸⁷

7 To overcome these barriers and achieve measurable energy savings, BayREN
8 Business employs three core strategies:

- 9 1. Maximize Peak Savings. The program prioritizes outreach and incentives
10 for energy-intensive businesses operating during peak hours—such as
11 grocery stores, restaurants, and retailers—where interventions can
12 deliver significant peak-period reductions.
- 13 2. Promote High TSB Measures. Incentive structures are designed to
14 encourage adoption of measures with substantial system benefits,
15 including hot water heat pumps, refrigeration upgrades, advanced
16 lighting and controls, and behavior-based interventions. Program success
17 is evaluated based on TSB performance, ensuring alignment with
18 statewide energy goals.
- 19 3. Provide Wrap-Around, In-Language Services. Recognizing the diversity of
20 SMBs, BayREN offers comprehensive, multilingual support through its
21 Building Performance Advisor. This concierge-style service assists with
22 enrollment, explains contractor proposals, and ensures quality assurance,
23 reducing complexity for business owners and fostering trust.

¹⁸⁷ Kubiak, “Overcoming Barriers to Small Commercial Energy Efficiency and Electrification.”

1 BayREN Business is measure-agnostic, offering technical assistance, contractor
2 referrals, and financial incentives for upgrades tailored to each business's needs.
3 Eligible measures include lighting improvements, refrigeration equipment, and
4 motor controllers, all designed to reduce energy use and lower operating costs. The
5 program leverages a population-level NMEC approach to verify savings, ensuring
6 transparency and accountability.

7 BayREN's Business Program exemplifies a targeted, equity-driven approach to
8 resource acquisition in the SMB sector. By addressing structural barriers,
9 prioritizing high-impact measures, and delivering culturally competent support, the
10 program not only achieves cost-effective energy savings but also strengthens
11 community trust and participation. This strategy works to advance California's clean
12 energy goals while ensuring that small businesses—often overlooked in traditional
13 efficiency programs—receive the support they need to thrive. Moreover, it
14 exemplifies the type of program envisioned by the Commission when developing
15 the REN criteria.

16 2. Market Support

17 BayREN has four regional market support programs (IES, TDS, HERE, and the
18 Incubator for Community-Designed Initiatives, as well as one statewide program
19 (HES California). These programs are in public, residential, and cross-cutting sectors
20 and support the long-term success of the energy efficiency market by working
21 towards the Commission's five sub-objectives for the segment.

A. MARKET SUPPORT SEGMENT SUB-OBJECTIVES

Sub-Objective #1: Demand: build, enable, and maintain demand for energy efficient products and services in all sectors and industries to ensure interest in, knowledge of benefits of, or awareness of how to obtain energy efficiency products and/or services. [activity example: educating customers]¹⁸⁸

In order to build the market for energy efficient products and services, customers need to be aware of them and the advantages they can provide, so that they will choose to incorporate these products into their building projects. BayREN's approach begins with targeted education and awareness-building to increase market demand. Through the IES program, public agencies receive comprehensive guidance on energy efficiency opportunities for public buildings and Community Resilience Centers. The Energy Concierge service provides agencies with up-to-date information on available programs and funding options, while the Energy Roadmapping service delivers detailed analyses of projected energy and cost savings, as well as greenhouse gas emissions benefits, for recommended measures. These services enable agencies to develop informed, long-term energy plans and increase participation in efficiency programs, indirectly driving demand for energy-efficient technologies.

Similarly, the statewide HES California program enhances energy literacy among homeowners by providing clear, unbiased information about home energy performance and actionable steps for improvement. The California Energy Commission's draft 2025 Building Energy Action Plan specifically calls out the need to "empower homeowners and building owners with decision-making resources"¹⁸⁹ as one of its recommendations for the most impactful and public-facing

¹⁸⁸ CPUC D.23-06-055, 58.

¹⁸⁹ California Energy Commission, *Building Energy Action Plan*, 13.

opportunities to move towards large-scale building decarbonization in the state. By promoting the value of home energy labels and offering rebates to reduce cost barriers, HES California builds consumer demand for energy upgrades while simultaneously expanding the supply of qualified assessors through targeted workforce training.

Education efforts extend to the professional workforce to ensure that market actors are equipped to implement and maintain advanced technologies. In the public sector, BayREN's TDS program delivers no cost training on decarbonization technologies, operations, and financing strategies for public agency staff. This not only helps ensure that the equipment achieves expected efficiencies and GHG reductions, but also increases demand by ensuring that local government staff who influence equipment purchases will support the acquisition of efficient decarbonization equipment.

The HERE program builds demand by educating market actors who influence decisions about the built environment and but are often overlooked. The program addresses a critical gap in the real estate sector by training real estate professionals and appraisers to understand energy efficiency and electrification measures so that these are valued properly in the market. These professionals also often influence the building renovation decisions made when a property is sold or rented. The program will be expanding to address other overlooked market actors who also affect these decisions, such as interior designers, architectural designers and architects.

BayREN also builds demand and accelerates market transformation by demonstrating the feasibility and cost-effectiveness of integrated solutions. Through the Decarbonization Showcase service, the TDS program pilots public

building improvement projects that combine energy efficiency, electrification, demand response, and renewable energy strategies. These projects generate performance data and case studies that inform best practices and support replication across the region.

Sub-Objective #2: Supply: build, enable, and maintain supply chains to increase the capability and motivation of market actors to supply energy efficient products and/or services, and to increase the ability, capability, and motivation of market actors to perform/ensure quality installations that optimize energy efficiency savings. [activity example: training contractors]¹⁹⁰

Market support requires not only building demand, but also ensuring that the supply exists to meet the increased demand. BayREN focuses its efforts towards Sub-Objective #2 on the supply of services and the ability and motivation of market actors to carry out quality work that will result in energy efficiency savings. This is done not only by BayREN's Market Support programs but also by other programs in the portfolio.

One of the goals of the statewide HES California program is to establish a statewide network of qualified HES Assessors. The program will build the network by recruiting and training individual and businesses who provide related services, such as home inspections or home energy audits, to also provide HES reports. In this way, the program will build on already-established delivery and communication pathways in order to increase the availability of HES reports throughout the state.

Two of BayREN's equity segment programs also have components that contribute to Market Support Sub-Objective #2. BayREN Works is a Workforce, Education, & Training program that trains and supports both disadvantaged youth to enter the energy sector and contractors, with a focus on small, local, minority, and women

¹⁹⁰ CPUC D.23-06-055, 58.

contractors, to become familiar with the installation of decarbonization equipment such as heat pumps. BayREN's Refrigerant program supports HTR SMBs and SMBs located in low-income and disadvantaged communities. The program has identified a need to prepare refrigeration contractors for upcoming regulations on low global warming potential (GWP) refrigerants and therefore plans to partner with the North American Sustainable Refrigerant Council to sponsor workshops and training, collaborate with local unions, and connect contractors with community college graduates. Together, these two programs will increase the number of youth entering the energy sector as well as the number of contractors trained on decarbonization technologies and low-GWP refrigerants, while also centering equity outcomes.

The C&S program also supports Sub-Objective #2 by providing training tailored for the compliance field to ensure quality installation of equipment and construction. BayREN's program leverages local relationships with building departments and enforcement officials to inform fit-for-purpose programming in a field known to need increased education and resourcing since 2015.¹⁹¹

Sub-Objective #3: Partnerships: build, enable, and maintain partnerships with consumers, governments, advocates, contractors, suppliers, manufacturers, community-based organizations and/or other entities to obtain delivery and/or funding efficiencies for energy efficiency products and/or services and added value for partners. [activity example: building partnerships]¹⁹²

As a REN comprised of ten agencies, partnerships are integral to how BayREN functions, not only for the partnerships between member agencies but also

¹⁹¹ USGBC California and USGBC, *Green Codes for California: A progress report and recommendations from the LEED & CALGreen User Group* (Washington, DC: USGBC, 2015), <https://www.usgbc.org/resources/green-codes-california-progress-report-and-recommendations-leed-calgreen-user-group>.

¹⁹² CPUC D.23-06-055, 58.

1 because of the relationships those agencies can leverage. These include existing
2 relationships with state and regional agencies, utilities, CCAs, local government
3 agencies, and community-based organizations. County members also work directly
4 with residents, businesses, and local governments within their counties, gathering
5 information on local needs and goals and providing information on BayREN and
6 other energy-related resources.

7 The proposed new Incubator for Community-Designed Initiatives is a market
8 support program which will contribute significantly to Sub-Objective 3. This
9 program will bring together community-based organizations and local governments
10 in annual Collaboratives organized around a theme related to energy, such as
11 improving health and resilience outcomes through energy improvements.

12 Members of each Collaborative will meet regularly, from initial training through
13 proposal development and potentially implementation, with a secondary goal of
14 the program being to build relationships between participants and with BayREN.

15 By leveraging the strengths of its ten member agencies and intentionally cultivating
16 relationships with local governments, community-based organizations, and market
17 actors, BayREN actively builds and sustains a broad partnership network, creating
18 pathways for more efficient delivery of energy-efficiency services and greater
19 shared value. With the launch of the Incubator for Community-Designed Initiatives,
20 BayREN will further advance this objective by enabling deeper collaboration,
21 supporting joint problem-solving, and fostering new partnerships that will also test
22 innovative solutions and help fill gaps across the region.

Sub-Objective #4: Innovation and Accessibility: build, enable, and maintain innovation and accessibility in technologies, approaches, and services development to increase value, decrease costs, increase energy efficiency, and/or increase scale of and/or access to emerging or existing energy efficient products and/or services. [activity example: moving beneficial technologies towards greater cost-effectiveness or declining costs.]¹⁹³

BayREN's portfolio supports this market support sub-objective through many of its programs across all segments. The new Incubator for Community-Designed Initiatives is directly aimed at this sub-objective by promoting not only innovation, but innovation growing out of detailed knowledge of community conditions. The trial projects tested by this program will be developed by community-based organizations and local government agencies and will improve access to energy efficient and electrification products and services for their communities, especially including HTR and underserved customers. Having annual events to share out the results of the trial projects will allow for both scaling and further innovation.

The Targeted Decarbonization Services Program builds innovation to increase access to emerging or existing energy efficiency products and services by showing how these can be used in real-world public sector buildings and sharing the outcomes. In this way, the program provides replicable models and lessons learned to encourage adoption throughout the region.

As the first statewide program to be offered by a Portfolio Administrator that is not an investor-owned utility (IOU) and based on years of successful operation in the Bay Area, the HES California program is an example of one way BayREN has successfully built, enabled, and maintained innovation for energy efficiency services. Since 2018, BayREN has delivered over 30,000 Home Energy Score reports,

¹⁹³ CPUC D.23-06-055, 58.

1 representing approximately 1.7% of the Bay Area single family housing stock. The
2 program has innovated in other ways as well, such as by developing a new
3 electrification checklist which is now nationally recognized and which has
4 influenced the Department of Energy to consider how they can include
5 electrification. In 2025, 100% of the 4,337 reports completed included the
6 electrification checklist, educating residents and driving the region towards market
7 adoption of decarbonizing buildings.

8 Other programs in BayREN's portfolio, while not in the market support segment,
9 also support this sub-objective. For example, the multifamily BAMBE program plans
10 to allocate a portion of its incentive budget to testing advanced decarbonization
11 technologies such as combination heat pump systems to create real-world test
12 cases and encourage broader adoption. Additionally, BayREN's Refrigerant
13 Replacement program is incentivizing systems using natural refrigerants and
14 preparing trials for solid refrigerant technologies, including partnering with CalNext
15 and other stakeholders to explore scalability and real-world performance.

16 Through community-driven program design, testing of scalable approaches, and
17 real world demonstrations of emerging technologies, BayREN actively builds and
18 sustains innovation and accessibility that lower barriers, reduce costs, and expand
19 the reach of energy efficient and electrification solutions, especially for
20 underserved communities.

Sub-Objective #5: Access to Capital: build, enable, and maintain greater, broader, and/or more equitable access to capital and program coordination to increase affordability of and investment in energy efficient projects, products, or services. [activity example: financing.]¹⁹⁴

BayREN's Targeted Decarbonization Services program includes a focus on assisting local governments, special districts, and school districts to be able to afford energy efficient and electric equipment. BayREN is working with agencies in the region to document and identify gaps related to financing of this equipment, as well as approaches to filling those gaps. Some approaches currently being explored are bridge financing, low-interest loans, and leveraging non-ratepayer funds. This work will continue, and the program will test and implement appropriate solutions.

3. Equity

A. STRATEGIES AND ACTIVITIES FOR ACHIEVING GOALS CONSISTENT WITH COMMISSION OBJECTIVES

The Commission has defined the objective of equity segment programs as follows:

Equity Segment Objective: For hard-to-reach, disadvantaged, and/or underserved communities ...:

Address disparities in access to energy efficiency programs;¹⁹⁵

Promote resilience, health, comfort, safety, energy affordability,^[FN 56] and/or energy savings;¹⁹⁶

¹⁹⁴ CPUC D.23-06-055, 59.

¹⁹⁵ CPUC D.23-06-055, 57.

¹⁹⁶ CPUC D.23-06-055 Footnote 56 at 57 (stating, "Energy 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").

1 Reduce energy-related greenhouse gas and criteria pollutant emissions;¹⁹⁷
2 and

3 Provide workforce opportunities.¹⁹⁸

4 BayREN’s equity segment programs, and most of its proposed portfolio budget,
5 work to achieve these objectives. Equity segment programs serve the residential
6 and commercial sectors, as well as the cross-cutting workforce education and
7 training program, and each reflects the specific conditions and needs of that sector
8 in the Bay Area. In addition, BayREN’s programs outside of the equity segment also
9 contain an equity focus or element.

10 **Addressing Disparities in Access**

11 In the residential sector, BayREN’s residential programs address disparities in
12 access by targeting households and properties that are underserved by traditional
13 energy efficiency offerings. The single family EASE Home program, launched in late
14 June 2025, was specifically designed to address the top two barriers facing the
15 equity segment: minimizing upfront costs and streamlining services for residents.¹⁹⁹
16 Multifamily strategies prioritize small properties that often lack resources to
17 navigate eligibility requirements and face split-incentive challenges, providing
18 technical assistance and incentives to support upgrades. For both EASE and BAMBE

¹⁹⁷ CPUC D.23-06-055 Footnote 57 at 57 (stating, “The term ‘criteria pollutant’ refers to: ground-level ozone, particulate matter, carbon monoxide, lead, sulfur dioxide, and nitrogen dioxide. See the following link: <https://www.epa.gov/criteria-air-pollutants>”).

¹⁹⁸ CPUC D.23-06-055 Footnote 58 at 58 (stating, “The term ‘workforce opportunities’ includes, but is not limited to, work opportunities in the energy efficiency supply chain and with companies/non-profits that deliver energy efficiency services, as well as the workers who implement the work within equity segment programs”).

¹⁹⁹ Determined by an extensive stakeholder engagement process in Q1, 2024, including a household survey to over 1,300 single-family residents in the Bay Area. For survey findings, see Grounded Research, CivicMakers, ILLUME Advising, *Single Family Moderate Income Report*.

1 programs, BayREN allocates funds for necessary repairs, leverages trusted local
2 government channels for outreach, and provides in-language support through
3 partnerships with community organizations and ethnic media, delivering
4 measurable energy and non-energy benefits.

5 In the commercial sector, the BRRR Program advances equity by prioritizing small-
6 and medium-sized food and floral businesses, many located in DACs or LICs. These
7 businesses rely on outdated refrigeration systems that use high-GWP refrigerants
8 and operate inefficiently, yet face barriers such as high upfront costs, limited
9 contractor access, and low awareness of incentives. BRRR addresses these
10 disparities through local government-based outreach, multilingual materials, and
11 partnerships with community-based organizations. The program offers no- or low-
12 cost refrigerant replacement and incentives for essential repairs and energy
13 efficiency measures, empowering businesses to adopt cleaner technologies without
14 financial strain. The BayREN Business Program, although in the resource acquisition
15 segment, also assists in addressing disparities in access by serving HTR SMBs as
16 well as SMBs in DACs and LICs, businesses who often find it difficult to participate in
17 energy programs.

18 **Promote Resilience, Health, Comfort, Safety, Energy Affordability, and/or Energy** 19 **Savings**

20 BayREN's equity programs promote resilience, health, comfort, energy affordability,
21 and/or energy savings. In the residential sector, our programs deliver upgrades
22 such as attic insulation, air sealing, duct replacement, and high-efficiency
23 appliances, all of which improve comfort, indoor air quality, and resilience.
24 Multifamily upgrades often pair electrification measures with envelope
25 improvements to prevent bill increases and enhance thermal comfort. Similarly,

1 BRRR promotes resilience and affordability by replacing outdated refrigeration
2 systems with efficient, low-GWP alternatives, reducing energy use and maintenance
3 costs while ensuring consistent temperatures during peak demand periods. These
4 improvements help prevent product spoilage and support food security in
5 communities that often lack access to fresh food.²⁰⁰

6 **Reduce Energy-Related Greenhouse Gas and Criteria Pollutant Emissions**

7 At the same time, BayREN's equity programs are designed to reduce greenhouse
8 gas and criteria pollutant emissions by deploying technologies that reduce both
9 direct and indirect emissions. Residential programs incorporate electrification and
10 high-efficiency measures that lower fossil fuel use, while BRRR eliminates high-GWP
11 refrigerants and optimizes refrigeration systems to reduce leaks and energy
12 consumption. These actions mitigate emissions of greenhouse gases and criteria
13 pollutants such as NO_x and PM_{2.5},²⁰¹ advancing statewide decarbonization and
14 clean air objectives.

15 **Provide Workforce Opportunities**

16 BayREN Works recruits disadvantaged youth and provides them with an hourly
17 living wage. Their employment includes training, performing in-person greenhouse
18 calls in the summer, and fall externships with energy and climate-focused
19 organizations, creating pathways to long-term economic mobility. Participants
20 receive professional development and hands-on experience in their local
21 communities. BayREN Works also trains and mentors qualified minority contractors

²⁰⁰ Food Desert Elimination Act of 2024, SB 1419 (Rubio), 2023-2024 Reg. Sess. (Enrolled September 5, 2024). Senate Bill 1419 defines a food desert as follows: "A food desert as determined by the Economic Research Service within the United States Department of Agriculture."

²⁰¹ Nitrogen oxides and particulate matter with a diameter of 2.5 micrometers or smaller.

new to clean energy technologies, such as heat pump water heaters and heat pump HVAC, with hands-on training and shadowing opportunities to complete their first electrification installations. BayREN also actively recruits minority-, women-, and disadvantaged-owned businesses as subcontractors and participates in the Bay Area's High-Roads Training Partnership for decarbonization contractors. These strategies build a pipeline of skilled workers and ensure that underrepresented groups benefit from the clean energy transition.

B. BAYREN'S RECOMMENDED MODIFICATIONS TO CURRENT DEFINITIONS OF EQUITY SUBCATEGORIES

The Commission has long acknowledged both the need and the priority of serving ratepayers that are HTR and are underserved by programs. The current definition, however, excludes large swaths of populations that face significant barriers to program participation. In D.23-06-055, the Commission explained that the purpose of the equity segment within the Energy Efficiency portfolio segmentation framework is to provide programs to HTR or underserved customers and disadvantaged communities in advancement of the ESJ Action Plan. The objectives of the equity segment rely on three distinct, but related, customer criteria:

- Hard-to-Reach – a barrier-based test incorporating a geographic criterion and additional criteria such as income qualification (California Alternative Rates for Energy (CARE), Energy Savings Assistance (ESA), or Family Electric Rate Assistance (FERA)), housing type (multi-family and mobile home tenants), language, and split incentive conditions.²⁰²

²⁰² CPUC D.23-06-055, Conclusion of Law 33.

- Disadvantaged communities – a subset criteria of HTR geographically identified pursuant to Health and Safety Code Section 39711. (D.23-06-055 at 50.)
- Underserved customers – defined by statute as members of an underserved community pursuant to Public Utilities Code Section 1601(e).²⁰³

Additionally, the Commission noted that PAs could propose to include additional groups in the definition of underserved customers by including the proposals, with relevant data, in annual reports.²⁰⁴

In this Business Plan Application, BayREN recommends adding individuals with Access and Functional Needs (AFN), as defined in Government Code Section 8593.3(f)(1), to the definition of HTR. This segment of the population encounters barriers to program participation and consideration of this has been identified as a priority in Version 2.0 of the CPUC Environmental & Social Justice Action Plan (ESJ Action Plan).²⁰⁵ More information is provided on this recommendation in Chapter 11.

BayREN also recommends changes to the HTR definition for the multi-family sector, as set forth in the motion filed on January 18, 2024 in the previous Energy Efficiency Rulemaking (R.13-11-005), although those items are not included in this application as they are being addressed on a separate track within the new Energy Efficiency Rulemaking (R.25-04-010).

²⁰³ CPUC D.23-06-055, 45-48.

²⁰⁴ CPUC D.23-06-055, Conclusion of Law 32. BayREN included such a proposal in its 2024 Annual Report.

²⁰⁵ CPUC ESJ Action Plan 2.0, 4.

C. SECTORS SERVED AND FORECASTS

The programs in BayREN's equity segment serve the residential and commercial sectors, as well as the cross-cutting workforce education and training program. During the 4-year business plan period, BayREN forecasts serving 10,000 single family homes in the equity segment.

4. Codes & Standards

BayREN's C&S program focuses on Bay Area local governments and supports all four of the purposes defined by the Commission for programs in this segment:

1. Influencing standards and code-setting bodies (such as the CEC) to strengthen energy efficiency regulations;²⁰⁶
2. Improving compliance with existing codes and standards;²⁰⁷
3. Assisting local governments to develop ordinances that exceed statewide minimum requirements;²⁰⁸ and
4. Coordinating with the other programs and entities to support the state's policy goals.²⁰⁹

A. INFLUENCING STANDARDS AND CODE-SETTING BODIES (SUCH AS THE CEC) TO STRENGTHEN ENERGY EFFICIENCY REGULATIONS

Although BayREN does not advocate for specific new Energy Code provisions, the C&S program follows code development discussions and acts as a bridge between local governments and the CEC, both for code development and code implementation. The program supplements the outreach of the Codes and

²⁰⁶ CPUC D.23-06-055, 13.

²⁰⁷ CPUC D.23-06-055, 13.

²⁰⁸ CPUC D.23-06-055, 14.

²⁰⁹ CPUC D.23-06-055, 14.

Standards Enhancement (CASE) Team by informing Bay Area local governments about key proposed changes, workshops, and opportunities to comment. Program staff also meet with staff from the CEC monthly and share feedback from local governments directly with agency staff. As appropriate, the program also provides formal comments to the Commission based on the program's work with Bay Area building departments. In this way, BayREN works to strengthen energy efficiency regulations by improving their enforceability and communicating the reasons behind the regulations to those who are charged with enforcing them.

B. IMPROVING COMPLIANCE WITH EXISTING CODES AND STANDARDS

The program improves code compliance by supporting building department staff with training, tools, and resources. BayREN's trainings and resources are developed based on gaps identified by local staff and training instructors. The program currently serves an average of approximately 800 attendees at roughly 30 trainings per year. Tools and resources include applicant-facing permit guides that building department staff can hand out at the counter for common projects, and more detailed staff-supporting resources such as the heat pump water heater technical assistance guide and the electrical load estimator. This work helps ensure that the savings anticipated by the energy code are realized when projects are built on the ground.

C. ASSISTING LOCAL GOVERNMENTS TO DEVELOP ORDINANCES THAT EXCEED STATEWIDE MINIMUM REQUIREMENTS

The program also supports local government sustainability staff in developing and implementing local energy policies that exceed statewide minimum requirements, such as reach codes. BayREN provides introductory information about reach code

development and processes on our website,²¹⁰ holds bi-monthly Reach Code and Policy Working Group calls for local government staff, and presents quarterly Regional Forums on topics that help local governments as they consider potential policies and approaches to reduce energy use and greenhouse gas emissions. The program also includes responsive trials and tools as local government needs are identified, such as the Existing Building Study, a publicly accessible digital dashboard to provide jurisdictions with estimated energy use and greenhouse gas emissions used for energy policies and planning.²¹¹

D. COORDINATING WITH THE OTHER PROGRAMS AND ENTITIES TO SUPPORT THE STATE'S POLICY GOALS

In all of this work, BayREN coordinates and partners with others working in this space, including the Statewide IOU Codes & Standards Program, local CCAs, and organizations such as the Building Decarbonization Coalition. C&S staff meet regularly with these other organizations to share information, discuss needs, develop joint resources,²¹² and coordinate messaging.

IV. Conclusion

In this application, BayREN is proposing programs in the residential, commercial, public and cross-cutting sectors that are designed to address the specific needs of the Bay Area. Each of these programs, as shown in the diagram at the start of this chapter, are also within a defined segment (resource acquisition, market support,

²¹⁰ "How to Adopt a Reach Code," Bay Area Regional Energy Network, n.d., <https://www.bayren.org/energy-policies-reach-codes/how-adopt-reach-code>.

²¹¹ BayREN, *2024 Annual Report*.

²¹² For example, BayREN C&S developed two trainings together with Energy Code Ace and two in partnership with Silicon Valley Clean Energy; BayREN's Heat Pump Water Heater Technical Assistance Sheet is based in part on work done together with TECH Clean California; and BayREN developed and produced a joint training series on reach codes together with the Statewide IOU Reach Code team.

1 equity, and codes and standards) and designed to meet the objectives of that
2 segment. Taken together, BayREN's proposed portfolio provides a comprehensive
3 set of programs designed to support the state's goals for energy efficiency,
4 greenhouse gas reductions, and equity within the Bay Area region, through
5 achieving BayREN's goals of serving priority audiences, improving energy efficiency,
6 reducing GHG emissions, increasing health and resilience benefits, and filling gaps
7 and spurring innovation, and what is reasonably achievable given specific
8 conditions in the Bay Area and BayREN's size and constraints.

Chapter 7: Portfolio Coordination

I. Overview

BayREN coordinates both internally and externally. Internal coordination ensures that the portfolio functions as a cohesive and complementary set of offerings. Coordination is embedded in BayREN's governance, program design, and implementation practices. External coordination extends across BayREN programs to include other Portfolio Administrators and initiatives such as market transformation and the Energy Savings Assistance (ESA) program. In addition, BayREN coordinates with Community Choice Aggregators (CCAs), regional and state agencies, and other stakeholders in the energy and climate space.

II. Coordination within BayREN

Given the relatively limited number of BayREN programs and the intentional differentiation of their target markets, internal coordination focuses on portfolio cohesion, strategic alignment, and consistent execution, rather than managing duplicative measures or competing customer segments.

BayREN employs structured governance, shared performance monitoring, and regular cross-program communication to ensure programs are mutually reinforcing, responsive to local needs, and aligned with portfolio-level goals related to energy efficiency, public health, and community resilience. Coordination also occurs organically because some BayREN staff work on multiple programs, including program leads.

1. Sector- and Segment-Specific Coordination

BayREN coordinates internally across sectors and segments through a layered governance and communication structure involving the following components.

- **Portfolio-level coordination**, which includes:
 - Monthly Coordinating Circle portfolio-level meetings. These monthly meetings include all BayREN program leads and agency leads. These meetings provide a forum to review performance, discuss potential opportunities, review and approve governance amendments and budgets, and ensure consistency with BayREN's mission and regional priorities.
 - Monthly meetings of all BayREN program leads, which are used to identify cross-program opportunities, share challenges and best practices, and coordinate on regulatory, reporting, and administrative requirements.
 - Bi-monthly meetings of BayREN county leads and regional staff to discuss efforts at each county that could potentially be leveraged to further BayREN and CPUC objectives and to coordinate and share best practices around county-level outreach.
- **Centralized regional resources and reporting**, including an internal dashboard with metrics for all programs that is available to all county, program, and regional BayREN staff, a single website for all BayREN programs, and coordinated marketing and outreach. BayREN holds monthly Communications and Outreach Office Hours available for any program leads and county staff to drop in and discuss any projects or details with BayREN's regional Communications Coordinator. In addition, reporting for all BayREN

programs is done by a single third party, creating economies of scale in program management by sharing program management templates, data collection, and reporting strategies across all programs.

- **Program-level coordination**, including monthly management meetings for each program. These meetings often include staff supporting multiple programs, enabling organic identification of synergies, shared challenges, and operational efficiencies across sectors and segments.

Through these mechanisms, BayREN ensures coordinated sector- and segment-specific implementation to support portfolio-wide objectives rather than operating in silos.

2. Program-Specific Coordination

In addition to the portfolio-level and cross-program coordination described above, each program's coordination across the sectors and segments is discussed below.

A. SECTOR-LEVEL COORDINATION

Residential sector: BayREN offers three regional programs in the residential sector. The multifamily and single-family programs closely coordinate on projects at 2–4-unit properties to determine best fit and eligibility. In general, if a 2–4-unit property has a central system, it can be served by the multifamily program. The Health, Energy, and Resilience Education (HERE) program focuses on educating overlooked market actors such as real estate professionals about single family home energy features and their value. The HERE program is also informed by the single-family Efficiency and Sustainable Energy (EASE) Home program.

The residential sector also coordinates closely with the cross-cutting workforce program, BayREN Works. The youth development portion of the program conducts

1 home visits that benefit single family and multifamily residents, and the contractor
2 mentorship program trains contractors working on residential heat pump
3 replacements. As a result, the program leads for these programs work together
4 closely.

5 The statewide Home Energy Score (HES) California program, together with the HERE
6 program, grew out of BayREN's previous Green Labeling program. As a result, the
7 HERE and HES California programs have strong ties. For example, the HERE
8 program educates real estate professionals and others about the value of Home
9 Energy Score reports.

10 **Commercial sector:** BayREN offers two complementary programs in the
11 commercial sector: the BayREN Business program and the BayREN Refrigerant
12 Replacement (BRRR) program. Both programs serve the same target hard-to-reach
13 (HTR) small medium businesses (SMB) audience. Because the Business program is a
14 Normalized Metered Energy Consumption (NMEC) program focused on achieving
15 measurable savings while the BRRR program focuses on refrigerants, there is no
16 overlap in terms of the measures offered, and some businesses may be able to
17 leverage both programs resulting in more energy savings and greenhouse gas
18 reductions. Close coordination is ensured by the fact that both programs are run by
19 staff at the San Francisco Department of the Environment, who coordinate and
20 share best practices during weekly internal meetings.

21 **Public sector:** The two public sector programs offered by BayREN serve the same
22 customer groups and coordinate closely through cross-referrals. For example,
23 participants in the Targeted Decarbonization Services (TDS) program can be
24 referred to the Integrated Energy Services (IES) Energy Concierge service for
25 assistance in identifying and applying for applicable programs for the specific

1 facility project. The IES Energy Concierge service can also refer participants to TDS
2 offerings, as applicable. Additionally, these programs coordinate with each other
3 and the Codes and Standards (C&S) program on outreach, as all three programs
4 have local government staff as their primary audience.

5 B. SEGMENT-SPECIFIC COORDINATION

6 **Market Support:** BayREN's five market support programs include the two public
7 sector programs (IES and TDS), two residential programs (HERE and HES California),
8 and the proposed new cross-cutting Incubator program. In addition to coordination
9 at the portfolio level as described above, these programs also work together on
10 shared messaging and marketing through the monthly development of regional
11 newsletters and outreach toolkits. There is further coordination within this segment
12 among programs within the same sector, as described above.

13 **Equity:** BayREN's four equity programs also coordinate at the portfolio level. In
14 addition, the single family and multifamily programs work together as described
15 above for the residential sector. Both residential programs and the commercial
16 sector BRRR program will be tapping into and coordinating with the expanded
17 BayREN Works program, particularly in relation with contractor engagement and
18 training. In addition, the youth development program directly supports both single
19 family and multifamily residents and these are designed to cross-walk with the
20 programs serving those audiences.

21 **Resource Acquisition and Codes & Standards:** BayREN offers one Resource
22 Acquisition program and one C&S program. As a result, no internal segment-
23 specific coordination is needed for these segments, but coordination with other PAs
24 is described in the next section.

C. PROGRAM-SPECIFIC COORDINATION

BayREN programs coordinate through regular cross-program meetings, shared implementation planning, and aligned outreach and messaging. Program staff often support multiple programs, enabling consistent communication, efficient handoffs, and identification of opportunities for joint outreach and technical assistance.

Several programs play cross-cutting roles across the portfolio. The C&S program supports other BayREN offerings by aligning local government engagement, training, and policy development with program needs, such as permitting, all in furtherance of increasing energy code compliance. The program also works to ensure that all measures are installed to code so that all anticipated energy savings will be realized. The Workforce, Education, and Training program similarly supports multiple sectors by generating program leads, addressing workforce gaps, and strengthening delivery capacity across BayREN offerings. BayREN's new Incubator for Community-Designed Initiatives will provide local governments and Community-Based Organizations (CBOs) with the opportunity to design, propose, and potentially implement their own initiatives that align with CPUC and BayREN objectives, in coordination with related programs.

Through this structured program-to-program coordination, BayREN ensures its portfolio functions as an integrated system, improving customer navigation, supporting deeper projects, and maximizing the effectiveness of ratepayer-funded investments.

III. Coordination with Other Program Administrators

1. Coordination Participants

BayREN coordinates with other PAs across the state, through statewide collaboratives and meetings, and by following collaboratively-created protocol at a regional level. BayREN's region is fully within Pacific Gas and Electric Company's (PG&E's) service territory, and BayREN works closely with PG&E at both the program and portfolio levels. No other RENs overlap with BayREN's region. The region includes seven CCAs, six of which administer EE ratepayer programs under either the Elect-to-Administer (ETA) or Apply-to-Administer (ATA) process:

1. MCE (ATA)
2. Ava (ETA)
3. Clean Power SF (ETA)
4. Peninsula Clean Energy (ETA applying for ATA²¹³)
5. Sonoma Clean Power (ETA)
6. San Jose Clean Energy (ETA)
7. Silicon Valley Clean Energy (neither ETA nor ATA)

BayREN individually met with all geographically overlapping PAs that are developing a 2028-2035 Business Plan application (PG&E, MCE, and Peninsula Clean Energy) to review high-level strategies, share planned portfolio proposals to minimize the risk of program duplication, and discuss coordination approaches for overlapping customer segments to incorporate into the portfolio. BayREN also met with all CCAs

²¹³ Peninsula Clean Energy has shared that they intend to submit a Business Plan Application for Apply to Administer EE programs with funding starting in 2028.

1 through quarterly BayREN-CCA collaboration calls that BayREN has organized and
2 led since 2022. Joint Cooperation Memos (JCMs) provide more details on both the
3 coordination among the PAs and the distinctions in our respective portfolios.

4 For BayREN's statewide HES California program, several types of coordination are
5 ongoing. BayREN participates in bi-monthly (every two weeks) Statewide Energy
6 Efficiency Team (SWEET) meetings to coordinate with other statewide PAs. BayREN
7 is also engaged with the California Energy Commission (CEC) as they explore
8 options for a Home Energy Report System. Because HES California only incentivizes
9 the production of HES reports, there is no overlap with other residential programs
10 within the state.

11 2. Coordination Structure and Frequency

12 BayREN coordinates with other PAs through a combination of formal, required
13 coordination mechanisms and ongoing informal collaboration. These venues
14 collectively ensure portfolio alignment, minimize duplication, reduce customer
15 confusion, and support complementary service delivery across overlapping
16 territories and customer segments. As is discussed in more detail below,
17 coordination occurs at the portfolio, sector, and program levels and includes:

- 18 • Joint Cooperation Memos
- 19 • Regular bilateral meetings between PAs
- 20 • Statewide and regional collaboratives

21 A. JOINT COOPERATION MEMO COORDINATION

22 Joint Cooperation Memos are the primary formal mechanism for coordination
23 between BayREN and geographically overlapping PAs. JCMs demonstrate how PAs

1 will avoid or minimize program duplication and ensure REN alignment with CPUC
2 guidance for Regional Energy Networks.²¹⁴

3 The JCMs document how PAs with overlapping service areas will communicate and
4 collaborate on an ongoing basis to ensure their respective programs are
5 complementary, do not create customer confusion, and do not result in
6 unnecessary duplication of services. They also describe referral pathways and
7 information sharing across program implementers, including referrals to programs
8 outside a PA's direct implementation scope when those programs represent a
9 better fit for a customer.

10 Since 2019, BayREN and PG&E have submitted annual or bi-annual JCMs describing
11 anticipated programs in the shared nine-county service area, how activities are
12 complementary, and how BayREN's offerings meet REN requirements. Beginning in
13 2020, BayREN has also filed regular JCMs with MCE. BayREN currently also has a
14 JCM with Ava as an ETA CCA and anticipates developing one with PCE as an ETA CCA
15 and then as an ATA CCA if their application is approved. Additional JCMs will be
16 prepared with other ETA CCAs in BayREN's region as needed.

17 While JCMs are a formal regulatory requirement, BayREN has consistently used the
18 JCM process as a proactive coordination tool to strengthen alignment across
19 portfolios and ensure that collective PA efforts best serve shared residents,
20 businesses, and public institutions. Both the trust that has developed, as well as the
21 real-time sharing of program information, has resulted in program layering and
22 other benefits to ratepayers in the Bay Area.

²¹⁴ CPUC D.12-11-015 (establishing guidance on JCMs). CPUC D.19-12-021 (updating guidance). CPUC D.18-05-041 (outlining requirements). CPUC D.23-06-055 (outlining requirements).

B. REGULAR COORDINATION MEETINGS

In addition to JCM development, BayREN program leads hold regular coordination meetings—typically monthly—with their counterparts at PG&E. These meetings provide a forum for sharing program updates, identifying potential areas of overlap, and aligning outreach and implementation activities before conflicts arise. With MCE, there are regular coordination meetings between both BayREN staff and MCE staff. In addition, BayREN county members from those counties located within MCE’s service territory also meet regularly with MCE staff.

These regular coordination meetings have not only prevented duplication but have also generated opportunities for deeper collaboration. For example, coordination between BayREN and MCE enabled a multifamily property owner in Marin County to combine BayREN’s BAMBE program with MCE’s Low-Income Families and Tenants (LIFT) program for Section 8–eligible units. By layering incentives and services, the project achieved a more comprehensive scope of work, reduced tenant utility bills by approximately one-third, and delivered improved comfort and indoor air quality.

Another example of the ratepayer benefit that results from this coordination is in the C&S sector. BayREN’s C&S program provides concise, practical training and resources tailored to the constraints faced by local building department staff, complementing the more in-depth offerings of PG&E’s Energy Code Ace. Rather than duplicating effort, BayREN and Energy Code Ace coordinate to ensure coverage across learning needs and have jointly developed specialized trainings of particular relevance to Bay Area jurisdictions.

Coordination also occurs with all Bay Area CCAs through quarterly partnership meetings that BayREN has organized and led since 2022. These meetings provide

opportunities for all agencies to provide updates on their activities, present and obtain feedback on ideas for new activities, discuss common challenges, and coordinate on outreach and other activities. BayREN anticipates continuing to organize these meetings and work with the CCAs to ensure that the content and frequency meet the needs of participants. BayREN's county members further engage with and coordinate with CCAs active in their counties.

C. STATEWIDE AND REGIONAL COLLABORATIVES

BayREN also collaborates with PAs statewide through broader coordination forums, including statewide initiatives, all-EE PA Group meetings, and Project Coordinating Groups (PCGs). These venues promote consistency, share resources, and create efficiencies across the energy efficiency portfolio.

All-EE PA Group meetings are held monthly and include the PA representative and often policy staff from each IOU, REN and MCE. These meetings are often a forum to discuss and/or draft proposals related to Ordering Paragraphs (OPs) that the CPUC has directed PAs to work jointly on drafting and submitting a proposal. PCG meetings are typically held monthly and include PA staff at multiple levels, as well as program implementers. BayREN additionally participates in the California Energy Efficiency Coordinating Committee (CAEECC) as a Portfolio Administrator Coordinating Committee member, with meetings held quarterly or as needed based on agenda topics.

In addition to coordinating amongst all PAs, the joint REN PAs collaborate to ensure local governments have a voice within the California energy efficiency portfolio. Two crucial venues for REN PA coordination and stakeholder engagement are the California Climate and Energy Collaborative (CCEC) and the California Regional Energy Networks (CalREN) coalition, both of which are funded through a contract

1 with CivicWell.²¹⁵ Currently, the RENs include funds in their budgets for these
2 activities and deliverables and also supplement expenses through non-REN
3 sponsorships and funding sources. This joint REN coordination aligns with
4 Commission goals to improve efficiency of ratepayer-funded projects, encourage
5 stakeholder engagement, and provide opportunities for all local governments to
6 have a role in energy efficiency and uplift their communities' needs.²¹⁶

7 CCEC (previously the Statewide Energy Efficiency Collaborative or SEEC) began as a
8 directive of the California Public Utilities Commission in 2010, with funding from the
9 Joint Investor-Owned Utilities (IOUs). In the years leading up to 2020, local
10 government partnerships (LGPs) experienced a precipitous decline in IOU funding.
11 In parallel, the utilities also elected to discontinue funding for SEEC (now CCEC).

12 After hearing the concerns of local governments faced with these reductions to
13 their energy efficiency activities, the Commission agreed that the role of RENs may
14 increase due to the decline in LGPs. This has proven to be true. With the
15 Commission's encouragement and regulatory scaffolding over the past 15 years,²¹⁷
16 RENs sought to continue building knowledge and capacity among local
17 governments, community-based organizations, and those who support them,
18 developing a network that currently includes over 4,000 practitioners working to
19 advance local energy efficiency and climate action in coordination with key state

²¹⁵ CivicWell was formerly the Local Government Commission.

²¹⁶ See, e.g., CPUC D.19-12-021, Conclusion of Law 4, 84; CPUC D.21-05-031, Findings of Fact 5 and 18, Conclusion of Law 36; CPUC ESJ Action Plan 2.0 Goals 1, 4, 5.

²¹⁷ CPUC D. 19-12-021, 18 (stating "We also agree with the numerous parties who pointed out in their comments that the importance of the RENs may increase as budgets and roles for LGPs are shrinking within the utility portfolios for multiple reasons"). CPUC D.19-12-021, Conclusion of Law 4 at 84 (stating "the Commission should make special provision for the role of local governments and the energy efficiency landscape either through RENs or LGPs, as appropriate and desired by individual local government entities").

1 goals and agencies. RENs have become key players in delivering equitable energy
2 efficiency benefits to ratepayers. Accordingly, the RENs committed to continue
3 jointly funding CCEC²¹⁸ as a venue for local government engagement and received
4 the support of Energy Division.

5 CCEC, through CivicWell, convenes the Annual California Climate & Energy Forum,
6 bringing together local governments, state agencies, community organizations,
7 utility and CCA PAs, and other key stakeholders to coordinate with each other,
8 share best practices and support local leadership in climate action. CCEC also
9 provides local governments and other stakeholders with access to resource
10 libraries, technical assistance and other services.

11 CalREN was started in 2022 to provide a venue for REN PAs to share information,
12 build on collective successes, and work together to coordinate and streamline
13 activities between RENs to increase their impact and improve the cost-effective use
14 of ratepayer funds. To further improve efficiencies, in 2025 RENs added their
15 CalREN services to the CivicWell contract to enhance coordination and ensure
16 additional cost savings.

17 Starting in 2027 and for the Business Plan period, the CivicWell contract covering
18 both CalREN and CCEC activities will be budgeted consistently by all REN PAs, with
19 costs divided between the Administration (85-100%) and Marketing (0-15%)
20 categories, as applicable.

²¹⁸ BayREN's Annual and Bi-Annual Budget Advice Letters (ABALs) since 2021, and the 2024-2031 *Business Plan*, discuss support for the California Climate & Energy Collaborative (CCEC). See, e.g., BayREN 2021 ABAL, 9; BayREN Portfolio Plan Testimony, 31, 44.

D. STAFF ROLES INVOLVED IN COORDINATION

Coordination activities described above are led by and rely on BayREN regional portfolio staff and program leads, with participation from BayREN county members as appropriate. Depending on the coordination venue, BayREN staff engage with counterpart portfolio managers, sector leads, program managers, regulatory or coordination staff, and program implementers at PG&E, CCAs, and other RENs.

3. Coordination Practices (Overlap Identification and Mitigation Work)

BayREN's role is distinct from CCAs, IOUs, and third-party implementers, and reflects the unique capabilities local governments bring to the delivery of EE²¹⁹ Each PA in the BayREN territory complements each other's portfolio, encourages innovation, and ensures that all ratepayers are served. This is consistent with CPUC policy that "[a]s long as program administrators and implementers are addressing different aspects of the energy efficiency marketplace, and/or coordinating their efforts in the same geographic area, some overlap may be fine or even positive, especially if the individual entities coordinate their offerings and their outreach to customers."²²⁰ Indeed, when the RENs were first approved, the CPUC acknowledged that "[a]ll consumers will be well served if there is close coordination and cooperation between the RENs and the utilities to ensure seamless program offerings and avoid customer confusion."²²¹

Any concerns about potential overlap or duplication are brought up and discussed at the appropriate regular coordination meeting. As a result, those who are most

²¹⁹ CPUC D.19-12-021, 18.

²²⁰ CPUC D.19-12-021, 18.

²²¹ CPUC D.12-11-015, 9.

1 knowledgeable about the activities of concern can immediately review and consider
2 options for resolution, bringing in additional staff from either PA as needed. This
3 approach has been very effective.

4 The Joint PA Advice Letter SoCalREN 20-E/20-G filed on October 1, 2024 described a
5 stakeholder process, potential overlap, quantification of impacts, and risk
6 mitigation strategies that was later approved by the Commission.²²² BayREN was
7 one of the three PAs that was determined to have zero substantively similar or
8 duplicative programs identified by overlapping PAs. BayREN conservatively noted
9 that its multifamily program could potentially overlap with MCE's program, but
10 through the JCM process an agreement was reached that MCE would serve deed-
11 restricted multifamily properties where their service territory overlaps with
12 BayREN's territory, while BayREN would serve market rate. If MCE were to run out
13 of funds in a program year, BayREN would step in to serve deed restricted
14 properties until additional funds become available through MCE. Coordination is
15 simplified because both PAs have the same implementer. As a result of the risk
16 mitigation strategies identified, Table 14 of the OP32 Report showed BayREN
17 carries \$0 in risk.²²³

18 IV. Coordination with Market Transformation

19 BayREN anticipates strong alignment with statewide Market Transformation
20 Initiatives (MTIs) administered by the California Market Transformation

²²² On June 30, 2025, the Commission Energy Division issued a disposition approving the Joint PA OP32 advice letter and corresponding OP32 Report as originally filed.

²²³ Southern California Regional Energy Network, *Southern California Regional Energy Network Filing on Behalf of the Energy Efficiency Portfolio Administrators for Program Overlap Analysis*, Advice Letter 20-E/20-G / BayREN Advice Letter 27-E (California Public Utilities Commission, October 1, 2024), 38 (Ordering Paragraph 32).

Administrator (CalMTA), including initiatives focused on residential electrification technologies. BayREN's portfolio will complement these statewide efforts by providing support such as customer engagement, technical assistance, contractor coordination, and localized implementation while leveraging statewide market interventions to scale adoption, deepen retrofits, and advance equity, health, and resilience outcomes.

1. Coordination with CalMTA

In Decision 19-12-021, the CPUC approved the Market Transformation Framework and established a single statewide administrator to conduct coordinated, statewide market transformation activities in collaboration with energy efficiency Portfolio Administrators and other market actors.²²⁴ Consistent with this framework, on November 20, 2025, the CPUC adopted Decision 25-11-023, which authorized the initial tranche of statewide MTIs proposed by CalMTA. Specifically, the decision approved one MTI focused on room heat pumps and conditionally approved a second initiative focused on induction cooking, as proposed in the Application of PG&E on behalf of CalMTA.

Both approved initiatives target residential markets—single-family and multifamily—that are directly served by BayREN programs. BayREN anticipates strong alignment with these statewide interventions and proposes to coordinate by providing localized market support that complements CalMTA's statewide strategies. BayREN anticipates beneficial coordination with these programs in a similar fashion to how the TECH Clean California program has increased the deployment of electrification technologies for space and water heating, particularly

²²⁴ CPUC D.19-12-021, 55.

1 for equity communities, as well as for potential health benefits.²²⁵ BayREN's
2 coordination will emphasize "last-mile" activities, including customer education and
3 engagement, technical assistance, contractor outreach and coordination, and
4 localized implementation support to accelerate adoption of approved technologies.

5 BayREN's single-family and multifamily programs will leverage these long-term
6 statewide market interventions by supporting awareness, readiness, and adoption
7 at the community level. In particular, BayREN will consider opportunities to layer
8 local program support with the CalMTA-approved MTIs to increase participation,
9 deepen energy savings, and advance equity, health, and resilience outcomes for
10 Bay Area residents.

11 This coordination approach aligns with the recommendations of the CAEECC
12 Market Support Metrics Working Group, which emphasized the importance of
13 sustained collaboration between the Market Transformation Administrator and
14 Energy Efficiency Portfolio Administrators.²²⁶

²²⁵ California Market Transformation Administrator, *Stage 1 Disposition Report* (San Francisco: CalMTA, 2025), 22–25, <https://calmta.org/wp-content/uploads/2025/04/Stage-1-Disposition-Report-Final-1-1.pdf>.

²²⁶ The Market Support Metric Working Group report acknowledges the need to form a collaborative approach between the Market Transformation Administrator (MTA) and EE program administrators. Further, it describes the conceptual distinctions between Market Transformation (MT) and Market Support (MS) where MT projects target reducing barriers to specific technologies while MS provides cross-cutting support of the EE market. MT projects seek to change and disrupt the market while MS programs seek to support existing or anticipated market needs. Lastly, MT is intended to be phased out after achieving a sustainable market while the market may need ongoing support from MS programs. Market Support Metrics Working Group, *Report and Recommendations to the California Public Utilities Commission and the Energy Efficiency Program Administrators* (October 6, 2021), included as Appendix E in Bay Area Regional Energy Network 2024–2031 Business Plan Appendices (Exhibit BayREN-03), 21, <https://www.bayren.org/sites/default/files/2022-03/A2203XXX%20-%20BayREN-03%20-%20Appendices.pdf>.

2. Coordination with the TECH Clean California Program

BayREN views TECH as a key market transformation partner for building electrification and has an established history of coordination with the TECH Clean California initiative. This history includes:

- Design and implementation of a midstream, contractor-focused Heat Pump Water Heater program across the nine Bay Area counties funded with a grant from the Bay Area Air Quality Management District (BAAQMD), utilizing the same program implementer as TECH Clean California and layering incentives;
- BayREN C&S partnership with the TECH Permitting Pilot initiative to develop tools, resources, and processes that expedite permitting for heat pump technologies; and
- Coordination on contractor communications, incentive processing, and public outreach to reduce customer and contractor confusion.

BayREN's regional presence and relationships with local governments complement TECH's statewide scale, enabling coordinated engagement with manufacturers, distributors, retailers, contractors, and customers.

Through these coordinated efforts with CalMTA and TECH Clean California, BayREN supports market transformation by addressing local barriers, accelerating adoption, and ensuring statewide initiatives are effectively implemented at the community level.

V. Coordination with Energy Savings Assistance (ESA) Programs

The equity segment is defined as “programs with a primary purpose of providing energy efficiency to hard-to-reach or underserved customers and disadvantaged communities in advancement of the Commission’s Environmental and Social Justice (ESJ) Action Plan. Improving access to energy efficiency for ESJ communities, 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.”²²⁷ The Equity category is distinct from ESA programs so as to avoid overlap with program offerings that low-income populations could receive at no cost through existing channels.²²⁸

BayREN’s Equity programs are distinct from PG&E’s ESA offerings and are designed to avoid overlap with no-cost services available through ESA. BayREN’s programs focus on services and technical assistance that complement, rather than duplicate, ESA offerings. BayREN’s two residential equity programs and workforce equity program have the potential to overlap with ESA customers. Program staff have worked with ESA as described below.

- **Single Family:** BayREN’s single family program, EASE Home, coordinates closely with PG&E’s ESA program. While there is overlap in weatherization measures, EASE Home has a resident co-pay and is designed for the

²²⁷ CPUC D.21-05-031, 14.

²²⁸ CPUC D.21-05-041, 15. In this decision, the Commission clarifies the “equity” category is distinct from the Energy Savings Assistance (ESA) programs, noting that while customer segments may overlap, the equity category is defined within the rulemaking for energy efficiency programs that do not specifically offer no-cost services through ESA. Low-income customers are defined as those meeting California Alternate Rates for Energy (CARE) income guidelines.

1 moderate-income population segment, while ESA is no-cost and targets the
2 low-income population segment. When an ESA-qualified single
3 family resident applies for BayREN EASE Home, they are referred to ESA's
4 application portal. BayREN EASE Home also has a double-dip check
5 integrated into its application portal, with the ability to check whether the
6 applicant has received PG&E ESA treatment within the last five years. If so,
7 they are deemed ineligible. Applicants are able to request an exemption,
8 requiring BayREN and PG&E ESA staff approval that overlapping core
9 weatherization measures such as attic insulation and duct sealing, repair, or
10 replacement were not received in order to proceed. In 2025, since EASE
11 Home launched in June, BayREN has received 35 exemption requests, and
12 approximately half were approved. These residents typically received only
13 LED lighting, faucet or showerhead upgrades, and/or door weatherstripping
14 through the PG&E ESA program, and were seeking core weatherization
15 upgrades through EASE Home. Although there is a 20% co-pay, BayREN EASE
16 Home is able to cover deferred maintenance measures and wall insulation,
17 offer comprehensive technical assistance on electrification, and provide a
18 direct line to local county support and resources. Anecdotally, some ESA-
19 qualified residents have mentioned such program components on why they
20 felt BayREN was a better fit for them. PG&E's ESA program does not currently
21 have a process set up to refer overqualified customers to BayREN EASE
22 Home. PG&E and BayREN single family staff meet every other month
23 to coordinate on program updates and referral processes.

- 24 • **Multifamily:** BayREN's multifamily program, the Bay Area Multifamily
25 Building Enhancement (BAMBE) program,
26 coordinates with PG&E's ESA program as outlined in the JCM. There is overlap

1 in the customers served and measures installed though with completely
2 different program designs and eligibility requirements. The BAMBE program
3 serves all multifamily properties 5 units and above but not market rate
4 properties 50 units and above. This includes properties that meet ESA
5 requirements. How the two programs define low income differs. BAMBE
6 serves deed-restricted properties defined as: “affordable housing properties
7 in which no less than 66 percent of the units are occupied by households
8 with an income of 80 percent or less of the Area Median Income
9 (AMI)”. ESA defines low-income as less than 250% of the Federal Poverty
10 Guidelines. Additionally, BAMBE serves likely unsubsidized affordable
11 housing (UAH, also known as naturally occurring affordable housing or
12 NOAH) by identifying low-income and rent-burdened census tracts and
13 providing additional incentives to multifamily properties located in these
14 census tracts where the ESA program requires formal income
15 documentation through other low-income program qualification programs
16 (e.g., the Supplemental Nutrition Assistance Program or SNAP). BAMBE
17 performs double-dip checks with PG&E for every project that reserves
18 rebates. As far as measure offerings, ESA can offer power strips, air
19 purifiers, and carbon monoxide/smoke alarms where BAMBE cannot. BAMBE
20 projects’ scopes often include central heat pump water heaters
21 with significant incentives of ~\$1,500 unit, which is often much more than
22 what ESA can offer.

- 23 • **Workforce.** The workforce BayREN Works program includes a component
24 that trains local, disadvantaged youth to provide home assessments and
25 installation of energy- and water-saving measures for renters, multifamily
26 residents, and underserved single-family residents, some of whom are likely

1 eligible for PG&E's ESA program. BayREN will coordinate with the ESA
2 program to ensure that measure installations are not duplicated and that
3 customers benefit from program choice, cross-referrals between programs,
4 and coordination among implementers.

5 VI. Coordination with Other Demand Side 6 Programs and Stakeholders

7 BayREN coordinates with CCAs, the Bay Area Air District, and other demand-side
8 programs and stakeholders as appropriate to align incentives, stack funding, and
9 support integrated EE, demand response, and building decarbonization strategies.
10 Regular coordination ensures that programs are complementary and that
11 customers experience a seamless pathway across offerings.

12 BayREN—on the regional, program, and county level—has regular meetings with
13 the CCAs in its territory.²²⁹ BayREN and the CCAs share the same constituents, and
14 some elected officials sit on the Boards of a CCA, a county, and/or the Association
15 of Bay Area Governments (ABAG). BayREN therefore coordinates closely with all
16 CCAs, including those who are ETA, ATA, or neither.

17 Another key partner is the Bay Area Air District. Air District offices are located in the
18 same office building on the same floor as BayREN's ABAG staff. Staff therefore meet
19 often and coordinate on a number of initiatives. For example, BayREN supported
20 development of Bay Area Regional Climate Action Plan (BARCAP) and participated in
21 the Implementation Working Group for the Air District's Zero NO_x emission water

²²⁹ There are seven CCAs in the Bay Area, and one in at least part of each county; more information is provided earlier in this chapter and also in Chapter 2.

heater rule 9-6, and Air District staff presented on the rules at BayREN's November 2025 Regional C&S Forum.

BayREN also coordinates with the Building Decarbonization Coalition about relevant initiatives. For example, BayREN participated in and supported development of the Switch is On, which is a single platform that provides information for consumers about incentives, including BayREN incentives, for which they could be eligible, as well as connecting them with contractors and information about equipment such as heat pumps.

In addition to this portfolio-level coordination, individual programs also coordinate with specific programs or agencies as appropriate, including the following:

- The BayREN Business program coordinates with PG&E's demand response programs so that customers are able to participate in both programs. Data is shared between the programs and event days from the demand response programs are blacked out from BayREN Business' 12-month performance monitoring period for a project's energy savings.
- BayREN's Refrigerant Replacement program coordinates with Marin County's Environmental Health Service's (EHS) Department when projects include evaporator coil replacement. In Marin County, these projects must be inspected by an EHS officer for proper condensate drainage. As part of the process, the BayREN Building Performance Advisor (BPA) reviews photos and/or video of the condensate drainage installation and sends them to Marin's EHS department staff to confirm compliance with EHS standards before approving the project for incentive payment.
- BayREN's multifamily program coordinates with Go Green Financing, with contractors presenting loan products to program participants to enable

1 recommended building improvements. Approximate 10 multifamily projects
2 received nearly \$800,000 from Go Green Financing in 2025.

- 3 • The multifamily program coordinates with the Solar on Multifamily
4 Affordable Housing (SOMAH) program as well, and three projects have
5 recently been completed or are in construction leveraging this program.
- 6 • The multifamily and single family programs both coordinate with the CEC's
7 Equitable Building Decarbonization direct install program, which is preparing
8 to launch in northern California.

Chapter 8: Stakeholder Engagement

Stakeholder engagement is an ongoing and integral component of BayREN's planning and program development processes. In 2024 and 2025, BayREN conducted targeted engagement with local governments, community-based organizations (CBOs), program implementers, program participants, and regional and state agencies. Feedback from these stakeholders provided essential guidance on refining BayREN's strategic focus areas, ensuring programs and services meet the needs of underserved and HTR communities, and enhancing coordination across existing regional initiatives.

This chapter summarizes BayREN's recent stakeholder engagement activities, describes how stakeholder input has informed the organizational and programmatic decisions presented in this business plan, and outlines additional planned engagement efforts to support implementation. Stakeholder engagement will continue moving forward in order to inform decision-making, guide implementation of the organizational strategy, and support adaptive management across its portfolio. BayREN also anticipates future engagement focused on integrating health and resilience considerations into program activities.

BayREN is committed to maintaining transparent, inclusive, and continuous engagement with a broad range of partners to ensure its activities remain responsive to regional needs and while at the same time meeting state energy, climate, and equity goals.

I. Engagement for BayREN's Regional Health and Resilience Focus

Local engagement efforts by BayREN's County Representatives confirmed that Bay Area residents care deeply about improving health outcomes with a specific focus on improving indoor air quality and their ability to mitigate the negative impacts of extreme heat events. Depending on geography, additional concerns included addressing moisture and mold, safety and accessibility upgrades (electrical and structural), and general housing quality improvements. Health-related priorities are most clearly understood in the residential sector, particularly for homeowners, where counties have existing pilot experience. As a result, BayREN has adopted a strategic focus on improving health and resilience outcomes across sectors, especially for underserved and HTR communities.

Input that shaped this decision came from a wide range of types of stakeholder engagement, including the following:

- **Napa County:** The 2023 Community Health Assessment (CHA) and 2024 Community Health Improvement Plan (CHIP), which engaged over 1,500 residents, focus groups, and public health partners. Napa also conducted six focus groups with youth, families, CBOs, and multilingual audiences as part of its Regional Climate Action and Adaptation Plan (RCAAP), and ran a countywide climate vulnerability assessment. Napa County's work to engage over 1,800 residents through surveys and focus groups tied to the development of the Regional Climate Action and Adaptation Plan (RCAAP) and CHIP, ensured they received input from youth, multilingual communities, and public health stakeholders.

- 1 • **Marin County:** The Green and Healthy Homes Initiative (GHHI) established in
2 2016 and the 2024–2026 CHIP, which designated Climate Action and
3 Community Preparedness as a top health priority, was led by community-
4 based organizations (CBOs) and public health partners. This work established
5 long-term coordination channels and had led to integrating health and
6 climate priorities into community-led efforts supported by monthly resident
7 advisory committees.
- 8 • **Alameda County:** StopWaste leads a Technical Advisory Group (TAG) made
9 up of sustainability and planning staff in each of Alameda County’s
10 jurisdictions. The TAG is a forum to raise awareness about best practices and
11 resources available to support local climate action. The group also serves as
12 a forum to surface climate-related priorities and challenges.
- 13 • **Contra Costa County:** Multiple pilots and assessments, including the
14 Asthma Initiative and Green and Healthy Homes integration, a listening
15 campaign for Community Benefits Agreement (CBA) task forces of refinery-
16 impacted communities, and an equitable electrification analysis linking
17 electrification to indoor air quality and health benefits and informing
18 community priorities. Contra Costa also integrated health priorities
19 discussions into standing committees and working groups.
- 20 • **San Mateo County:** San Mateo County piloted four community-led resilience
21 hubs that tested models ranging from senior resilience hubs to renter-
22 focused heat mitigation, portable power station programs for medically
23 vulnerable residents, and resilience education through faith-based networks.
- 24 • **Santa Clara County and San Francisco:** Active Health, Air Quality, and
25 Resilience (HAQR) working groups addressing heat and indoor air quality,
26 with Santa Clara embedding resilience in several standing initiatives and

1 partnerships with Health and Human Services and Public Health
2 departments.

- 3 • **Solano County:** The County is actively engaged in Solano Climate Ready, a
4 local group focused on improving community resilience, and is working to
5 build relationships with the Healthy Solano Collaborative, a group that is led
6 by the Public Health Department and focused on engaging local government
7 staff and raising awareness about public health goals and challenges.
- 8 • **Sonoma County:** The Sonoma County Transportation and Climate
9 Authority's (SCTCA) Climate Change Partners group meets bi-monthly and
10 includes local government stakeholders, including the County Water District
11 staff and city sustainability staff. SCTCA also coordinates a Climate Action
12 Advisory Committee made up of community members representing each
13 Sonoma County jurisdiction who provide input on key climate-related needs
14 and priorities.

15 II. Summary of Engagement by Sector

16 BayREN Program Leads have undertaken substantial efforts to engage and gather
17 input from the communities they serve to inform and improve BayREN programs
18 across sectors. These efforts demonstrate a strong foundation of community-
19 driven engagement across multiple populations, including vulnerable groups such
20 as renters, seniors, multilingual audiences, and individuals with disabilities.

21 The following examples highlight BayREN's commitment to continuously improving
22 program offerings based on direct input from the communities BayREN serves, as
23 well as key partners, state and regional agencies, and local governments.

1. Residential Sector

BayREN's residential programs carry out extensive engagement with the populations they serve. This engagement provides insights that continuously shape program design and implementation. For example, BayREN's single-family program underwent a significant redesign in 2023-2024 to better align program outcomes with equity-focused goals. Stakeholder engagement for this effort involved collaboration with over 40 CBOs across all nine Bay Area counties and more than 70 partner organizations, including CCAs, contractors, and energy program implementers. Additionally, BayREN conducted a household survey of more than 1,300 single-family respondents, oversampling moderate-income households to understand their unique challenges and needs.²³⁰ This research revealed that moderate-income residents, who are often excluded from income-qualified programs, face significant barriers to participating in energy efficiency initiatives, despite high awareness of their benefits. More than half of single-family moderate-income homeowners surveyed report facing barriers to adopting energy efficiency measures, with upfront costs being the most significant obstacle. BayREN's survey found that 37 percent of moderate-income respondents struggled to afford food or medicine, while 25 percent were unable to pay their energy bills at some point in the past year.

Key findings from the engagement highlighted three major obstacles: 1) prohibitively high upfront costs, 2) limited focus on weatherization and health-related upgrades, and 3) complex programmatic requirements that create access barriers. These insights shaped the new Efficiency and Sustainable Energy (EASE) Home program, which targets households earning up to 120% of area median

²³⁰ Grounded Research, CivicMakers, ILLUME Advising, *Single Family Moderate Income Report*.

1 income. The redesigned program prioritizes low-cost weatherization and energy
2 efficiency upgrades, such as insulation and air sealing, while addressing health,
3 comfort, and safety. Outreach strategies now focus on pollution-burdened
4 communities and non-English-speaking households, and the program includes
5 comprehensive support to simplify the customer journey. Centering stakeholder
6 input led to development of a more inclusive and accessible program that directly
7 responds to affordability and equity gaps in the region. This type of engagement as
8 part of program design illustrates how BayREN supports Goal 5 of the CPUC's
9 Environmental and Social Justice (ESJ) Action Plan: Enhance outreach and public
10 participation opportunities for ESJ communities to meaningfully participate in the
11 CPUC's decision-making process and benefit from CPUC programs.²³¹

12 BayREN's multifamily program, BAMBE,²³² convened a diverse group of
13 stakeholders in 2024 to discuss methods for improving access to residential energy
14 upgrades in Bay Area rental properties. Known as the Retrofits for Rentals Coalition
15 (R4R), the group brought together researchers, program implementers, public
16 health officials, and local government representatives²³³ in a series of meetings
17 throughout 2024²³⁴ to discuss financing, program design, and building owner
18 engagement strategies. Research conducted in parallel with R4R, including
19 interviews and focus groups with landlords, tenants, and energy providers,
20 provided insight into the practical challenges of accessing energy upgrade

²³¹ CPUC ESJ Action Plan 2.0.

²³² Bay Area Multifamily Building Enhancements.

²³³ Members of R4R included staff from UC Berkeley, UC San Francisco, Association for Energy Affordability (AEA), StopWaste, BayREN, Bay Area Healthy Homes Initiative, Contra Costa County, BAAQMD, Marin Clean Energy, Rising Sun, San Francisco Department of the Environment, San Francisco Department of Public Health, Regional Asthma Management and Prevention (RAMP), Alameda County Healthy Homes, and the Green and Healthy Homes Initiative.

²³⁴ R4R held an in-person kickoff meeting in February 2024 and then met virtually in April, May, July, October and December 2024.

1 programs. The Coalition found that renters are most motivated by upgrades that
2 improve health, comfort, and resilience. Tenants value things like better indoor air
3 quality, safer appliances, and protection against extreme weather, and programs
4 that highlight these benefits, rather than just cost savings, tend to resonate more
5 with renters. Findings from the convenings helped shape new renter-facing
6 program offerings for the BAMBE program. For example, at the beginning of 2025,
7 BAMBE began a series of post-installation renter engagement activities, including
8 sharing flyers with information on the upgrades installed, resources on saving
9 energy and choosing the right rate plan, and a link to a survey to provide feedback.
10 The program also hosted several workshops²³⁵ at properties that installed in-unit
11 upgrades to help residents understand how to operate the equipment and
12 maximize energy savings. Tenants appreciated onsite, after-work sessions, practical
13 tips, printed materials, rate-plan education, and opportunities to ask questions
14 directly. Many said they planned to use the tools provided or enroll in programs like
15 CARE/FERA or PG&E's HomeIntel. Testimonials further reinforced that renters value
16 energy efficiency and electrification upgrades not only for comfort but also for
17 safety, peace of mind, and environmental impact, with several explicitly
18 recommending the upgrades to others.

19 The BAMBE program is also in the process of conducting a survey of small (<50 unit)
20 property owners who have not participated in the program to understand the
21 unique needs, challenges, and motivations within this segment of the multifamily
22 sector. The program is also interviewing contractors who work on small multifamily
23 properties to gain further insight into the priorities of owners and barriers to
24 upgrading this property type. The program aims to use findings from these initial

²³⁵ Four post-install events took place at four participating multifamily properties between April and October of 2025.

1 surveys/interviews to better understand how to serve the needs of this
2 underserved property type.

3 Also serving the residential sector, BayREN's Health, Energy, and Resilience
4 Education (HERE) program, formerly known as the Green Labeling program, focuses
5 on educating and influencing often-overlooked stakeholders who shape the built
6 environment, such as real estate professionals. In the fall of 2025, the program
7 conducted two focus groups centered on reaching a better understanding of
8 awareness, attitudes, and motivations for participation in BayREN's real estate
9 training programs. The first group (Group A) consisted of real estate agents who
10 had taken at least one BayREN training, and the second group included real estate
11 agents who had never heard of BayREN and had not taken a training (Group B).
12 Additionally, BayREN conducted an online survey of real estate agents based in all
13 nine counties.²³⁶ The goal of the focus group and the survey was to identify key
14 barriers, motivators, and actionable strategies to increase participation and
15 engagement across the BayREN real estate network. Participants shared that
16 sustainability topics are emerging more frequently in client conversations and that
17 hands-on, visual, and locally tailored training significantly boosts confidence. More
18 than 70 percent of survey respondents reported that they do not receive formal
19 sustainability training from their brokerages or associations, yet most expressed
20 strong interest in learning about green building concepts, energy-efficient
21 technologies, high-performance home features, and their regulatory and
22 transactional implications. Real estate professionals are not resistant to these

²³⁶ Franklin Energy, *Survey and Focus Group Report* (San Francisco: Bay Area Regional Energy Network, October 6, 2025).

1 subjects, but they want clear value, flexible formats, and tools they can
2 apply immediately.

3 Based on the input received, the program will design and test out a new resilience-
4 focused training and will pilot one National Association of Realtors (NAR) Green
5 Designation as a four-part series instead of two days in response to a request to
6 shorten popular trainings to make them more accessible. Additionally, beginning in
7 2026, each participant in the NAR Green Designation will receive a toolkit focused
8 on supporting the integration of classroom content into their day-to-day work.

9 Also in the residential sector, BayREN was authorized in the previous Business Plan
10 cycle to offer the Home Energy Score (HES) program statewide. To ensure that the
11 newly expanded program reaches as many participants as possible, BayREN
12 surveyed homeowners²³⁷ who had previously received a HES report through the
13 regional program and received 74 responses. Participants were asked questions
14 about their experience receiving a report and were asked for feedback on potential
15 future report design changes. Respondents overwhelmingly (77 percent) preferred
16 the more detailed HES report format, noting that the format was “more motivating”
17 and “helps me understand why I need improvements.” In terms of motivation,
18 respondents rated their carbon footprint as important, and 66 percent ranked
19 “estimated energy costs” as their first priority. When asked about the results of
20 receiving their past HES report, 70 percent of respondents reported feeling
21 motivated to act after receiving their original report, and 46 percent went on to
22 implement some of the recommended upgrades. These takeaways will guide
23 BayREN’s rollout of the statewide HES program in 2026 with a focus on promoting
24 the cost savings and health and comfort benefits of energy efficiency upgrades and

²³⁷ The online survey was conducted in September of 2025.

1 reducing the gap between motivation and action by providing additional guidance
2 and tools to support action.

3 BayREN's residential programs will continue to evolve and improve based on
4 ongoing, robust stakeholder engagement.

5 2. Commercial Sector

6 Stakeholder engagement efforts in the commercial sector focused on gathering
7 insights through meetings with key partners, interviews with business associations
8 and chambers of commerce, and surveys of food-sector businesses (e.g.,
9 convenience stores, quick-serve and sit-down restaurants, drinking bars) across
10 seven Bay Area counties. BayREN's county members were also interviewed to
11 capture local perspectives on challenges and opportunities to reduce energy use
12 and increase energy affordability in the commercial sector. These discussions and
13 surveys focused on understanding barriers, motivations, and opportunities related
14 to energy efficiency, electrification, and business resilience, especially for HTR food
15 sector businesses and businesses not typically served by existing incentive
16 programs. Program staff also shadowed contractors to engage with them and
17 observe directly how they recruit program participants.

18 In July and August of 2025, BayREN reached out to small businesses in the Bay Area
19 with the Small Business Refrigeration and Operation Needs survey. Approximately
20 90% of respondents noted concerns about rising electricity rates, while 83%
21 expressed interest in energy efficiency and 77% noted environmental concern.
22 Food sector businesses that completed the survey reported low awareness of and
23 participation in energy programs along with concerns about cost and enrollment
24 complexity. Findings from surveys and interviews resulted in recommendations for
25 simplified participation, higher incentives, and increased technical assistance

1 scopes. Results also encouraged the commercial programs to consider rebates for
2 resiliency equipment, improving accessibility for customers with disabilities, and
3 expanding partnerships with trusted intermediaries such as chambers of
4 commerce, CBOs, and local governments.

5 In addition to engagement with small businesses, business associations and
6 chambers of commerce, program staff consulted with key stakeholders at the local,
7 state and national level to gather input on program design, workforce readiness
8 and potential partnerships. Meetings with the California Air Resources Board,
9 Peninsula Clean Energy, and the North American Sustainable Refrigeration Council,
10 for example, included discussions on workforce readiness for natural refrigerants
11 and opportunities for collaboration and data-sharing.

12 Findings from this stakeholder engagement informed current and planned changes
13 to the programs in this sector, including simplifying program processes and
14 expanding technical assistance and program offerings. Program staff have already
15 made significant improvements to simplify recruitment and application processes,
16 including providing online tools. BayREN Business plans to launch a pilot in 2026 to
17 educate small businesses and contractors about heat pump water heaters and to
18 further encourage electrification measures. The program also intends to explore
19 collaborations with agencies, nonprofit organizations, and grant-making entities—
20 such as the California Department of Forestry and Fire Protection (CAL FIRE)—to
21 identify funding opportunities that can support resiliency and accessibility
22 measures. Leveraging these external resources will enable the programs to expand
23 customer access and align with broader energy resilience and equity objectives.

3. Public Sector

BayREN launched two new public sector programs in 2024 based on needs identified through input from local government staff during the development of BayREN's 2024-31 Business Plan. The Integrated Energy Services (IES) program was developed to address local government needs including limited staff capacity, lack of specialized expertise, and low awareness of available programs to support energy efficiency, electrification, and resilience upgrades for public buildings. The primary goal of the IES program is to support local governments and special districts so they can make full use of energy efficiency products and services to achieve their energy goals for their public facilities and community resilience centers (CRCs). The program addresses the challenges that local government staff are facing when attempting to upgrade their public buildings by providing the information, resources and technical support they need to develop and implement energy projects.

Two earlier BayREN efforts informed the design of the IES program: a Zero Net Energy (ZNE) Technical Assistance project previously offered through the C&S program to assist local governments working to make their buildings zero net energy, and a Resilient Libraries Network (RLN) initiative designed to test potential public sector approaches and assist local governments who were struggling to design, fund, and operate CRCs. Lessons learned from both of these efforts shaped the new Energy Concierge and Energy Roadmapping services available now through BayREN's IES program. Program staff also gathered additional input from local government staff²³⁸ on what additional resources would be most helpful in

²³⁸ IES program staff met with local government members of the Marin Clean Energy Partnership (MCEP) and Silicon Valley Clean Energy's (SVCE) Member Agency Working Group in June and July of 2025.

1 developing and operating a CRC. Several suggested resources have been developed
2 and can now be accessed on BayREN's website.²³⁹

3 BayREN's other public sector program, Targeted Decarbonization Services (TDS),
4 was designed to address two barriers cited by local government staff during
5 outreach for BayREN's 2024-31 Business Plan: limited familiarity with
6 decarbonization equipment and its higher costs and complexity. The program's
7 goal is to empower local governments to deploy decarbonization technologies by
8 providing technical and financial assistance, resources, actionable data, and
9 scalable, equitable solutions.

10 In 2024, program staff designed and administered three surveys to inform various
11 components of the program. First, a survey²⁴⁰ to inform the training program for
12 local government facilities staff identified an interest in trainings focusing on heat
13 pump water heaters and heat pump HVAC systems. As a result, the program
14 developed and offered trainings on these topics, reaching facilities staff from 43
15 Bay Area jurisdictions in 2024 and 2025. A similar survey²⁴¹ was carried out to
16 inform the development of trainings for local government finance staff. Survey
17 responses revealed a need for general education about financing mechanisms
18 available to local governments to support energy-related projects, as well as the
19 advantages and disadvantages of different types of financing. As such, the TDS
20 program launched two new trainings, [Public Sector Energy Financing 101 for](#)

²³⁹ "Community Resilience Center Resources," Bay Area Regional Energy Network,
<https://www.bayren.org/community-resilience-center-resources>.

²⁴⁰ The facilities staff online survey was conducted between August 6-September 6, 2024. Forty-eight local government staff participated in the survey, representing 23 unique local governments and 17 unique special districts.

²⁴¹ The finance staff online survey was conducted between October 30-December 6, 2024. Thirty-one local government staff participated in the survey, representing 15 unique local governments and 14 unique special districts.

1 [Finance Staff](#) and Public Sector Energy Financing 201 for Finance Staff in late
2 2025. The third survey was administered as part of BayREN's efforts to develop the
3 financing component of the TDS program to address the cost barrier to adoption of
4 decarbonization technologies. The survey²⁴² indicated local government staff
5 interest in upfront funding, bridge funding, and low-interest loans to cover the gaps
6 before incentive payments are received.

7 In the year since the launch of its two public sector programs, BayREN has also
8 been approached about the need for school districts to receive similar types of
9 support. To learn more, program staff held a virtual workshop²⁴³ for school district
10 staff to share information about BayREN's existing Public Programs, gather input
11 from public schools (K-12) on their priorities and challenges for energy efficiency
12 and decarbonization projects, and assess interest in becoming eligible for these
13 programs. The workshop brought together representatives from BayREN, local
14 governments, regional agencies, consultants, and school districts to discuss
15 opportunities for energy efficiency, decarbonization, and sustainability in school
16 facilities. BayREN heard that HVAC replacements and Light Emitting Diode (LED)
17 lighting upgrades are top priorities for school districts, and that aging infrastructure
18 and financial limitations create challenges for implementation. Based on the
19 information received, BayREN is planning to expand its public sector programs to
20 serve schools and provide them with needed technical assistance, with additional
21 engagement and information-gathering to occur in 2026 and 2027 to shape
22 services.

²⁴² The financing issues survey was conducted between May 20-June 20, 2025. Seventy-seven local government staff participated in the survey, representing 49 unique local governments and 12 unique special districts.

²⁴³ The workshop was held on September 23, 2025.

4. Codes & Standards

BayREN's C&S program, a cross-cutting sector program, works in three arenas: supporting the development of local reach codes and related energy policies; improving implementation and compliance with state and local energy codes; and closing the gap between the state and local governments on future energy codes and related efforts. The program was originally developed based on input from Bay Area jurisdictions and was shaped early on by a 2013 survey²⁴⁴ and a 2015 Permit Resource Opportunity Program (PROP) assessment of code compliance in a sample of Bay Area jurisdictions.²⁴⁵ Together, this engagement shaped both the formats and the topic areas for BayREN's C&S work.

In 2021, the program conducted a robust survey of public sector staff across the nine-county Bay Area to gather additional information, with the intention of repeating the survey every five years. The 2021 survey that collected data from 53 of 105 Bay Area building departments.²⁴⁶ The table below highlights how BayREN integrated this input both through developing new and expanded program offerings and by leveraging BayREN's regional scale and expertise to directly inform development of the Energy Code.

Table 8.1 Summary of Survey Results and BayREN Responses

Survey Response Themes	Respondent Suggestions	Actions Taken by BayREN	Results
The complexity of the Energy Code continues to be a	Respondents expressed support for simplifying the	Provided formal recommendations to the CEC as part of the 2022	The CEC has started implementing this idea and is

²⁴⁴ BayREN, 2020-21 Survey Report.

²⁴⁵ Benningfield Group, Inc., BKi, and Association of Bay Area Governments, *BayREN Codes & Standards Permit Resource Opportunity Program: PROP Final Report and Energy Code Resource Guide* (San Francisco: BayREN, 2015), https://www.bayren.org/sites/default/files/2021-11/bayren_cs_prop_final_report_2015_0401_0.pdf.

²⁴⁶ Frontier Energy, 2021 Building Department Survey.

Survey Response Themes	Respondent Suggestions	Actions Taken by BayREN	Results
major barrier for public sector staff working to expand energy efficiency and building electrification.	Energy Code and providing straightforward and accessible resources to improve understanding.	Energy Code pre-rulemaking process recommending simplification and automation, including aligning the code with Title 24.	preparing two versions of the 2025 Energy Code, one with the traditional structure and one with a re-aligned structure.
There is a need for additional capacity building within local building departments on Energy Code compliance.	Respondents highlighted the need for special inspectors to focus on Energy Code compliance.	Partnered on a grant application to the U.S. Department of Energy (DOE) to support building department staff receiving training as Associate Energy Analysts.	U.S. DOE awarded the grant and BayREN is working to recruit building department staff to participate in the program.
Building department staff need simple and straightforward trainings to improve understanding of all components of the Energy Code.	Respondents requested assistance sheets, on-demand resources and permit guides.	Developed and added a new training on “Navigating the Energy Code” which is offered both live and on-demand. BayREN also developed a new simplified code assistance sheet for heat pump water heater installations.	Over 150 people have attended the new trainings on “Navigating the Energy Code.”

In addition to surveys every five years, the C&S program also receives ongoing feedback from a variety of sources. BayREN liaisons attend monthly meetings of code officials, including the Marin County Codes Advisory Board and the East Bay International Code Council chapter, in order to both share out information about BayREN resources and also solicit input and feedback. The program also utilizes surveys after each of BayREN’s quarterly Regional Forums and approximately 30 trainings each year to collect additional feedback that is used to shape the program. For example, BayREN extended each of its trainings to 90 minutes in response to feedback from attendees requesting more time to allow more detailed explanations and questions.

III. Workforce Education and Training

BayREN originally engaged with contractors through its residential programs. Prior to the redesign of the single family program to EASE Home, the previous Home+ program required use of qualified contractors who were trained in the program. BayREN engaged with these contractors on an ongoing basis and also through annual events. In 2019, the Rising Sun Center for Opportunity also began to offer Green House Calls targeted at residents in disadvantaged areas together with its Climate Careers program as part of BayREN's Home+ program. Climate Careers was proposed as a separate program in the equity sector as part of the 2024-2031 Business Plan application and opened as BayREN's workforce education and training program in 2024. With this Business Plan, BayREN is proposing to expand this program into a more robust program called BayREN Works. All aspects of this program have been informed by stakeholder engagement.

Both residents served through Green House Calls and prospective customers have been surveyed²⁴⁷ to provide feedback on the program and barriers to participation. Based on the feedback received, Rising Sun is working to improve program messaging including development of standardized information on program benefits, together with frequently asked questions and quick-reference guides to provide simpler and clearer information to Green House Calls recipients about what to expect.

Climate Careers youth participants also provide feedback at the conclusion of their participation in the program. Eighty-eight percent of Climate Careers participants reported that their overall professional skills improved because of participating in

²⁴⁷ CivicMakers, *BayREN Climate Careers Study* (Bay Area Regional Energy Network, November 2025).

1 the program, while 86 percent of participants felt more prepared to enter the
2 workforce. All 43 participants in 2024 identified as low income, with 86 percent
3 identifying as Black, Indigenous, People of Color (BIPOC).

4 While reporting high overall satisfaction with the program, alumni also requested
5 additional guidance on green career pathways and longer-term support. In 2021,
6 Rising Sun began placing a limited number of youth in externships following their
7 completion of the Climate Careers program, and in 2024, five externs were offered
8 permanent jobs at their host sites.

9 Building on this feedback and experience, BayREN and Rising Sun are proposing to
10 increase the number of externships, with BayREN providing support for externs
11 working in the energy sector. The program will also offer additional support to
12 alumni, such as career coaching and mentorship.

13 BayREN also engaged with a number of stakeholders around the need for
14 contractor training, particularly with installation and maintenance of
15 decarbonization technologies such as heat pump water heaters. The Bay Area Air
16 District's Implementation Working Group, which included BayREN staff, assessed
17 workforce needs and noted "the need for more outreach, training, and incentive
18 program participation, especially for small independent contractors" for
19 implementation of the zero-NOx water heater rule.²⁴⁸ The Emerald Cities
20 Collaborative, who runs a multi-month electrification academy for disadvantaged
21 contractors in the Bay Area, found that contractors benefit from additional
22 mentoring and assistance beyond an initial training to cement what they learned. In

²⁴⁸ Bay Area Air Quality Management District, Staff Report: Informational Update Regarding Regulation 9, Rule 6 (December 2024), https://www.baaqmd.gov/~media/dotgov/files/rules/reg-9-rule-4-nitrogen-oxides-from-fan-type-residential-central-furnaces/2021-amendments/documents/20241127_board-report-dec-2024-pdf?rev=f9b89cc7ceb54588b5c505d6f20635e3, 9.

2025, San Francisco ran a Climate Equity Hub as a demonstration project that connects contractors who are new to heat pump water heater technology with experienced mentors to build confidence with the technology. BayREN will be testing and refining this approach in other counties in 2026 and 2027, in order to offer contractor mentorship as a permanent part of the BayREN Works program starting in 2028.

IV. Ongoing Engagement

Stakeholder engagement is an ongoing practice for BayREN, both at the portfolio level and through individual programs. BayREN County Representatives serve as the conduit to the cities and communities within each county, and they engage with them through a variety of ways to both gather input and provide information. This engagement ensures that BayREN's offerings continue to evolve to address the energy- and climate-related challenges experienced in each county.

County-level engagement occurs at regular meetings such as the Alameda County Energy Council Technical Advisory Group, the Contra Costa County Energy Efficiency Collaborative, and the San Mateo County Regionally Integrated Climate Action Planning Support (RICAPS) program. Other examples of stakeholder engagement carried out by county members of BayREN include surveying city staff in Santa Clara County, interviewing staff in San Mateo County, and gathering input at meetings such as the Marin County Climate and Energy Partnership and the Sonoma County Transportation and Climate Authority Climate Action Advisory Committee. BayREN's County Members bring the information and feedback gathered back to the portfolio-level Coordinating Circle and to individual program committees, as well as to each other through bi-monthly county collaboration meetings and directly to

1 regional staff as appropriate, ensuring that BayREN's offerings remain in step with
2 the needs of the region.

3 At the same time, as shown above, BayREN's programs also engage with their
4 target audiences and related stakeholders in order to inform their offerings. One
5 example is the C&S survey of local governments that is planned for 2026. In
6 addition, all programs continuously collect feedback and information from program
7 participants to identify potential areas for improvement.

8 Finally, BayREN will also begin to track and report on Community Engagement
9 Indicators (CEIs), in compliance with D.23-06-055 and future Commission directives.

Chapter 9: Evaluation, Measurement, and Verification

I. Overview

BayREN actively utilizes Evaluation, Measurement, and Verification (EM&V) to identify gaps in the energy efficiency landscape, shape program design, provide insight into challenges, identify strengths, and suggest recommendations for improvement. New programs are assessed for evaluability, and programs are evaluated as soon as sufficient data is available and on an ongoing basis thereafter. Market studies and ad hoc analyses are carried out as needed. This work helps to ensure that BayREN's programs function as designed and to identify when changes are needed.

Other regular EM&V efforts revolve around addressing Commission-directed efforts, such as the equity and market support metrics, measurement of non-energy benefits (NEBs), awareness, knowledge, attitudes and behaviors (AKABs), and community engagement indicators. This work includes identifying how the Commission's direction relates to BayREN's current metrics and indicators, as well as providing recommendations for how changes are needed to align them.

BayREN develops an annual EM&V workplan for each year that identifies the studies that will be conducted that year, the schedule of work, and the budget for each study. This workplan is filed each year on the CPUC's Evaluation Studies Public Document Search website (commonly referred to as the PDA).²⁴⁹

²⁴⁹ Website available at <https://pda.energydataweb.com/#!/>.

II. Planned EM&V Studies and Activities for 2028-2035

BayREN's planned EM&V studies and activities over the next 4- and 8- year cycle falls into the five main categories discussed below.

1. Portfolio-Level Research and Support

At least every two years, BayREN plans to conduct a portfolio assessment. Portfolio assessments look at the performance of the whole portfolio, or entire segments or sectors within it, to evaluate whether they are meeting the appropriate objectives. This type of assessment could also examine one type of metric, such as Total System Benefit (TSB) or NEBs, across the entire portfolio. Studies that support the portfolio, such as examining cross-cutting benefits from BayREN's portfolio of programs, could also fall into this category. In addition to the two planned portfolio assessments, BayREN anticipates carrying out work to optimize its proposed portfolio in relation to the portfolio-level logic model and Portfolio Unique Value Metrics and based on the review of program and portfolio outputs discussed in Chapter 5 during the portfolio plan period.

2. Program Process Evaluations

Two or three process evaluations are planned for each year to identify program strengths as well as areas where improvement is needed, including the participant experience. Program leads work with BayREN's EM&V consultants to identify key areas of focus for these evaluations. In general, BayREN aims to provide a process evaluation for each program every three to four years, although this can vary depending on need. For programs that claim energy savings, these process evaluations will include assessments of TSB and how TSB can be increased. Work

for some other programs includes recommendations on how to report, but not claim energy savings in cases where that is appropriate.

3. Evaluability Studies

When new programs begin or existing ones are redesigned, BayREN ensures that the programs are collecting the data that will be needed to support future evaluations, impact studies and/or metrics. Evaluability studies are generally carried out in the first year or two of a new or redesigned program's operation, and one would be anticipated for BayREN's proposed new regional program.

4. Market Studies

To run effective programs, BayREN needs information about gaps in the market, the need for new services, and how to better reach and serve target audiences. This information is also needed to develop metric baselines for newer or redesigned programs. When there are changes in the market, new studies may be needed. BayREN therefore regularly conducts market studies, such as landscape analyses or market characterizations and assumes up to three market studies could be conducted each year. These may be coordinated with other PAs, as appropriate.

5. Ad Hoc Support

This category includes ongoing work related to metrics and indicators, including review and redesign of metrics, indicators and logic models. Activities in this category also include responses to CPUC requests, and assistance to ensure that the metrics, indicators and program direction are aligned with new policy direction or initiatives as they arise.

6. EM&V Activities for Home Energy Score California

BayREN would like to conduct similar types of EM&V activities for its newly launched statewide program, Home Energy Score (HES) California, such as carrying out an evaluability study within the first two years of program launch, conducting a program process evaluation approximately every three years, and carrying out two market studies to support program roll-out in all parts of the state. In order to be able to do this, BayREN needs access to and control over the PA EM&V funds for the program, and has therefore requested that the four Investor-Owned Utilities (IOUs) provide BayREN with these funds, which is a different approach from what has been taken by the IOU PAs who lead statewide programs.

Another challenge is that EM&V activities will not necessarily occur for HES California every year, but the full amount of EM&V funds will be needed. As a result, BayREN needs to be able to carry unused PA EM&V funds over from year to year within the 4-year portfolio period. This is also different from the past practice for IOU statewide programs.

BayREN has been discussing these challenges and working with the IOUs to resolve them, and the planned EM&V summarized in the table below assumes that BayREN is able to fully access all statewide HES California PA EM&V funds and carry them over from year to year within the portfolio period until needed.

Table 9.1 Planned EM&V Activities

	2028-2031 Period	2032-2035 Period
Portfolio-Level	• Portfolio Assessment (2028 and 2030)	• Portfolio Assessment (2032 and 2034)
Program Evaluability Studies	• Incubator for Community Designed Initiatives (2029 or 2030) • BayREN Works expansion (2028 or 2029)	• New or redesigned programs as appropriate (TBD)

	2028-2031 Period	2032-2035 Period
Program Process Evaluations	• Process evaluations across all program areas - at least one in this cycle (estimated year) ○ EASE Home (2028) ○ BAMBE (2028) ○ HERE (2029) ○ BRRR (2029) ○ BayREN Business (2029) ○ BayREN Works (2030) ○ IES (2030) ○ TDS (2030) ○ Codes and Standards (2031) ○ Incubator (2031) • Statewide Home Energy Score California (2028)	• Process evaluations across all program areas - at least one in this cycle ○ Each program will be evaluated within 3-4 years of the past study
Market Studies	• Landscape analyses or other market specific research as needed (up to three per year)	• Landscape analyses or other market specific research as needed (up to three per year)
Ad Hoc	• Ongoing metric and indicator support • TBD as needed	• Ongoing metric and indicator support • TBD as needed

III. EM&V Budget Allocation

BayREN's proposed EM&V budget is four percent of the proposed portfolio budget, consistent with CPUC direction, for both the regional portfolio and the statewide HES California program. BayREN is requesting a slight increase in its portion of the overall EM&V budget from 27.5% to 30%²⁵⁰ for both the regional and statewide portions of the portfolio.

For the regional portfolio, this increase will accommodate the work described above, including the planned portfolio assessment and portfolio optimization projects. For the statewide HES California, this increase will support the continued

²⁵⁰ California Public Utilities Commission, *Decision Providing Policy Guidance for the Development of Energy Efficiency Rolling Portfolio Business Plans*, D.16-08-019 (Rulemaking 13-11-005), August 18, 2016.

- 1 roll-out of the program throughout the state, allowing for early identification and
- 2 analysis of challenges and providing recommendations for program improvements
- 3 as appropriate.

1 **Chapter 10**

2 Not applicable.

Chapter 11: Recommendations for New or Modified EE Policy

I. Introduction

In support of the advancement of the Commission's energy efficiency, decarbonization, equity, and system reliability objectives, this chapter offers recommendations for policy changes and refinements within the scope of R.25-04-010. Specifically, BayREN recommends:

1. Refinement of the Hard-to-Reach (HTR) definition to include Communities with Access and Functional Needs (AFN) individuals, to better align with structural participation barriers.
2. Action to align NTG treatment in light of the structural barriers faced by equity populations.
3. Continuation of Integrated Demand Side Management (IDSM) authority to capture synergistic system benefits.
4. Clarification and action to provide funding continuity for statewide programs.

Each recommendation builds upon existing Commission frameworks and seeks to ensure that portfolio design, cost-effectiveness treatment, and program implementation remain aligned with evolving policy priorities, including avoided peak load, resilience, and equitable access to energy efficiency. BayREN also recommends changes to various definitions and processes to streamline multi-family projects as set forth in the motion filed on January 18, 2024 in the previous Energy Efficiency Rulemaking (R.13-11-005), although those items are not included

here as they are being addressed on a separate track within the current Energy Efficiency Rulemaking (R.25-04-010).

II. The Hard-to-Reach Definition Should be Revised to Include Access and Functional Needs Communities

1. Current HTR Criteria and Gaps

The Commission has long acknowledged both the need and the priority of serving ratepayers that are hard-to-reach and are underserved by programs. In D.23-06-055, the Commission explained that the purpose of the equity segment within the Energy Efficiency portfolio segmentation framework is to provide programs to HTR or underserved customers and disadvantaged communities in advancement of the ESJ Action Plan. The objectives of the equity segment rely on three related but distinct customer criteria:

- Hard-to-Reach – defined through a barrier-based test incorporating a geographic criterion and additional criteria such as income qualification (California Alternate Rates for Energy (CARE), Energy Savings Assistance (ESA), or Family Electric Rate Assistance (FERA)), housing type (multi-family and mobile home tenants), language, and split incentive conditions.²⁵¹
- Disadvantaged communities (DACs) – a subset criteria of HTR, geographically identified pursuant to Health and Safety Code Section 39711. (D.23-06-055 at 50.)

²⁵¹ CPUC D.23-06-055, Conclusion of Law 33.

- Underserved customers – defined by statute as members of an underserved community pursuant to Public Utilities Code Section 1601(e).²⁵²

The current definition of hard-to-reach, however, excludes populations that face significant barriers to program participation, including but not limited to individuals with Access and Functional Needs. AFN populations are defined as:

Individuals who have developmental or intellectual disabilities, physical disabilities, chronic conditions, injuries, limited English proficiency or who are non-English speaking, older adults, children, people living in institutionalized settings or those who are low income, homeless, or transportation disadvantaged, including, but not limited to those who are dependent on public transit or those that are pregnant.²⁵³

The Commission previously identified collaboration with and understanding the needs of this group to be a critical topic for consideration in Version 2.0 of the CPUC Environmental & Social Justice Action Plan (ESJ Action Plan).²⁵⁴ Recognizing the importance of understanding and responding to the needs of the AFN communities, the CPUC has directed staff to focus on ensuring proceedings and programs “meaningfully account for and include the needs of people with AFN.”²⁵⁵

The 2025 ESJ Action Plan Report provides updates on Commission activities related to AFN communities.²⁵⁶ In three Decisions²⁵⁷ issued through R.18-12-005, the Commission has directed the Investor-Owned Utilities (IOUs) (and small municipal

²⁵² CPUC D.23-06-055, 45-48.

²⁵³ Cal. Gov’t Code §8593.3(f)(1).

²⁵⁴ CPUC ESJ Action Plan 2.0, 4.

²⁵⁵ CPUC ESJ Action Plan 2.0, 19.

²⁵⁶ CPUC ESJ Action Plan Report 2025, 22-25.

²⁵⁷ California Public Utilities Commission, *Decision Adopting Phase 1 De-Energization Guidelines*, D.19-05-042 (Rulemaking 18-12-005), May 30, 2019. California Public Utilities Commission, *Decision Adopting Phase 2 Updated Guidelines*, D.20-05-051 (Rulemaking 18-12-005), June 5, 2020. California Public Utilities Commission, *Decision Adopting Phase 3 Guidelines*, D.21-06-034 (Rulemaking 18-12-005), June 29, 2021.

jurisdictional utilities) to take actions in support of AFN communities relative to Public Safety Power Shutoff (PSPS) events. While these actions are critical, there are more opportunities for this population to benefit from ratepayer-funded energy efficiency programs so that they can enjoy the programmatic benefits of energy affordability, health and resilience on a regular basis and not only during critical events like PSPS.

While the current HTR criteria captures income qualification (CARE/ESA/FERA), housing type (multi-family tenants), language, and split incentives, it excludes other groups that should fit within the HTR definition, including AFN individuals. Adding this group into the HTR definition would be a natural expansion of the definition, as there is significant overlap between the two populations. This addition would break down an existing regulatory silo and would likely result in more targeted programming to this population within the primary purpose of equity segment programs.

2. Proposed Modification to the HTR Definition

The Commission's definition of Hard-to-Reach seeks to address "those customers who do not have easy access to program information or generally do not participate in energy efficiency programs due to a language, income, housing type, geographic or home ownership (split incentives) barrier."²⁵⁸ The Commission's intent with this definition is that programs targeted at HTR customers should prioritize the most underserved customers, because they are likely the *hardest* to reach.²⁵⁹ While this definition expressly acknowledges that certain populations and

²⁵⁸ California Public Utilities Commission, "Energy Efficiency Policy Manual," April 2020, <https://www.cpuc.ca.gov/-/media/cpuc-website/divisions/energy-division/documents/energy-efficiency/eepolicymanualrevised-march-20-2020-b.pdf>.

²⁵⁹ CPUC D.18-05-041, 41-42.

property types face significant participation barriers, it excludes other high-need groups facing similar barriers, such as AFN communities. Accordingly, BayREN recommends an addition to the HTR definition by adding the following criterion:

Those communities and customers who have, according to the definition provided in CA Gov’t Code §8593.3(f)(1), Access and Functional Needs (AFN).

The foundational CPUC ESJ Action Plan recognized that although its definition of ESJ Communities captures “a diverse group of communities in need of prioritization, some additional priority communities are not specifically named. *Notably, communities with AFN and those with other medical vulnerabilities are not specifically captured...*[and] [w]e encourage CPUC initiatives to critically consider all the various kinds of populations that warrant prioritization in policies and programs.”²⁶⁰

Accordingly, this expanded HTR definition is in alignment with prior Commission recognition of this population as having a higher level of need, as well as the primary purpose of the equity segment. Refining the HTR definition would therefore strengthen the Commission’s existing barrier-based framework without altering the statutory foundations of underserved or DAC classifications.

III. Net-to-Gross (NTG) Ratios and Equity Customers

1. NTG and Current Methodology

Net-to-Gross is used by the Commission to adjust gross energy savings to reflect the portion of savings attributable to program intervention. NTG is defined as the

²⁶⁰ CPUC ESJ Action Plan 2.0, 21-22 (emphasis added).

ratio of net program load impact divided by gross program load impact and is used to account for “free-ridership,” meaning savings that would have occurred absent the program.

NTG values are applied to gross savings to determine net savings. Net savings directly affect:

- Total Resource Cost (TRC) results;
- Total System Benefit (TSB);
- Portfolio cost-effectiveness outcomes; and
- Reported program performance.

Calculating NTG ratios involves estimating what percentage of customers would have carried out an improvement without assistance from the program. While the applicability of NTG ratios for hard-to-reach customers has evolved to include direct install and specific measure application types (MATs),²⁶¹ its applicability to the equity segment, which includes HTR, underserved, and disadvantaged communities, remains unaddressed in Commission policy.

2. Misalignment in Current Application of NTG

Uniform NTG assumptions are derived from generalized market behavior and applied across customer segments. This approach assumes similar levels of free-ridership regardless of structural barriers, income constraints, geographic disadvantage, housing type, or market access.

²⁶¹ CPUC Energy Division, Addendum to CPUC Guidance on Use of Default Net-to-Gross Ratio for Hard-to-Reach Customers (May 3, 2022), <https://cedars.cpuc.ca.gov/deer-resources/deemed-measure-packages/guidance/file/3042/download/>.

Equity Segment²⁶² participants,²⁶³ by definition, include:

- Hard-to-Reach customers;
- Disadvantaged communities; and
- Underserved customers.

Applying the same NTG assumptions to equity segment program participants as to the broader population implicitly assumes that equity participants are equally likely to carry out energy improvements as non-equity participants. This assumption is faulty, as illustrated by the following example.

The California electronic reference manual (eTRM) assigns a NTG value of 0.2800 for the SWBE006 Ceiling Insulation (Residential (measure (non-direct install). An NTG of 0.28 assumes that 72 percent of the gross savings would have occurred absent program intervention, or that 72% of participants would have installed the ceiling insulation even without program assistance. However, capital-intensive envelope retrofits such as ceiling insulation are unlikely to occur absent program support when financial constraints, housing tenure limitations, or structural barriers are present. Free-ridership is lower for equity customers²⁶⁴ and the level of free-ridership is therefore being grossly overstated. This type of overstatement for equity segment participants:

- Artificially suppressed net savings;
- Reduces TRC and TSB outcomes; and

²⁶² CPUC D.23-06-055, 34.

²⁶³ CPUC Resolution E-5351, 7 (stating that an equity segment participant “does NOT [sic] have to be hard-to-reach, located in a disadvantaged community, or underserved but must be a participant in an Equity segment program”).

²⁶⁴ Patrick Malone, Nina Ong, and Max Chang, *State Net-to-Gross Ratios* (Cambridge, MA: Synapse Energy Economics, January 23, 2015), <https://www.synapse-energy.com/sites/default/files/NTG-Research-14-053.pdf>.

- Disincentivizes offering deep retrofit measures within equity portfolios.

The limitations of applying generalized NTG assumptions to equity populations are also reflected in recent research examining NTG values for hard-to-reach customers. A 2024 study examining Net-to-Gross ratios for Hard-to-Reach customers²⁶⁵ did not provide a sufficient evidentiary basis to determine NTG treatment for equity-segment programs. The study relied on coalesced survey data from programs implemented during Program Years 2019-2021,²⁶⁶ which pre-date the Commission's segmentation framework adopted in Decision 21-05-031 and therefore do not reflect the design or delivery approaches of today's equity-targeted programs. The Commission recognized in D.21-05-031 that programs in the Equity segment serve fundamentally different policy objectives than resource acquisition programs.²⁶⁷

Additionally, the analysis was largely driven by a single measure category—smart communicating thermostats—in residential downstream programs, limiting the applicability of the results to other measure types, including electrification readiness and building envelope improvements. The study also relied on limited commercial samples and incomplete data on key Hard-to-Reach classification criteria, which the authors themselves acknowledge may result in misclassification of participants and reduced statistical precision. As a result, the study stated, “Results are not robust enough to support providing a different NTGR for HTR

²⁶⁵ DNV, *Forward Looking Research: Cross-Program Net-to-Gross Ratios for Hard-to-Reach Customers of Downstream Programs*. CALMAC Study ID CPU0379.01 (Oakland: California Public Utilities Commission, 2024), https://www.calmac.org/publications/GroupA-FLR_NTGR-for-HTR-Customers-Downstream_2024-08-23.pdf.

²⁶⁶ Which also coincided with COVID-19 impacts.

²⁶⁷ CPUC D.21-05-031, 13-14 (stating “Overall, we find it important to reduce the conflict between cost effectiveness and other equally or more important policy objectives such as equity and support for the energy efficiency market”).

1 customers served by downstream rebate programs.”²⁶⁸ Taken in context, this does
2 not mean that the NTG values should not be updated, but rather, it reflects the
3 methodological and data limitations of the study that prevent it from providing a
4 definitive basis for NTG policy for equity-segment programs.

5 Finally, the study evaluated only IOU-administered programs and did not examine
6 Regional Energy Network (REN) programs or community-based delivery models
7 designed specifically to overcome structural participation barriers. REN programs
8 rely on localized engagement, community partnerships, and intensive customer
9 assistance models that differ substantially from general-market IOU programs. For
10 these reasons, the study should not be interpreted as conclusive evidence
11 regarding NTG assumptions for equity-targeted programs.

12 Importantly, free-ridership is not solely a function of customer characteristics, but
13 also of program design and delivery. Equity-segment programs rely on targeted
14 outreach, language support, technical assistance, and barrier-removal strategies
15 specifically intended to reach customers who would not otherwise participate.
16 These design features materially reduce the likelihood that participants would
17 undertake energy efficiency improvements absent program intervention.

18 NTG values greater than 1.0 are not unprecedented in Commission evaluations. In
19 such cases, spillover, avoided increases in energy usage, or broader program
20 influence can result in net savings that exceed the directly measured gross savings.
21 For example, the Evergreen evaluation of the Disadvantaged Communities – Single-
22 family Solar Homes (DAC-SASH)²⁶⁹ program found NTG adjustment factors ranging

²⁶⁸ DNV, “Forward Looking Research”, 4.

²⁶⁹ California Public Utilities Commission, *Attachment A to Rulemaking 25-01-005*, January 26, 2026, 73, table 38, <https://docs.cpuc.ca.gov/PublishedDocs/Efile/G000/M596/K242/596242292.PDF>.

from 1.02 to 1.24, reflecting that without the program, participants' energy usage and bills would have increased relative to a comparison group. These results demonstrate that NTG values greater than one can occur when programs produce impacts beyond the directly measured intervention and are consistent with established evaluation practice. Similar dynamics can occur in equity-focused energy efficiency and electrification programs, where program intervention prevents increases in energy consumption, enables comprehensive upgrades, and produces broader system benefits that would not occur absent targeted outreach and barrier-removal strategies.

3. Policy Misalignment

The equity segment is intended to address disparities in access and remove participation barriers. A blanket NTG approach assumes equal likelihood of independent adoption across all customer types. However, that assumption does not reflect the economic and structural realities embedded in the Commission's own HTR, DAC, and underserved definitions. Where customers face documented barriers—income constraints, accessibility limitations, geographic isolation, or split incentives—free-ridership is materially lower than population-wide averages. The Federal Reserve reported in 2025 that a third of American adults would not be able to cover a \$400 emergency expense using cash or the equivalent,²⁷⁰ yet incremental costs for most efficiency measures in California is considerably higher.²⁷¹

²⁷⁰ "Adults Who Would Cover a \$400 Emergency Expense Using Cash or Its Equivalent," Board of Governors of the Federal Reserve System, last updated May 28, 2025, <https://www.federalreserve.gov/consumerscommunities/sheddataviz/unexpectedexpenses.html>.

²⁷¹ California Statewide Codes and Standards Program, *2022 Cost-Effectiveness Study: Existing Single Family Building Upgrades* (Statewide Reach Codes Team, April 25, 2024), https://localenergycodes.com/download/1222/file_path/fieldList/Single%20Family%20Retrofits%20CostEff%20Report.pdf.

1 Applying uniform NTG values therefore undervalues equity program impact and
2 undermines the Commission’s equity objectives. NTG ratios also affect the
3 measurement of equity outcomes. Reports to the legislature²⁷² use savings from
4 the California Energy Data and Reporting System (CEDARS) that are based on these
5 NTG ratios. Resolution E-5351 includes measurements of equity outcomes through
6 participation and bill savings indicators, including the “Median of equity target
7 participants’ expected first-year bill savings.”²⁷³ If these are calculated based on
8 energy savings with NTG factors, the bill savings will also be understated, directly
9 affecting reported equity performance and portfolio valuation.

10 More broadly, NTG ratios are intended to ensure that program savings are
11 attributed accurately to program interventions. Where NTG assumptions materially
12 misrepresent the likelihood that customers would undertake energy efficiency
13 improvements absent program support, the resulting net savings calculations no
14 longer reflect true program attribution. For equity-segment programs designed
15 specifically to overcome structural participation barriers, applying generalized NTG
16 assumptions derived from broader market programs risks systematically
17 understating program impact and mischaracterizing the effectiveness of the
18 Commission’s equity-focused initiatives.

19 4. Recommended Commission Action

20 BayREN recommends that the Commission take action to align NTG treatment in
21 light of the structural barriers faced by equity populations, in order to ensure that
22 program attribution, cost-effectiveness calculations, and reported savings more
23 accurately reflect the incremental impact of programs designed to serve the state’s

²⁷² See, e.g., CPUC *Report on Demand-Side Management Programs*.

²⁷³ CPUC Resolution E-5351, Metric table, 91.

most underserved communities. To start this process, BayREN recommends that the Commission direct the preparation of a study or studies on appropriate NTG treatment for equity segment participants, including at least the following:

- Consultation and input from PAs and implementers involved with equity segment programs.
- Careful determination of the number and type(s) of studies needed. For example, separate studies may be needed for different sectors or delivery types.
- Consideration of the data needed and available to support a study in order to provide robust results.

In cases where sufficient data cannot be obtained, BayREN further recommends consideration of the best default value to apply, which could be based on results from other studies or use other reasonable assumptions or methodologies that recognize the realities of the equity segment.

Because NTG is intended to measure incremental program attribution, it should reflect the structural participation barriers inherent in the equity segment.

Differentiated NTG treatment would align cost-effectiveness calculations with the Commission's adopted equity framework.

IV. Integrated Demand Side Management Continuation

1. BayREN's Approved IDSM Framework

The Commission has encouraged coordination across demand-side resources to maximize system value and advance decarbonization objectives. As energy

1 efficiency policy evolves, portfolio performance is increasingly evaluated in the
2 context of avoided peak demand, load flexibility, resilience, and greenhouse gas
3 reductions, rather than solely energy savings. In D.23-06-055, the Commission
4 allowed each PA to submit a Tier 3 Advice Letter proposing to expend a portion of
5 its energy efficiency budget on a pilot basis for integration of IDSM to allow for
6 integrated program delivery.

7 BayREN's IDSM framework was approved together with other PAs in September
8 2025 through its Tier 3 Advice Letter 25-E and incorporated into its Commission-
9 approved portfolio structure. This framework authorizes coordinated delivery of
10 energy efficiency and complementary demand-side measures.

11 2. Gap in Current Policy Context

12 As avoided peak load and system resilience become central to energy policy,
13 continued integration of energy efficiency, demand response, and distributed
14 energy resources is essential to the capture of synergistic benefits.

15 Siloed program delivery limits the ability to:

- 16 • Align envelope improvements with electrification and load flexibility;
- 17 • Capture permanent peak load reductions alongside flexible load strategies;
- 18 and
- 19 • Deliver comprehensive solutions to customers facing structural barriers.

20 For Equity Segment participants—HTR, DAC, and underserved customers—IDSM
21 provides compounded benefits that extend beyond isolated efficiency measures.
22 Coordinated delivery improves affordability, resilience, and health outcomes while
23 enhancing system value through peak load reduction. RENs are uniquely positioned

to implement integrated strategies through regional coordination and community-based delivery models, particularly for equity populations.

3. Recommended Commission Action

To allow for continued coordination and integration of energy efficiency and IDSM in the Business Plan period, BayREN recommends that the Commission:

1. Affirm of the approval of the IDSM frameworks from the Advice Letters extends through the 2028-2035 Business Plan period; and
2. Encourage continued integration of EE, DR, and DER delivery to capture avoided peak load, resilience, and equity benefits.

As energy efficiency evolves to reflect avoided peak demand and system resilience, preserving and strengthening IDSM frameworks will ensure that demand-side resources are deployed in a coordinated, cost-effective, and equity-centered manner.

V. Statewide Programs Funding Continuity

1. Statewide Programs Authorized on the Same Terms of the Decision

In D.23-06-055, Portfolio Administrators received approvals for both regional and statewide programs between the period of 2024-2027. As such, budgets were approved for this funding cycle and the Commission clarified the manner in which the PAs should treat unspent and uncommitted funds:²⁷⁴

²⁷⁴ CPUC D.23-06-055, 17-18.

Unspent and uncommitted funds should be reported in each PA's annual report. The reporting should include funds collected and spent over the four-year portfolio cycle, annually and cumulatively, and at the end of a portfolio cycle, unspent funds that can be applied to offset collections in subsequent portfolio cycles.

The current process for statewide programs is not consistent with this direction. Instead, the Statewide PAs, in their Statewide Co-Funding Agreement (CFA), require the Lead Party to return to each Non- Lead Party the unused portion of the Monthly Payments made, along with interest accrued through an Annual True-Up Payment. These payments are the sum of any monthly payment from the previous year, plus interest, minus the program costs. Based on the Commission's clarification above, these funds should have the ability to rollover and be spent within the portfolio cycle, with unspent and uncommitted funds returned to the Non-Lead Party from which they were received at the end of the four-year portfolio cycle.

2. Timing Issue

As the first non-IOU lead administering a statewide program, BayREN has experienced challenges that are hindering the launch and implementation of its statewide HES California program.

- First, although BayREN's approved Advice Letter included funds for 2025,²⁷⁵ these funds were not received until December 2025 or later due to contracting and other delays. As a result, BayREN was not able to start work on the program until very late in the year and 2025 funds could not be fully

²⁷⁵ BayREN, AL 28-E (Statewide HES Program Request).

1 expended during the year, constraining the ability to launch the statewide
2 program as planned.

- 3 • Second, delivery of 2026 funds has also been delayed. Current processes
4 require each Lead Party to receive approval from all Non-Lead Parties for
5 monthly disbursement amounts through an annually updated table (Exhibit
6 B) detailing the requested monthly payments for the subsequent year.
7 BayREN submitted its updated table in December 2025 and the approval
8 process from Non-Lead Parties can vary from weeks to months, thus
9 delaying release of 2026 monthly payments.
- 10 • Third, BayREN understands that the statewide IOU Lead PAs are able to
11 continue operation of their programs because of their access to the
12 Statewide Energy Efficiency Balancing Account (SWEEBA) which is maintained
13 by the IOUs. BayREN does not have access to the SWEEBA, and as a coalition
14 of local governments, also does not have access to other funding sources or
15 revenue streams which would allow it to regularly cover costs when
16 payments are delayed.

17 These barriers have affected BayREN's ability to successfully launch its statewide
18 program as intended. Since BayREN is expected to return unused funds from 2025
19 and has not received 2026 payments from some Non-Lead Parties, BayREN's
20 program lead, StopWaste, has been forced to instruct the program implementer for
21 Home Energy Score (HES) California to pause or scale back operations for the
22 program until such payments are received.

23 3. Recommended Commission Action

24 BayREN recommends that the Commission:

- Clarify that Lead PAs of statewide programs should have access to all approved funds within a portfolio cycle, and that unspent or uncommitted funds should be returned to statewide Non-Lead Parties at the end of the four-year portfolio cycle.
- Direct the Statewide PAs to develop a procedure for non-IOU PAs leading a statewide program to have access to a SWEEBA or similar type of account or mechanism, using ratepayer funds, in order to allow for continued program operations when funding is delayed by Non-Lead Parties.

VI. Conclusion

BayREN appreciates the Commission's consideration of these proposed recommendations for new and/or modification to existing energy efficiency policy. All recommendations are consistent with CPUC policy of increasing access to ratepayer funded programs while also ensuring that the benefits of the programs are accurately measured.

Attachment A

Testimony Sponsors

and

Statements of Qualifications

Table of Testimony Sponsors

Chapter	Sponsors
Chapter 1: Executive Summary	Jane Elias
Chapter 2: Portfolio Summary	Karen Kristiansson Tim Olsen
Chapter 3: Portfolio Strategies	Jane Elias Karen Kristiansson Jennifer Berg Marc Costa
Chapter 4: Forecast Methodology and Zero-based Budgeting	Karen Kristiansson
Chapter 5: Portfolio Management	Jane Elias Karen Kristiansson Jennifer Mitchell-Jackson Mary Sutter
Chapter 6: Segmentation and Sector Strategy	Jane Elias Karen Kristiansson
Chapter 7: Portfolio Coordination	Karen Kristiansson
Chapter 8: Stakeholder Engagement	Karen Kristiansson Aleka Seville
Chapter 9: Evaluation, Measurement, and Verification	Jane Elias Karen Kristiansson
Chapter 11: Recommendations for New or Modified EE Policy	Jane Elias Marc Costa Jennifer Berg

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San Francisco, CA 94105

Statement of Qualifications

Jane Elias

Chapters 1, 3, 5, 6, 9, and 11

Description of Responsibilities

I have served as the Director of Energy Programs at the Association of Bay Area Governments (ABAG) since July 2023. In this role, I am the BayREN Portfolio Administrator and responsible for oversight of energy efficiency programs, reporting and compliance, strategic planning, management of evaluation activities, regulatory filings, and coordination with Pacific Gas and Electric Company and the seven Community Choice Aggregators (CCA) in our region. I am a voting member of the California Energy Efficiency Coordinating Committee (CAEECC).

Summary of Educational and Professional Background

Prior to joining ABAG, I worked for thirteen years at the County of Sonoma, holding multiple positions including the Energy and Sustainability Division Manager. Earlier in my career, I was the Principal and Founder of an energy efficiency consulting business. I have served on several Boards and Committees related to climate, energy and energy financing. Currently, I serve on the Board of the Local Government Sustainable Energy Coalition (LGSEC), whose mission is to advance local government leadership on clean energy and climate resilience through regulatory action, policies, and programs.

I hold a Bachelor of Arts degree from the University of California, San Diego, graduating with honors. In addition, I obtained the Credentialed California County Senior Executive certification in 2017 from the California State Association of Counties. I have over twenty years of building and energy experience. I have held CGBP, GreenPoint Rater – New & Existing, HERS Rater, BPI Building Analyst and Envelope Professional, and Certified Energy Plans Examiner certifications.

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Statement of Qualifications

Karen Kristiansson

Chapters 2, 3, 4, 5, 6, 7, 8, 9, and Application Excel Sheets

Description of Responsibilities

I am the Assistant Director of Energy Programs at the Association of Bay Area Governments (ABAG). My responsibilities include managing BayREN's budget, overseeing regional communications, supporting BayREN programs, coordinating with member agencies, and ensuring BayREN governance procedures are followed. I have served in this role since 2025.

Summary of Educational and Professional Background

I joined ABAG and BayREN in 2018 as the Program Lead for BayREN's Codes & Standards Program and managed the program for seven years. Prior to that, I worked at the Bay Area Air Quality Management District as a Principal Environmental Planner where duties included reviewing greenhouse gas analyses and climate action plans. Earlier in my career, I served as Deputy Town Planner for the Town of Portola Valley where I managed long-range and current planning projects and oversaw code enforcement actions. I worked before that in the private sector as a Principal Planner with Spangle Associates. In that role, I managed complex planning projects, led consultant teams, worked with citizen committees, and conducted research funded by the National Science Foundation.

I completed a Bachelor of Arts degree at Williams College, with a major in English and concentration in Environmental Studies, and a Master of Regional Planning at the University of North Carolina, Chapel Hill, specializing in Environmental and Land Use Planning.

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Statement of Qualifications

Jennifer Berg

Chapters 3 and 11

Description of Responsibilities

I am the former Director of Energy Programs at the Association of Bay Area Governments (ABAG). In that capacity, I was responsible for managing all the agency's energy programs, including the Bay Area Regional Energy Network (BayREN).

I was the BayREN Program Manager from January 2013 until June 2023. I oversaw BayREN's portfolio of energy efficiency programs, including strategic planning and preparation of regulatory filings, as well as collaboration with other Portfolio Administrators. I was a member of the California Energy Efficiency Coordinating Committee (CAEECC) since it was formed and served as the Co-chair.

Since leaving ABAG, I have continued to provide support to Regional Energy Networks on administration, regulatory policy and programmatic activities.

Summary of Educational and Professional Background

Prior to joining ABAG, I was an attorney specializing in toxic tort litigation. In addition to serving as the Co-Chair of CAEECC, I served on the Board of the Local Government Sustainable Energy Coalition, whose mission is to advance local government leadership on clean energy and climate resilience through regulatory action, policies, and programs. I currently serve on the Board of Directors of a nonprofit organization dedicated to workforce development.

I have a Bachelor of Arts degree from the University of California, Santa Barbara, graduating with honors, a Juris Doctorate from the Catholic University of America in Washington, DC, and an Executive Certificate in Sustainable Management from the Presidio Graduate School.

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Statement of Qualifications

Marc Costa

Chapters 3 and 11

Description of Responsibilities

I am a Director with The Energy Coalition, a 501(c)3 nonprofit organization whose mission is to empower communities to leap into the future of clean energy. My work with BayREN has included providing regulatory consulting services focused on policy and proceeding tracking, as well as supporting the development of filings aligned with BayREN's portfolio goals and objectives.

Summary of Educational and Professional Background

I have more than fifteen years of experience in the building industry focusing on areas ranging from advanced energy community planning, federal energy data standards, and software development. I am also an author and contributor to local government, state, federal, and international energy policy. I am an active member of multiple policy and technical initiatives at the United Nations and International Energy Agency focusing on the rapid, equitable acceleration of electrification paired with clean energy resources. I serve in leadership positions at the GridWise Architecture Council, Local Government Sustainable Energy Coalition, California Technical Forum, and numerous industry groups. I also co-founded the OpenStudio Coalition to ensure free and open access to building energy modeling tools across the world.

I hold a B.S. in management Science from University of California at San Diego as well as a B.S. in construction engineering from California State University at Long Beach. I am a LEED AP, CGBP, and BOC Level II, and Certified Passive House Consultant and Tradesperson.

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Statement of Qualifications

Jennifer Mitchell-Jackson

Chapter 5 (Metrics Support)

Description of Responsibilities

I am a Partner with Grounded Research and Consulting, a firm that specializes in Evaluation, Design and Implementation, Process Evaluations, Metric Development and Stakeholder Engagement. My work with BayREN has included market research and analysis, process evaluations, development of BayREN value metrics and associated program logic models.

Summary of Educational and Professional Background

I co-founded Grounded Research and Consulting in 2016.

Prior to that, I was a partner at Opinion Dynamics, where I worked with dozens of clients across the country, acting as a researcher and technical advisor on hundreds of program and market studies. I also developed project methodologies, questionnaires, and discussion guides, interpreted survey results and presented results and recommendations to clients.

I previously was a research affiliate at Lawrence Berkeley National Laboratory, where I tested the energy use of appliances in support of state and national energy efficiency standards.

Prior to that, I was a Researcher/Consultant for the California Public Utilities Commission, where I assisted in the oversight of utility-run energy efficiency programs. I also served as a liaison between the utilities and participated in the utility stakeholder-regulatory committee that guides measurement and verification of these programs.

I have a Bachelor of Science from Yale University, and a Master of Science in Energy and Resources from the University of California, Berkeley.

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Statement of Qualifications

Tim Olsen

Chapter 2, Exhibit 3, and Application Excel Sheets

Description of Responsibilities

I am an Assistant Director at The Energy Coalition, where I support BayREN with regulatory reporting and data management. I have been working in this capacity on behalf of RENs since 2019 and on behalf of program implementers since 2013. I currently oversee implementation and act as the main point of contact for regulatory reporting contracts.

My responsibilities include overseeing the delivery of technical inputs and outputs for forecasts, including Business Plans, True-up Advice Letters, and Mid-Cycle Advice Letters, as well as monthly, quarterly, and annual reports via CEDARS. I manage and oversee portfolio cost-effectiveness analyses, including supervision of Cost Effectiveness Tool (CET) runs at the portfolio, sector, and program levels. I participate in working groups and regulatory workshops to align savings methodologies, including deemed, custom, and NMEC approaches, and support enhancement of cost-effectiveness strategies across sectors.

Summary of Educational and Professional Background

Prior to working at The Energy Coalition, I was a Project Scientist with ERM, where I conducted greenhouse gas and sustainability analyses and reporting, supported environmental compliance programs, led and supported audits in air quality and GHG compliance, and developed environmental data management systems for clients across multiple sectors.

I am a Leadership in Energy & Environmental Design Accredited Professional (LEED AP). I also completed ARB GHG Verification Training and Certification.

I hold a Bachelor of Science in Communication Arts from Cornell University and a Master of Environmental Science and Management from the University of California, Santa Barbara.

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Novato, CA 94947

Statement of Qualifications

Aleka Seville

Chapter 8

Description of Responsibilities

I am Founder and Principal at Collective Strategies Consulting, a firm that specializes in organizational strategy development, coalition building, program and policy design, and stakeholder engagement. My work with BayREN has included regional coordination and partnership building, developing and leading stakeholder engagement efforts, program design, needs assessments, and organizational strategy development.

Summary of Educational and Professional Background

I founded Collective Strategies Consulting in 2020. Prior to that, I was Director of Climate Programs at the Sonoma County Regional Climate Protection Authority (RCPA), a special district in Sonoma County tasked with coordinating climate action across the cities, county, CCA, and other partner agencies. In that role, I led Sonoma County's BayREN program outreach, developed RCPA's organizational strategy, and coordinated building decarbonization efforts with Sonoma County, seven cities, and Sonoma Clean Power.

Before joining RCPA, I was the Director of Community Adaptation at Four Twenty Seven, a climate risk analytics firm, where I led all resilience projects for government and philanthropic clients. Prior to that, I served as a Climate Project Specialist for the Association of Bay Area Governments' Joint Policy Committee, where I engaged public sector and community stakeholders throughout the nine-county Bay Area.

I have a Bachelor of Arts from the University of California, Santa Cruz, and a Master of Public Policy from the University of California, Berkeley.

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Statement of Qualifications

Mary Sutter

Chapter 5 (Metrics Support)

Description of Responsibilities

I am a Partner with Grounded Research and Consulting, a firm that specializes in Evaluation, Design and Implementation, Process Evaluations, Metric Development and Stakeholder Engagement. My work with BayREN has included market research and analysis, process evaluations, development of BayREN value metrics and associated program logic models. I participated in the most recent round of California Energy Efficiency Coordinating Committee Metrics Working Group meetings on behalf of BayREN.

Summary of Educational and Professional Background

I co-founded Grounded Research and Consulting in 2016.

Prior to that, I was Vice President of Energy Evaluation at Opinion Dynamics. In that role, I served as director of engineering as well as a lead technical advisor and staff trainer. I also provided guidance on evaluation design and implementation for process, impact, and market studies.

I was previously President at Equipoise Consulting, where I implemented all aspects of evaluation on a large variety of energy efficiency programs in the residential, commercial, agricultural, and industrial sectors.

I was a Senior Energy Engineer with Quantum Consulting, where I assessed multiple residential and commercial programs.

I have Bachelor of Science from the University of Missouri and a Master of Science in Civil Engineering from the University of Colorado. I also have a Certificate in Evaluation Practice and Quantitative Evaluation Methods, Evaluator's Institute.