Opinion Dynamics

CALIFORNIA PUBLIC UTILITIES COMMISSION THIRD-PARTY (3P) EQUITY PROGRAMS

PROCESS AND EFFECTIVENESS EVALUATION FINAL REPORT

SEPTEMBER 12, 2024

CPU0381.01

Boston | Portland | San Diego | San Francisco

CONTENTS

1. Executive Summary 6
   - 1.1 Methods 8
   - 1.2 3P Equity Program Overview 8
     - REA-R Program 9
     - REA-NR Program 9
     - DACMO Program 9
     - Simplified Savings Program 10
   - 1.3 Conclusions and Recommendations 10
     - 1.3.1 3P Equity Program Alignment with IOU Business Plans and ESJ Action Plan 10
     - 1.3.2 Relevant CA Policies and Frameworks that Guide Energy Equity 13
     - 1.3.3 Commonalities in the Program Theory and Logic Models of the 3P Equity Programs 13
     - 1.3.4 Evaluability of the 3P Equity Programs 14
     - 1.3.5 Successes and Barriers to Implementing 3P Equity Programs in California 16
2. Introduction 17
   - 2.1 Glossary of Terms 17
   - 2.2 3P Equity Programs 18
     - REA-R Program 18
     - REA-NR Program 19
     - DACMO Program 19
     - Simplified Savings Program 19
3. Study Objectives and Research Questions 21
4. Methods 22
   - 4.1 Program and Document Review 22
   - 4.2 Interviews with Key Program Stakeholders ... 23
   - 4.3 Landscape Analysis 23
     - 4.3.1 Literature Review 23
     - 4.3.2 Interviews with Energy Equity Actors 24
   - 4.4 Evaluability Assessment 24
5. Detailed Findings 26
   - 5.1 Energy Equity in California: Setting the Landscape 26
     - 5.1.1 Guiding Documents and Policies ... 26
     - 5.1.2 CPUC Decision-Making Processes. 29
     - 5.1.3 Actors Working on Energy Equity ... 33
   - 5.2 Energy Equity Definitions and Frameworks ... 36
     - 5.2.1 The Differences between Equality, Equity, and Justice 36
     - 5.2.2 Types of Energy Equity and Existing Frameworks 37
     - 5.2.3 California Energy Equity Frameworks 37
   - 5.3 Defining Audiences of Interest for Equity Programs 40
     - 5.3.1 Audiences of Interest for the CPUC 40
     - 5.3.2 Best Practices in Defining Equity Audiences 42
     - 5.3.3 3P Equity Program Audiences 43
   - 5.4 Strategic Planning and Goal Alignment 45
     - 5.4.1 ESJ Action Plan, IOU Business Plans, and 3P Equity Program Design 45
   - 5.5 Investing in Energy Equity 51
     - 5.5.1 Third-Party Implementation 51

5.5.2 Community Capacity Building.....53

5.6 Community Engagement and Procedural Equity 54

5.6.1 CPUC Guidance on Community Engagement 54

5.6.2 3P Equity Program Community Engagement 55

5.6.3 Best Practices for Community Engagement 56

5.7 3P Equity Program Evaluability 60

5.7.1 REA Programs (REA-R and REA-NR) 62

5.7.2 DACMO Program.....63

5.7.3 Simplified Savings Program.....64

6. Conclusions and Recommendations 66

6.1.1 3P Equity Program alignment with IOU Business Plans and ESJ Action Plan 66

6.1.2 Relevant CA Policies and Frameworks that Guide Energy Equity 68

6.1.3 Commonalities in the Program Theory and Logic Models of the 3P Equity Programs 68

6.1.4 Evaluability of the 3P Equity Programs 69

6.1.5 Successes and Barriers to Implementing 3P Equity Programs in California.....70

Appendix A. Literature Review Sources.....72

Appendix B. Detailed 3P Equity Program Evaluability Assessment Reports 80

Appendix C. Summary of Key Findings by Research Question 81

Appendix D. PTLM Development Resource Guide ...85

TABLES & FIGURES

Table 1. Relevant 3P Equity Policy Guidance 7

Table 2. ESJ Action Plan Alignment by 3P Equity Program 10

Table 3. Forms of Equity Addressed in California Energy Equity Documents 13

Table 4. Comparison of 3P Equity Program Barriers and Activities 14

Table 5. Summary of Research Objectives and Questions 21

Table 6. Overview of Evaluation Methodology by Research Objective 22

Table 7. Number of Interviews Conducted by 3P equity program 23

Table 8. Number of Interviews Conducted by 3P Equity Program 24

Table 9. Plausibility Criteria 24

Table 10. Feasibility Criteria 25

Table 11. ESJ Action Plan Version 2.0 Goals and Objectives 27

Table 12. Modified Common Metrics 30

Table 13. CAEECC EMSWG Recommended Equity Indicators 32

Table 14. Traditional Equity Concept Alignment with Nationally Recognized Energy Frameworks 37

Table 15. DACAG Equity Framework Lenses 38

Table 16. JAEDI Framework Considerations for Embedding Equity and Environmental Justice 40

Table 17. CPUC Definitions for Environmental and Social Justice and Disadvantaged Communities 41

Table 18. Factors to Consider when Identifying Audience of Interest in the Residential and Commercial Sector 43

Table 19. Summary of ESJ Goals and Alignment with 2024–2031 IOU Business Plans 45

Table 20. Successes and Challenges with IOU Business Plan Alignment with ESJ Action Plan (Version 2.0) 46

Table 21. ESJ Action Plan Alignment by 3P Equity Program 48

Table 22. Desired Outcomes for 3P Equity Programs based on PTLM Review 49

Table 23. Metrics for Measuring the Success of Community Engagement 59

Table 24. REA Resource Program Evaluability Assessment Summary 62

Table 25. REA Non-Resource Program Evaluability Assessment Summary 63

Table 26. DACMO Program Evaluability Assessment Summary 64

Table 27. Simplified Savings Program Evaluability Assessment Summary 65

Table 28. Forms of Equity Addressed in California Energy Equity Documents 68

Table 29. Summary of Research Objectives/Questions and Associated Key Findings 81

Table 30. PTLM Components and Best Practice Considerations 85

Table 31. Template for Linkage Theories 88

Table 32. Software Options to Create PTLMs 89

Figure 1. CAEECC EMWG Members 31

Figure 2. 2021 Initiative for Energy Justice Rating of 100% Renewable Energy Policies by State/Territory 36

Figure 3. The Spectrum of Community Engagement to Ownership Developed by Facilitating Power 58

Figure 4. CAEECC and Non-CAEECC Indicators Among 3P Equity Programs 61

Figure 5. PTLM Sample Template 87

This study is covered under CPUC Contract 17PS5017 between Opinion Dynamics and the California Public Utilities Commission (CPUC or the Commission).

ACKNOWLEDGMENTS

This project was a collaborative effort under contract to the CPUC. The Evaluation Team would like to thank the CPUC Staff and Investor-Owned Utilities (IOUs) for their input throughout the project planning and execution. The Evaluation Team would also like to thank the energy equity actors, IOU equity program administrators, and 3P equity implementation staff who took the time to support this study by responding to research efforts.

LEGAL NOTICE

This report was prepared as an account of work sponsored by the CPUC. It does not necessarily represent the views of the Commission or any of its employees except to the extent, if any, that it has formally been approved by the Commission at a public meeting. For information regarding any such action, communicate directly with the Commission at 505 Van Ness Avenue, San Francisco, California 94102. Neither the Commission nor the State of California, nor any officer, employee, or any of its contractors or subcontractors makes any warrant, express or implied, or assumes any legal liability whatsoever for the contents of this document.

I. EXECUTIVE SUMMARY

Since 2016, the California Public Utilities Commission (CPUC) has required program administrators (PAs) to shift the implementation of their programming to third-party (3P) implementers across their portfolios.[1] In 2021, the CPUC passed Decision 21-05-031, which requires PAs to segment their energy efficiency (EE) portfolios into programs whose primary purpose is resource acquisition, market support, or equity.[2] D.21-05-031 stated that the primary objective of the equity programs is to support the CPUC's Environmental and Social Justice (ESJ) Action Plan by providing energy efficiency to Hard-to-Reach[3] (HTR) customers, underserved customers,[4] and customers living or operating in disadvantaged communities (DACs).[5] The ESJ Action Plan more broadly aims to 1) improve environmental and social justice communities' access to energy efficiency, 2) provide additional benefits to ESJ communities—particularly around air quality, energy affordability, and public health, and 3) enhance the ability of ESJ community members to participate and inform CPUC programs and decisions.[6] The CPUC defines ESJ communities as one of the following:

- DACs, defined as census tracts that score in the top 25% of CalEnviroScreen,[7] along with those that score within the highest 5% of CalEnviroScreen's Pollution Burden but do not receive an overall CalEnviroScreen score;
- All Tribal lands;
- Low-income households (household incomes below 80% of the area median income [AMI]); and
- Low-income census tracts (U.S. Census tracts where aggregated household incomes are less than 80% of area or state median income).

In California, there are several policies that guide EE equity. These are briefly described in Table 1.

[1] D.16-08-019. 166232537.PDF (ca.gov)

[2] D 21-05-031. 385864616.PDF (ca.gov)

[3] Hard-To-Reach Residential Customers, as defined by the CPUC ESJ Action Plan, are customers "who do not have easy access to program information or generally do not participate in energy efficiency programs due to a combination of language, business size, geographic, and lease (split incentive) barriers." See cpuc.ca.gov/-/media/cpuc-website/divisions/news-and-outreach/documents/news-office/key-issues/esj/esj-action-plan-v2jw.pdf pp. 80.

[4] Underserved customers are those with lower participation rates in EE programming. The specific criteria that are correlated with participation vary by sector. Sociodemographic variables (e.g., the proportion of residents with no healthcare, percentage of residents who are renting, older housing stock, and percentage of residents with a disability) were correlated with lower participation rates and unequal distribution of benefits in the residential sector. For the commercial and industrial sectors, firm size (i.e., number of employees) and the firm's location (e.g., proportion of residents living below the poverty line, proportion of severe environmental issues in the community) were correlated with participation in EE programs. See: California Energy Efficiency Coordinating Committee (CAEECC) Underserved Working Group. "Summary Memo". 2021. Underserved Working Group (2020) | CAEECC

[5] California Public Utilities Commission. Environmental and Social Justice Action Plan. Sacramento, CA: California Public Utilities Commission, 2022. esj-action-plan-v2jw.pdf (ca.gov).

[6] California Public Utilities Commission. Environmental and Social Justice Action Plan. Sacramento, CA: California Public Utilities Commission, 2022. esj-action-plan-v2jw.pdf (ca.gov).

[7] CalEnviroScreen is a mapping tool that is used to identify communities who are the most vulnerable to negative environmental and health impacts (e.g., pollution). https://oehha.ca.gov/calenviroscreen/about-calenviroscreen.

Table 1. Relevant 3P Equity Policy Guidance

September 2012	SB 535[8]	▪ Requires the California Environmental Protection Agency shall identify disadvantaged communities for investment opportunities ▪ Requires the Department of Finance, when developing a specified 3-year investment plan, to allocate 25% of the available moneys in the Greenhouse Gas Reduction Fund (GGRF) to projects that provide benefits to disadvantaged communities, as specified, and to allocate a minimum of 10% of the available moneys in the Greenhouse Gas Reduction Fund to projects located within disadvantaged communities
October 2015	SB 350[9]	▪ CPUC to focus energy procurement decisions on greenhouse gas (GHG) emission reductions of 40% by 2030, including efforts to achieve at least 50% renewable energy procurement, doubling of EE, and promoting transportation electrification ▪ Calls upon the CPUC to help improve air quality and economic conditions in DACs ▪ Created the Disadvantaged Communities Advisory Group (DACAG)
February 2019	CPUC's Environmental & Social Justice Action Plan, Version 1.0[10]	▪ Established a definition of ESJ Communities for the purposes of CPUC policy and programs ▪ Consisted of nine overarching goals, clear objectives, and 95 concrete action items to ensure agency-wide collaboration, accountability, and forward movement in meeting ESJ Goals.
December 2019	D.19-12-021[11]	▪ Requested the Regional Energy Networks (RENs) describe their unique value to California's energy, climate, and equity goals. ▪ All RENs submitted metrics and indicators that allow assessment of their unique value in their business plans
May 2021	D.21-05-031	▪ Adopted Total Systems Benefit (TSB) as the primary metric to assess PA Performance ▪ Divided portfolio into three segments: resource acquisition, market support, and equity
October 2021	CalEnviroScreen 4.0	▪ The Office of Environmental Health Hazard Assessment (OEHHA) updated the mapping tool that helps identify California communities that are most affected by many sources of pollution using environmental, health, and sociodemographic data.
April 2022	CPUC's Environmental & Social Justice Action Plan, Version 2.0[12]	▪ Updated to reflect a continuation of efforts to systematize the consideration of ESJ principles across Commission activities and incorporates two years of learnings from engagement with ESJ communities, advocates, and other stakeholders ▪ Revised eight of the nine goals from Version 1 to clarify existing language, and goal 7, related to workforce development, has been updated to include an emphasis on job quality and access.
July 2023	D.23-06-055[13]	▪ Divided portfolio into four segments: resource acquisition, market support, equity, and codes & standards ▪ Adopted 13 equity indicators, many of which were recommended by the California Energy Efficiency Coordinating Committee (CAEECC) Equity Metrics Working Group (EMWG)
August 2023	D.23.08-005[14]	▪ Adopts the TSB and energy savings goals for 2024-2035 for the four IOUs

[8] Bill Text: CA SB535 | 2011-2012 | Regular Session | Chaptered | LegiScan
[9] SB 350 Senate Bill – CHAPTERED (ca.gov)
[10] https://www.cpuc.ca.gov/news-and-updates/newsroom/environmental-and-social-justice-action-plan.
[11] 321507615.PDF (ca.gov)
[12] esj-action-plan-v2jw.pdf (ca.gov)
[13] 512907396.PDF (ca.gov)

The CPUC hired Opinion Dynamics (i.e., the Evaluation Team) to conduct an early developmental evaluation, using Opinion Dynamics' Whole Independent Systems Evaluation™ (WISE),[15] of the 3P equity programs that were expected to launch in 2023. The Evaluation Team addressed the following research objectives:

- Assess the extent to which each 3P equity program plan aligns with the IOU business plans and CPUC ESJ Action Plan regarding goals, metrics, and timelines.
- Document relevant California policies that guide energy equity, identify key CA actors involved in equity framework/metric development, and describe best practices from existing equity metrics/frameworks.
- Identify commonalities in the program theory and logic models[16] (PTLM) of the current 3P equity programs.
- Determine the evaluability[17] of the 3P equity programs.
- Describe the current successes and barriers to implementing 3P equity programs in California.

1.1 METHODS

To address these objectives, the Evaluation Team utilized a mix of secondary data review and qualitative data collection and analysis activities, which included:

- Program and Document Review: A review of 3P equity program and CPUC public documents (e.g., Decisions, ESJ Action Plan, IOU Business Plans)
- Landscape Analysis: An online literature review of key definitions, frameworks, metrics, and best practices and interviews with U.S. energy equity actors
- Evaluability Assessment: A review of the PTLMs and associated key performance indicators (KPIs) provided in the implementation plan of each 3P equity program and interviews with implementation staff.
- Key Program Staff Interviews: Interviews with IOU PAs and implementation staff for each 3P equity program to investigate lessons learned.

1.2 3P EQUITY PROGRAM OVERVIEW

The Evaluation Team found that there are four unique equity programs across the IOU territories that launched in 2023:

- SCE Residential Energy Advisor Resource Program (REA-R) [18]
- SCE Residential Energy Advisor Non-Resource Program (REA-NR) [19]

[14] 517027629.PDF (ca.gov)
[15] WISE - Opinion Dynamics
[16] Program theory and logic models (PTLMs) are diagrams that visually represent the theories of change including the activities planned, the outputs expected, and how these are tied to desired short-, medium-, and long-term outcomes.
[17] Evaluability involves examining the plausibility of the intended outcomes from program activities and outputs as well as the feasibility of measuring the impact of program activities on desired outcomes.
[18] Resource acquisition programs aim to deliver energy savings to customers. The REA-R is an equity segment program and does not require cost-effective energy savings targets like programs under the CPUC resource acquisition segment; However, the primary purpose of the REA-R is to deliver immediate energy savings to equity customers and is referred to as having a resource component.
[19] Non-Resource programs are those that do not directly lead to energy savings. Currently, the market support segment of IOU portfolios reflects these types of programs. Market Support programs support energy efficiency efforts "by educating customers, training contractors, building partnerships, or moving beneficial technologies towards greater cost-effectiveness".(D.21-05-031). REA-NR has market support components that

- SCE Disadvantaged Community Marketing and Outreach Program (DACMO)
- Simplified Savings Program for Small Businesses (administered by PG&E, SCE, and SDG&E)

REA-R PROGRAM

REA-R is an equity program that targets low- and moderate-income residential customers in SCE's service territory DACs and focuses on HTR customers. The Program offers eligible customers at-home energy assessments,[20] customer case management,[21] direct install measures,[22] and energy-saving incentives. Participants are eligible to receive measure offerings from trained trade allies (TAs). The program's primary goal is to increase access to energy-efficient technology in DACs while improving non-energy benefits such as indoor air quality and economic development. The REA-R Program was scheduled to launch in September 2023, but delays in the ramp-up phase pushed back this launch date. As of March 2024, the implementer has developed a pipeline of interested customers and TAs. but an official launch date has not been scheduled.

REA-NR PROGRAM

While REA-NR is a separate equity program with the same implementer as REA-R, it does not have a resource component that is focused on claiming direct energy savings; instead, it aims to support customer awareness and participation in existing IOU resource programs. In its design, REA-NR addresses key barriers to residential customer participation in resource programs, such as a lack of community trust in IOUs and an overall lack of awareness of IOU programs. REA-NR aims to address these barriers by 1) conducting community-centered marketing activities and 2) ensuring that information about the program comes from a local and trustworthy source (i.e., community-based organizations [CBOs] and local trade allies).

Similar to REA-R, REA-NR targets low- and moderate-income HTR residential customers in DACs in SCE's service territory. The program's primary goal is to increase understanding of and access to energy-efficient technology in underserved communities while improving non-energy benefits like indoor air quality and increasing economic opportunities for contractors in these communities. Like REA-R, REA-NR was scheduled to launch in the Fall of 2023 but experienced delays during the ramp-up phase. REA-NR began marketing efforts as of March 2024.

DACMO PROGRAM

DACMO operates in SCE's service territory and focuses on HTR residential customers and customers in DACs. The program aims to enhance customer knowledge about energy efficiency products, energy saving behaviors, and their benefits (i.e., costs) by providing residents with technical assistance and educational support in their own language. The implementer conducts outreach and marketing activities such as providing access to free in-language home energy

support customer awareness and participation in existing IOU resource programs. Other non-resource programs may also engage with workforce, education, and training activities, or technology development and adoption.

[20] According to the U.S. Department of Energy, home energy assessments or home energy audits are used to identify energy use, opportunities for improving home energy efficiency, and the priority of actions to take to save energy moving forward. Home Energy Assessments | Department of Energy

[21] Customer case management is how firms engage with customers and document the status of services, projects, or transactions. This may include documentation of customer questions or concerns and the firm's responses.

[22] According to the CPUC, direct installation of an energy efficiency measure—a single technology, energy-use practice, or behavior that results in reduced energy use—is the incentive paid to the installer of the measure rather than the customer. As a result, many of the direct install measures are offered at low or no cost to the customer. See https://cedars.sound-data.com/deer-resources/deemed-measure-packages/guidance/file/3120/download and https://www.epa.gov/sites/default/files/2019-06/documents/guidebook_for_energy_efficiency_evaluation_measurement_verification.pdf

advisors, in-home assessments of energy-saving opportunities, and free energy efficiency products to customers (e.g., nightlights, light bulbs). The Program was launched, as scheduled, in August of 2023 and is currently conducting program activities.

SIMPLIFIED SAVINGS PROGRAM

The Simplified Savings Program targets micro and small businesses —which the program defines as firms with an energy usage of 50 kilowatts (kWs) or less—in DACs and among HTR customers to promote energy savings, bill savings, and non-energy benefits (e.g., health and comfort). The Simplified Savings Program staff recruits and trains CBO partners and contractors to enroll in a TA network. The CBOs and TAs recruit participants, directly install energy efficiency measures, and identify additional low and no-cost opportunities for micro and small business customers to improve their energy efficiency. PG&E, SCE, and SDG&E all are anticipated to offer this program in their service territory. There are minor differences in the contractual language following the RFP for each of the IOUs, but the design is expected to be the same. The program in the PG&E territory began in July 2023; however, the program has not yet launched in the SCE and SDG&E territories.[23]

I.3 CONCLUSIONS AND RECOMMENDATIONS

Below, we summarize the conclusions, key findings, and recommendations that emerged from this study.

I.3.I 3P EQUITY PROGRAM ALIGNMENT WITH IOU BUSINESS PLANS AND ESJ ACTION PLAN

Conclusion 1: As instructed by the CPUC, the 2023 3P equity program designs align with goals 1, 2, and 5 of the Environmental & Social Justice (ESJ) Action Plan, and most of the objectives. According to D.21-05-031, in their design, the programs under the equity segment of the IOU energy efficiency portfolios are tasked with "providing energy efficiency to hard-to-reach or underserved customers and disadvantaged communities," as defined by the CPUC's ESJ Action Plan.[24] The ESJ Action Plan provides nine goals and 28 objectives that illustrate the broad vision and steps the CPUC will take to ensure equity in its programs and services. Specifically, the IOUs' equity programs included in the 2024-2031 Business Plans were intended to support Goals 1, 2, and 5 of the ESJ Action Plan, as stated in D.21-05-031. The 2023 3P equity programs (REA-R, REA-NR, DACMO, and Simplified Savings) align with most of the objectives under the ESJ Action Plan goals 1, 2, and 5, as shown in Table 2. The objectives that the 2023 equity programs do not address are not relevant to the implementers as they focus on standardized CPUC processes (ESJ Objectives 1.1 and 5.1) or studies of the impact of EE strategies on ESJ community health, well-being, and other benefits (ESJ Objective 2.2). While the 3P equity programs may collect data regarding the non-energy benefits received by program participants, the current description of Objective 2.2 is focused on sector-level studies across IOU territories.

Table 2. ESJ Action Plan Alignment by 3P Equity Program

ESJ Goals	ESJ Objectives	REA-R	REA-NR	DACMO	Simplified Savings
Goal 1: Consistently integrate equity and access considerations throughout CPUC regulatory activities.	**1.1 Build Systematic Approaches for ESJ Priorities:** Continue building systematic approaches for considering ESJ issues in proceedings and decisions, as well as implementation processes included in advice letters, general orders, and resolutions. Build understanding of critical ESJ concepts and definitions to ensure alignment and deepen impact.				

[23] SCE planned to launch in December of 2023 but is currently delayed. SDG&E's program is scheduled to begin in 2024.

[24] https://www.cpuc.ca.gov/-/media/cpuc-website/divisions/news-and-outreach/documents/news-office/key-issues/esj/esj-action-plan-v2jw.pdf

ESJ Goals	ESJ Objectives	REA-R	REA-NR	DACMO	Simplified Savings
	1.2 Expand Opportunities for Access: Continue pursuing innovative approaches to broadening access to CPUC activities and decision-making.	✓	✓	✓	✓
Goal 2: Increase investment in clean energy resources to benefit ESJ communities and improve local air quality and public health.	**2.1 Outreach & Engagement:** Broaden and deepen outreach and engagement with ESJ communities early in proceedings and processes related to resilient, clean energy.	✓	✓	✓	✓
	2.2 Research & Analysis to Understand Impact: Further research and analytical opportunities to understand impacts in ESJ communities.				
	2.3 Move Towards Mutual Eligibility & Maximizing Impact: Better leverage ongoing work by fostering cross-division, cross-Commission, and cross-agency dialogues to move towards mutual eligibility and maximizing impact.	✓	✓		✓
	2.4 Address Impacts in ESJ Communities: Continue to address ongoing and legacy impacts in ESJ communities in the resilient, clean energy space.	✓	✓		✓
	2.5 Continue Ongoing Investment: Continue to make prioritized resilient, clean energy investments in ESJ communities.	✓	✓		✓
Goal 5: Enhance outreach and public participation opportunities for ESJ communities to meaningfully participate in the CPUC's decision-making process and benefit from CPUC programs.	**5.1 Improve Communication with ESJ Lens:** Continue to build and improve CPUC communications methods and materials to ensure ESJ audiences can better participate.				
	5.2 Continue to Emphasize Engagement with CBOs: Deepen relationships and network connections with community-based organizations throughout the state.	✓	✓		✓
	5.3 Build Pathways for Public Participation: Based on lessons learned and areas of improvement, build additional and enhanced pathways to welcome and involve ESJ stakeholders into CPUC processes.		✓		
	5.4 Enhance Engagement with Particular ESJ Communities and Individuals: Consider the specific needs of populations and work to create targeted engagement opportunities.	✓	✓	✓	✓

Each of the 2023 3P equity programs leverages ESJ Action Plan definitions for HTR customers and DACs to target potential participants, and each of the programs expands opportunities for access among these target segments. The Simplified Savings Program is the first equity program to provide offerings to micro and small business customers, thus expanding opportunities for access to energy efficiency benefits among HTR commercial segments. The remaining programs each support increased engagement among HTR residential customers. To accomplish this, almost all of the programs—with the exception of REA-R—aim to improve customer awareness of energy efficiency programs, products, and benefits by 1) ensuring that outreach materials are developed to be locally relevant and accessible and 2) identifying opportunities to connect with HTR customers through existing community events and functions.

- Recommendation 1: To continue to support Goals 1, 2, and 5 of the ESJ Action Plan, the CPUC and IOUs should collaborate to invest resources to improve community engagement activities, particularly around 3P Equity program design, implementation, and measures of success. This should involve identifying community needs, barriers to participation, and preferred engagement modes. Beyond supporting CPUC's goal of improving community participation in decision-making processes, this investment would also help inform the development of future requests for abstracts/proposals for 3P Equity Programs so the program designs are rooted in community needs. These novel 3P equity programs may benefit from developmental evaluations[25] that provide recommendations on improving program activities at various stages of equity planning, program development, implementation, and final impact evaluation.

Conclusion 2: The CPUC initiated workstreams to develop portfolio- and segment-level metrics and indicators to measure equity performance, but there is a lack of guidance for program-level tracking. The CPUC has issued decisions to define goals, indicators, and metrics for the EE portfolio and the equity segment.[26] D.18-05-041 included common metrics and indicators across the three energy efficiency portfolio segments (resource acquisition, market support, and equity), and D.23-06-055 mandated the assembly of the CAEECC EMWG to define indicators for the new equity segment. Specifically, the CPUC established the CAEECC EMWG to develop the objectives for the equity segment and design indicators to evaluate success toward these objectives. While the CPUC provided clear guidance that the equity segment of PA portfolios should support goals 1, 2, and 5 of the ESJ Action Plan, according to D.23-06-055, IOUs are not expected to develop their own equity-specific program goals, targets, and associated metrics until March 2025. Currently, goals, metrics, and indicators are published in at least these three sources (i.e., the ESJ Action Plan, CAEECC EMSWG report, and Grounded Research Common Metrics Working Group report), and it is not clear what level of consolidation is requested or required by the CPUC.

In D.23-06-055, the CPUC instructed the IOUs to contract with a vendor to support the process of proposing and adopting long-term equity segment accountability goals, including defining goal constructs, demonstrating alignment with objectives, identifying the granularity of reporting detail (statewide, by PA, by territory), identifying relevant metrics and indicators to measure progress to goals, determining timeline for goal achievement, and providing necessary baseline information. To support the development of these goals and metrics, the CPUC is preparing a request for proposal (RFP) for a Market Rate NEBs Equity Segment Study that aims to improve the quantification of non-energy benefits[27] (NEBs). In June 2024, the IOUs participated in a Working Group to support the development of the RFP.[28] It is not clear to what extent the vendor will leverage existing sources to consolidate historic efforts and create a pathway for the equity segment and its programs moving forward. Finally, the CPUC recently issued an RFP for Energy Efficiency Technical Consultant Services that will also support the development of equity segment accountability goals to quantitatively measure segment performance.

- **Recommendation 2:** The CPUC should consider providing guidance to the PAs on how existing goals in the ESJ Action Plan Version 2.0 may translate or cascade down to the equity segment and then to IOU processes and programs.
- **Recommendation 2A:** Upon the completion of the Market Rate NEBs Equity Segment Study, we recommend that the IOUs utilize standardized key performance indicators (KPIs) and methodologies to quantify NEBs for the equity segment of their portfolio.
- **Recommendation 2B:** Once equity segment goals, metrics, and indicators are established and finalized with the CPUC, PAs should work with program implementers to translate these into program implementation plans to ensure clear documentation for how the equity segment goals, metrics, and indicators align with each equity program's PTLMs, how program data will be collected and by whom, and how/when these data will be reported to the CPUC. Due to the current EE program cycle, this will ideally be implemented in preparation for the February 2026 application cycle.
- **Recommendation 2C:** It may benefit stakeholders (including the PAs, CPUC, and other energy equity stakeholders) to have all relevant California energy equity documentation in one place (e.g., the ESJ Action Plan or the CAEECC website) so there is one guiding source for equity information. CPUC should assign an entity to

[26] While the terms indicators and metrics are often used synonymously, the CPUC differentiates these for the equity segment. Indicators may help to establish baselines and serve as a precursor for metrics which are more specific quantitative measures that are used to evaluate the effectiveness of specific actions or strategies towards desired goals or targets.

[27] According to the CAEECC Equity Metrics Working Group, non-energy benefits include health benefits (e.g., indoor air quality, outdoor air quality), comfort (e.g., noise, temperature), safety of appliance, and economic or other non-energy benefits (https://www.caeecc.org/9-29-21-emwg-mtg). Additionally, the ESJ Action Plan 2.0 includes pollution or GHG reduction, quality of services, and person-oriented decisions (esj-action-plan-v2jw.pdf (ca.gov).

[28] Advice No.6338-G, et al., "Joint Non-Energy Benefits Study Working Group's Recommendations pursuant to D.23-06-055".

inventory all energy equity documents for the state in one location (e.g., CPUC Energy Division, CAEECC, or other entity). This repository should include a dictionary of key and relevant terms for energy equity (e.g., goals, NEBs) to ensure consistency in terminology across energy equity actors. Ensure the repository is marketed to relevant stakeholders so the public is aware of these valuable materials.

I.3.2 RELEVANT CA POLICIES AND FRAMEWORKS THAT GUIDE ENERGY EQUITY

Conclusion 3: There are three existing frameworks that guide energy equity in California. There are several guiding documents and ongoing efforts to support energy equity in California, including the CPUC's ESJ Action Plan, the California Energy Commission (CEC) Justice Access, Equity, Diversity, and Inclusion (JAEDI) Framework, and the DACAG Equity Framework[29]. Each key energy equity framework referenced in California covers at least three of the four forms of equity, as shown in Table 3. All three frameworks aim to support distributive equity and capabilities among target equity populations (e.g., hard-to-reach and underserved customers and disadvantaged communities) but are not consistent in providing guidance on procedural equity and recognition.

Table 3. Forms of Equity Addressed in California Energy Equity Documents

Forms of Equity	CPUC ESJ Action Plan	DACAG Framework	CEC JAEDI Framework
Distributive—the extent to which individuals have access to goods and are exposed to harms.	✓	✓	✓
Procedural—addressing barriers to participation in decision-making processes.	✓	✓	✓
Recognition--the extent to which individuals' experiences, perspectives, and ideas are respected and not dismissed.	✓		✓
Capabilities—the empowerment of communities and support of capacity building for marginalized and burdened communities.	✓	✓	✓

I.3.3 COMMONALITIES IN THE PROGRAM THEORY AND LOGIC MODELS OF THE 3P EQUITY PROGRAMS

Conclusion 4: The 2023 3P equity programs have overlapping program theories, and each targets hard-to-reach customers and disadvantaged communities. Although the 2023 3P equity programs target different sectors (REA-R, REA-NR, and DACMO targeting residential and the Simplified Savings Program targeting commercial), each specifically targets hard-to-reach customers and those residing/operating in DACs. In the short and medium term, programs aimed to increase awareness and interest in IOU programs, build community trust in IOU offerings, and increase participation in IOU EE programs. The REA-R and Simplified Savings programs do this more directly by offering free assessments and direct install measures for immediate energy and bill savings to the customer. REA-R and the Simplified Savings Program also provide workforce training to improve access to qualified contractors in disadvantaged communities. The REA-NR and DACMO programs seek to achieve increased awareness through marketing, outreach, and engagement activities. The two programs take cultural competency into consideration when developing marketing materials and engagements, including developing in-language materials and DACMO partners with CBOs to increase trust with customers. The similarities and differences in the market barriers achieved by each 3P equity program and the program activities of each are listed in Table 4.

[29] The DACAG was created by SB 350 and advises the CPUC and CEC on how to more effectively design and implement energy policies and programs with DACs in mind. The DACAG framework was updated in 2024, but the updated version came out after the analysis conducted in this report. The 2024 update of the DACAG framework includes recognition.

Table 4. Comparison of 3P Equity Program Barriers and Activities

	REA-R	REA-NR	DACMO	Simplified Savings
Market Barriers				
Untapped customer market due to language, location, and other community needs			✓	✓
Lack of customer trust with IOUs		✓		✓
Program and process complexity for customers and contractors		✓		✓
Initial upfront cost	✓	✓		✓
Lack of knowledge of EE programs, products, and benefits	✓	✓	✓	
Difficulty finding qualified and affordable contractors	✓			✓
Program Activities				
Free assessments	✓			✓
Direct install (DI) measures (resource program activity)	✓			✓
Workforce training	✓			✓
Locally relevant, in-language, and accessible outreach and marketing activities.		✓	✓	✓
CBO engagement		✓		✓
Local trade ally engagement	✓			✓
Customer education and technical assistance		✓	✓	

Conclusion 5: Existing PTLMs for the 2023 3P Equity programs do not follow PTLM design best practices. The original REA-R, REA-NR, and Simplified Savings PTLMs provided to the Evaluation Team by program staff did not provide explicit links between program activities, outcomes, and associated outcomes, nor logical connections between various short-, medium-, and long-term outcomes. Including these elements in a PTLM is tantamount to ensuring program activities lead to expected outcomes and KPIs can be established to measure program success. The original PTLM for DACMO followed some PTLM best practices, including linkages from program activities to outputs and outcomes. However, the original DACMO PTLM did not provide plausible connections between various short-, medium-, and long-term outcomes and expected program outputs. Each original PTLM was based on a template provided in RFP documents from the PAs to 3P implementation firms. The Evaluation Team updated the original PTLMs to follow PTLM design best practices as part of this evaluation study. The updated PTLM for each program is included in Appendix B.

- **Recommendation 5:** Adopt the PTLM updates proposed by the Evaluation Team for each program.
- **Recommendation 5A:** The current PTLM template provided by the IOUs to 3P implementers proposing equity program designs should be updated to reflect best practices, such as identifying linkages and providing a logical description of each linkage to support the development of indicators and evaluation of 3P Equity programs. A sample PTLM template that could be used for future equity programs can be found in Appendix D.

I.3.4 EVALUABILITY OF THE 3P EQUITY PROGRAMS

Conclusion 6: Not all desired outcomes of the 2023 3P equity programs are plausible without further theoretical linkages between the activities and outcomes. A list of each program's outcomes and the plausibility of them occurring based on the original program design can be found in Section 5.7. The Evaluation Team provided updated PTLMs to ensure plausible linkages for each of the 3P equity programs (See Appendix B); however, the following outcomes were removed from the updated PTLMs for each program due to unclear linkages between program activities and outcomes. For REA-R, the expectation that a long-term outcome of the REA-R program will be "gas equipment and appliances substituted for high-efficiency electric alternatives" is not likely without fuel substitution-focused interventions. For

DACMO, the expectation that a long-term outcome of the program will be "energy code changes" is not likely given that the program targets customers rather than other market actors, such as code officials, so energy code changes are not currently a theoretical outcome of the program. Additionally, the Simplified Savings Program activities do not plausibly lead to ESJ communities participating in CPUC decision-making processes. In the original PTLM, the Simplified Savings Program intended to fulfill objectives under Goal 5 of the CPUC's ESJ Action Plan.[30] However, the expectation that a long-term outcome of the program will be "enhanced outreach and public participation by ESJ communities in CPUC's decision-making process" is not likely. The program targets small business customers in ESJ communities with energy-efficiency program offerings but expecting this experience to lead to participation in regulatory processes is not a theoretical outcome of the program.

- **Recommendation 6:** If fuel substitution is an expected long-term outcome of the REA-R program, we recommend that program staff update the PTLM to specify program activities that lead to a fuel substitution output. Activities may include fuel substitution-focused training for contractors or education campaigns for customers.
- **Recommendation 6A:** If "energy code changes" are an intended outcome of DACMO, we recommend that program staff update the PTLM to include activities that clearly lead to energy code changes, such as interventions that specifically target code officials and/or other stakeholders that influence code-making decisions. These activities, however, may be better suited for a Codes & Standards program.
- **Recommendation 6B:** If "Enhance outreach and public participation opportunities for ESJ communities to meaningfully participate in the CPUC's decision-making process" is an expected outcome of the Simplified Savings Program, we recommend that the PTLM add program activities that lead to this outcome. Tailored outreach materials could reference the importance of participating in CPUC decision-making processes, the benefits to customers for doing so, and opportunities for participation.

Conclusion 7: Most of the KPIs identified for the 2023 3P equity programs are not feasible to measure based on current data collection/tracking practices. REA-R and REA-NR are only somewhat feasible to measure based on current data collection/tracking practices, while the KPIs for DACMO and Simplified Savings are not currently feasible to measure. Current data collection practices do not collect the data required for future program evaluation of all KPIs. Additionally, the KPIs identified to measure program performance do not fully capture all intended outcomes from the program activities.

- **Recommendation 7:** For each 3P equity program assessed as part of this study, adopt the KPIs proposed by the Evaluation Team in Appendix B (within the detailed evaluability assessment reports). Each of the KPIs was designed to measure the intended outcomes of each program activity.
- **Recommendation 7A:** We recommend that the PAs update the existing data collection and tracking practices for each of the 2023 3P equity programs and ensure all the data necessary to measure the proposed KPIs are collected and tracked. An example data request is included in each evaluability assessment report included in Appendix B to provide the expected level of detail and unit of measure for each data field. The PAs should assign clear responsibilities to implementation staff and contractors (or other market actors) to identify who is responsible for tracking which data and how it will be reported to PA and CPUC staff. The PAs should also ensure any issues or concerns with data privacy are addressed early on in the process.

[30] https://www.cpuc.ca.gov/news-and-updates/newsroom/environmental-and-social-justice-action-plan#:~:text=5.,and%20benefit%20from%20CPUC%20programs.

I.3.5 SUCCESSES AND BARRIERS TO IMPLEMENTING 3P EQUITY PROGRAMS IN CALIFORNIA

Conclusion 8: There has been limited pursuit of community perspectives prior to the design and implementation stages of the 2023 3P equity programs. There was no explicit solicitation of community feedback for IOU PAs on developing the RFP for 3P equity programs outside of the Procurement Review Groups (PRGs) at each IOU. PAs expected 3P implementers to have conducted sufficient research to inform the program design that met the RFP; however, implementers predominantly based their proposals on previous experience rather than collecting ESJ community feedback on the design of the proposed program. Following contracting, some implementers sought to reach out to community leaders to ensure that the outreach and communication materials were relevant but were met by resistance from PAs who wanted finalized outreach materials prior to engaging with community members about the program.

- **Recommendation 8:** The CPUC should allow for IOU budgets to include funding for community listening sessions in 3P Equity program contracts. These community listening sessions should be completed soon after the contract award to verify that the program design aligns with community experiences and needs (e.g., barriers). If it is discovered that there is misalignment, this allows the implementers and IOU PAs to work together to modify the program to better meet community needs, program goals, and equity-segment goals. This also serves as an initial step in developing community relationships and supporting future community engagement activities.

Conclusion 9: The 3P equity programs aim to overcome trust barriers with vulnerable populations through community engagement. During interviews, program staff identified a lack of trust among underserved customers as a main barrier to implementing 3P equity programs. As such, three of the four Programs (REA-R, REA-NR, and Simplified Savings) have design elements that incorporate CBOs and local contractor networks into program delivery to build trust with community members, leverage CBO's existing networks to promote awareness of the program, and build positive relationships with CBOs to increase their likelihood of participating in future IOU programming.

- **Recommendation 9:** Despite programs being in the ramp-up phase of implementation, the implementers should continue to evolve program activities to incorporate CBOs and local contractors over time. The PAs should also initiate opportunities for community stakeholders to provide feedback on program design and evolution opportunities. We recommend that the PAs invest in opportunities to improve community engagement by understanding and addressing barriers to community participation in dialogues about goal setting, program design, implementation, and evaluation through communication and research directly with community members and CBOs.
- **Recommendation 9A:** While implementation teams emphasize the positive impact of using local contractors to build trust in IOU offerings by establishing more personal connections with customers, it is important to recognize that developing these trusted relationships takes time. We understand that implementers may feel an urgency to launch these programs, but we advise against rushing the development of these relationships just to meet program launch deadlines. We realize this is a difficult balance.

Conclusion 10: Most of the 3P equity programs expected for launch in 2023 were delayed. Internal turnover at IOUs, novel program eligibility requirements, and data sharing complications caused program launch delays. The DACMO and PG&E's Simplified Savings Program both launched in 2023, but the REA-R, REA-NR, and Simplified Savings programs in SCE and SDG&E territories are delayed into 2024. As each 3P equity program adopts KPIs developed as part of this evaluation, communication regarding data sources, access, and transfer protocols among implementers and evaluators will be pertinent.

- **Recommendation 10:** We recommend that IOU PAs communicate with the 3P implementation vendors regarding the data sources and requirements for the 3P Program before finalizing the program design or early in the ramp-up/implementation process. Additionally, if the PAs can designate a deputy program manager who is briefed on program activities at a high level, it may enhance program stability during unexpected staff turnover and improve relationships with implementers and other program stakeholders.

2. INTRODUCTION

Since 2016, the California Public Utilities Commission (CPUC) has required program administrators (PAs) to shift the implementation of their energy efficiency portfolio to third-party (3P) implementers.[31] By 2022, IOUs were expected to have, at minimum, 60% of their programs implemented by third-party firms.[32] Due to the recent shift in who is responsible for program implementation, investor-owned utility (IOU) staff are expected to identify a new role for themselves within program administration.

In 2021, the CPUC passed Decision 21-05-031, which requires PAs to segment their energy efficiency portfolio into programs with a primary purpose of resource acquisition, market support, or equity.[33] D.21-05-031 stated that the primary objective of the equity programs is to support the CPUC's Environmental and Social Justice (ESJ) Action Plan by providing energy efficiency to Hard-to-Reach (HTR) and underserved customers and customers in disadvantaged communities (DACs).[34] The ESJ Action Plan more broadly aims to (1) improve environmental and social justice communities' access to energy efficiency, (2) provide additional benefits to ESJ communities—particularly around air quality, energy affordability, and public health, and (3) enhance the ability of ESJ community members to participate and inform CPUC programs and decisions. The CPUC defines ESJ communities as one of the following:

- DACs, defined as census tracts that score in the top 25% of CalEnviroScreen, along with those that score within the highest 5% of CalEnviroScreen's Pollution Burden but do not receive an overall CalEnviroScreen score;
- All Tribal lands;
- Low-income households (household incomes below 80% of the area median income [AMI]); and
- Low-income census tracts (US Census tracts where aggregated household incomes are less than 80% of area or state median income).

2.1 GLOSSARY OF TERMS

Based on conversations with CPUC, key terms included in this report are briefly defined below:

Policy Goals: or ESJ Goals are the nine goals listed in the CPUC's ESJ Action Plan Version 2.0,[35] intended to ensure agency-wide collaboration, accountability, and forward movement in meeting ESJ principles.

Accountability Goals: are currently under development for the equity segment by the CPUC, these goals will provide a method for measuring equity segment performance quantitatively.

Objectives: developed for the equity segment by the California Energy Efficiency Coordinating Committee (CAEECC) Equity Metrics Working Group (EMWG) and adopted in D.23-06-055. These objectives include addressing disparities in access to energy efficiency programs; promoting resilience, health, comfort, safety, energy affordability, and/or energy savings; reducing energy-related greenhouse gas and criteria pollutant emissions; and providing workforce opportunities for hard-to-reach, disadvantaged, and/or underserved communities.

[31] D.16-08-019. 166232537.PDF (ca.gov)
[32] In D.18-01-004, utilities were expected to have at least 25% of their portfolios consist of 3P programs by the end of 2018, 40% by the end of 2020; and 60% minimum by the end of 2022.
[33] D 21-05-031. 385864616.PDF (ca.gov)
[34] California Public Utilities Commission. Environmental and Social Justice Action Plan. Sacramento, CA: California Public Utilities Commission, 2022. esj-action-plan-v2jw.pdf (ca.gov).
[35] https://www.cpuc.ca.gov/-/media/cpuc-website/divisions/news-and-outreach/documents/news-office/key-issues/esj/esj-action-plan-v2jw.pdf

Indicators: the 13 equity segment indicators recommended by the CAEECC EMWG in its final report to CPUC.[36] Indicators are important measures of progress that are tracked, measured, and reported on but do not have associated targets. They may reflect qualitative documentation of progress, help establish baselines, and serve as precursors to quantitative metrics.

Metrics: Yardsticks by which progress in the equity segment is tracked, measured, and reported. Metrics specifically have associated targets. While the terms indicators and metrics are often used synonymously, the CPUC differentiates these for the equity segment. Indicators may help to establish baselines and serve as a precursor for metrics which are more specific quantitative measures that are used to evaluate the effectiveness of specific actions or strategies towards desired goals or targets. Specific equity segment metrics are currently under development.

Non-Energy Benefits: health benefits (e.g., indoor air quality, outdoor air quality), comfort (e.g., noise, temperature), safety of appliance, and economic or other impacts beyond energy savings. D.23-06-055 authorized a working group to further define the goals, priorities and scope of a non-energy benefits (NEBs) study to update and improve quantification of NEBs as an indicator for equity segment program performance.[37]

Resource Programs: per D.21-05-031, are programs with a primary purpose of, and a short-term ability to, deliver cost-effective avoided cost benefits to the electricity and natural gas systems.

Non-Resource Programs: include programs in the equity and market support segments. Some of these programs may deliver energy savings, but they are not required to do so.

2.2 3P EQUITY PROGRAMS

Beginning in 2022, IOUs developed requests for proposals (RFPs) for programs within the new equity segment. The Evaluation Team found four unique programs across the IOU territories that were expected to launch in 2023:

- SCE Residential Energy Advisor Resource Program (REA-R)
- SCE Residential Energy Advisor Non-Resource Program (REA-NR)
- SCE Disadvantaged Community Marketing and Outreach Program (DACMO)
- Simplified Savings Program for Small Businesses (administered by PG&E, SCE, and SDG&E)

REA-R PROGRAM

REA-R is an equity program that targets low- and moderate-income residential customers in SCE's service territory DACs and focuses on HTR customers.[38] The Program offers eligible customers at-home energy assessments,[39] customer case

[36] https://www.caeecc.org/_files/ugd/849f65_811eb0401da74baebe65034d82232234.pdf
[37] The Joint Non-Energy Benefits Study Working Group's recommendations pursuant to D.23-06-055 were delivered to CPUC via Advice Letter on July 11, 2024.
[38] Hard-To-Reach Residential Customers, as defined by the CPUC ESJ Action Plan, are customers "who do not have easy access to program information or generally do not participate in energy efficiency programs due to a combination of language, business size, geographic, and lease (split incentive) barriers." See cpuc.ca.gov/-/media/cpuc-website/divisions/news-and-outreach/documents/news-office/key-issues/esj/esj-action-plan-v2jw.pdf pp. 80.
[39] According to the U.S. Department of Energy, home energy assessments or home energy audits are used to identify energy use, opportunities for improving home energy efficiency, and the priority of actions to take to save energy moving forward. Home Energy Assessments | Department of Energy

management,[40] direct install measures,[41] and energy-saving incentives.[42] Participants are eligible to receive measure offerings from trained trade allies (TAs). The program's primary goal is to increase access to energy-efficient technology in DACs while improving non-energy benefits such as indoor air quality and economic development. The REA-R Program was scheduled to launch in September 2023, but delays in the ramp-up phase pushed back this launch date. According to interviews with the implementer, as of March 2024, they have developed a pipeline of interested customers and TAs. but do not have an official launch date scheduled.

REA-NR PROGRAM

While REA-NR is a separate equity program with the same implementer as REA-R, it does not have a resource component that is focused on claiming direct energy savings; instead, it aims to support customer awareness and participation in existing IOU resource programs. In its design, REA-NR addresses key barriers to residential equity customer participation in resource programs, such as a lack of community trust in IOUs and an overall lack of awareness of IOU programs. REA-NR aims to address these barriers by 1) conducting community-centered marketing activities and 2) ensuring that information about the program comes from a local and trustworthy source (i.e., community-based organizations [CBOs] and local trade allies).

Similar to REA-R, REA-NR targets low- and moderate-income HTR residential customers in DACs in SCE's service territory. The program's primary goal is to increase understanding of and access to energy-efficient technology in underserved communities while improving non-energy benefits like indoor air quality and increasing economic opportunities for contractors in these communities. Like REA-R, REA-NR was scheduled to launch in the Fall of 2023 but experienced delays during the ramp-up phase. REA-NR began marketing efforts as of March 2024.

DACMO PROGRAM

DACMO operates in SCE service territory and focuses on HTR residential customers and customers in DACs. The program aims to provide residents with technical assistance and educational support in their own language. This will help enhance their knowledge about energy, energy efficiency products, and their benefits. It will also offer information about reducing energy costs through changing behaviors. The implementer conducts outreach and marketing activities such as providing access to free in-language home energy advisors, in-home assessments of energy-saving opportunities, and free energy efficiency products to customers (e.g., nightlights, light bulbs). The Program was launched, as scheduled, in August of 2023 and is currently conducting program activities.

SIMPLIFIED SAVINGS PROGRAM

The Simplified Savings Program targets micro and small businesses —which the program defines as firms with an energy usage of 50 kilowatts (kWs) or less—in DACs and among HTR customers to promote energy savings, bill savings, and non-energy benefits (e.g., health and comfort). The Simplified Savings Program staff recruits and trains CBO

[40] Customer case management is how firms engage with customers and document the status of services, projects, or transactions. This may include documentation of customer questions or concerns and the firm's responses.

[41] According to the CPUC, direct installation of an energy efficiency measure—a single technology, energy-use practice, or behavior that results in reduced energy use—is the incentive paid to the installer of the measure rather than the customer. As a result, many of the direct install measures are offered at low or no cost to the customer. See https://cedars.sound-data.com/deer-resources/deemed-measure-packages/guidance/file/3120/download and https://www.epa.gov/sites/default/files/2019-06/documents/guidebook_for_energy_efficiency_evaluation_measurement_verification.pdf

[42] REA-R is an equity segment program and, therefore, does not require cost-effective energy savings targets. However, the primary purpose of the REA-R is to deliver immediate energy savings to equity customers through energy assessments and direct install measures, and therefore SCE refers to it as having a resource component.

partners and contractors to enroll in a TA network. The CBOs and TAs recruit participants, directly install energy efficiency measures, and identify additional low and no-cost opportunities for micro and small business customers to improve their energy efficiency. PG&E, SCE, and SDG&E all are anticipated to offer this program in their service territory. There are minor differences in the contractual language following the RFP for each of the IOUs, but the design is expected to be the same. The program in the PG&E territory began in July 2023; however, the program has not yet launched in the SCE and SDG&E territories.[43]

[43] SCE planned to launch in December of 2023 but is currently delayed. SDG&E's program is scheduled to begin in 2024.

3. STUDY OBJECTIVES AND RESEARCH QUESTIONS

Table 5 summarizes each research objective and the corresponding research questions. For a summary of the findings associated with each research question, see Appendix C.

Table 5. Summary of Research Objectives and Questions

Research Objective	Research Questions
Assess the extent to which each program plan aligns with the IOU business plans and CPUC ESJ Action Plan regarding goals, metrics, and timelines.	▪ What are the key program elements documented for each 3P equity program launched in 2023? ▪ What are the goals/metrics each program uses to track success? ▪ What entity defined these goals/metrics? ▪ How have the 3P equity programs integrated CPUC's definition of equity into their program design?
Document relevant CA policies that guide energy equity, identify key CA actors involved in equity framework/metric development, and describe best practices from existing equity metrics/frameworks.	▪ What are the energy equity policies in CA relevant to the 3P equity programs? ▪ What frameworks/metrics have been established regarding energy equity programs? ▪ Are there existing frameworks/metrics from other jurisdictions that could be beneficial to CA's 3P equity programs?
Identify commonalities in the program theory and logic models (PTLMs) of the current 3P equity programs.	▪ What sectors are covered by each program and why? ▪ Does a PTLM exist for each 3P equity program? ▪ What is the program theory for each 3P equity program? ▪ How is the program intended to bring about expected results? ▪ How does the program plan to recruit DAC/HTR customers to participate? ▪ What are the program activities and outputs? ▪ What are the program's short-, medium-, and long-term outcomes? ▪ Are the program's activities producing desired outcomes? ▪ What are the commonalities of the PTLMs across 3P equity programs?
Determine the evaluability of the 3P equity programs.	▪ Are the data needed to quantify program success from the implementation plan being collected, or can they be collected for each 3P equity program? ▪ Are the goals/metrics intended for each 3P equity program appropriate to measure program success? ▪ Can non-energy goals (e.g., bill savings, safety and comfort, indoor air quality) be evaluated for each program?
Describe the current successes and barriers to implementing 3P equity programs in California.	▪ To what extent have 3P implementation staff and utility PAs integrated community voices and perspectives into the design, implementation, and measurement of the success of each equity program? ▪ What were the reasons stakeholders participated/did not participate in the 3P equity program design, implementation, or evaluation process? ▪ What lessons were learned in the first year of implementing 3P equity programs (e.g., barriers, successes, unexpected challenges)? ▪ To what extent are the 3P equity programs on track to meet the goals/objectives set in the implementation plans? ▪ How could 3P equity programs be improved to better meet the needs of equity (DAC/HTR/underserved) customers in California? ▪ What is the estimated 3P equity program awareness among equity (DAC/HTR/underserved) customers? ▪ What are the expected motivations/barriers for 3P equity program participation among equity (DAC/HTR/underserved) customers?

4. METHODS

In order to achieve the study objectives, the Evaluation Team used early components of Opinion Dynamics' developmental evaluation approach called the Whole Independent Systems Evaluation (WISE™).[44] WISE™ combines traditional process, impact, and market transformation evaluations but takes a proactive approach by generating insights from the beginning rather than waiting until the end. In this study, we conducted initial research to ensure that the 2023 equity programs are evaluated early and support future process and impact evaluations. As part of this study, the Evaluation Team conducted 1) a review of key program and CPUC documents, 2) a landscape analysis to understand key definitions, frameworks, metrics, and best practices, 3) an assessment of the PTLMs and KPIs of each program (i.e., evaluability assessment), and 4) interviews with key program staff and relevant stakeholders. A summary of the methods used for each research objective can be found in Table 6.

Table 6. Overview of Evaluation Methodology by Research Objective

Research Objective	Program and Document Review	Landscape Analysis	Evaluability Assessment	Key Program Staff Interviews
Assess the extent to which each program plan aligns with the IOU business plans and CPUC ESJ Action Plan regarding goals, metrics, and timelines.	✓		✓	✓
Document relevant CA policies that guide energy equity, identify key CA actors involved in equity framework/metric development and describe best practices from existing equity metrics/frameworks.		✓		
Identify commonalities in the program theory and logic models of the current 3P equity programs.	✓		✓	
Determine the evaluability of the 3P equity programs.	✓		✓	✓
Describe the current successes and barriers to implementing 3P equity programs in California.			✓	✓

4.1 PROGRAM AND DOCUMENT REVIEW

The Evaluation Team developed a data request to gather program materials that help understand each equity program's design and implementation status, that was expected to launch in 2023. The Evaluation Team reviewed internal program information for each program, such as existing PTLMs, program implementation plans, and 3P implementer contracts. Additionally, the Evaluation Team compiled and reviewed public documents available and related to the 3P equity programs, which included:

- CPUC ESJ Action Plan (Versions 1.0 and 2.0)
- IOU Business Plans 2024–2051
- Historical CPUC Decisions relevant to the design and implementation of 3P equity programs (e.g., D.21-05-031, D.16-08-019, and D.18-01-004)
- Relevant CAEECC documents such as the EMWG 2021 Report

This task aimed to:

[44] WISE - Opinion Dynamics

1. Develop a baseline understanding of the current 3P equity program designs, goals, intended outcomes, and critical processes.
2. Characterize each program's goals, metrics, and timelines.
3. Examine the alignment between program designs, IOU business plans, and CPUC ESJ objectives.
4. Characterize the responsibilities of 3P implementers associated with these programs in contrast to the IOU PAs.
5. Identify key contacts for program interviews.

4.2 INTERVIEWS WITH KEY PROGRAM STAKEHOLDERS

Following the initial program document review, the Evaluation Team conducted 12 in-depth phone interviews with 3P implementation staff and IOU program managers for the REA-R, REA-NR, DACMO, and Simplified Savings Programs. The interviews covered (1) the program implementation status, (2) clarification regarding the PTLM, (3) current data collection practices, and (4) the successes and challenges staff have experienced with the program thus far. All interviews were recorded with the permission of all interviewees. They were then transcribed and analyzed using NVivo Software for significant themes. Table 7 lists the number of interviews by program.

Table 7. Number of Interviews Conducted by 3P equity program

	IOU Program Managers	3P Program Implementation Staff	Total Number of Interviews
REA-R and REA-NR	1	1	2
DACMO	1	1	2
Simplified Savings	2	6	8
Total Number of Interviews	**4**	**8**	**12**

4.3 LANDSCAPE ANALYSIS

The landscape analysis aimed to document the relevant policies, actors, frameworks, and best practices that guide energy equity within California. The Evaluation Team conducted a literature review and a series of interviews with key equity actors to answer the following questions:

- What are the energy equity policies in California relevant to the 3P equity programs?
- What frameworks/metrics have been established regarding energy equity programs?
- Are there existing frameworks/metrics from other jurisdictions that could be beneficial to CA's 3P equity programs?

4.3.1 LITERATURE REVIEW

The Evaluation Team conducted an online literature review to understand the energy equity policies, frameworks and definitions, metrics, and relevant actors working on energy equity issues in California. We began by searching online reports and guiding documents from the CAEECC, CPUC, and California Energy Commission (CEC). We conducted an online search to identify and review various sources, compiling information on actors working on energy equity in California, their scope of work, organizational overview, metrics, and commitment to equity goals for emergent themes and best practices. A list of the documents reviewed can be found in Appendix A.

4.3.2 INTERVIEWS WITH ENERGY EQUITY ACTORS

To ensure that we spoke with a diverse set of actors, we categorized each actor based on the type of entity (i.e., non-profit, educational institution, public utility commission [PUC] staff/evaluators working outside California, and California IOU PAs) and the extent to which their websites contained equity information. We then purposefully sampled to ensure we had at least one interview with each type of actor. We initially began our outreach with actors that contained substantive equity information such as resources, frameworks, or integrated equity into their vision and mission statements.

We conducted email and phone outreach in April 2024. Individuals were initially contacted via email and received a follow-up phone call and an email reminder. We completed a total of 10 phone interviews, as shown in Table 8. The 60-minute interviews covered the organization's role and experiences working on energy equity in California, relationships and collaborations with other energy equity actors, current data collection practices to measure progress towards equity, and recommendations for how to design, implement, and evaluate energy equity activities and policies. With participants' permission, each interview was recorded, transcribed, and coded for key themes utilizing NVivo.

Table 8. Number of Interviews Conducted by 3P Equity Program

Type of Entity	Number of Interviews Completed
Non-Profit Organization	4
Educational Institution	1
Non-CA PUC/Evaluator	2
CA IOU PAs	3
Total Number of Interviews	**10**

4.4 EVALUABILITY ASSESSMENT

Evaluability involves the plausibility of expecting—and the feasibility of measuring—the program's intended outcomes. The Evaluation Team assessed the evaluability of the 3P equity programs utilizing the original PTLMs and implementation plans provided by the IOUs. To evaluate plausibility, the Evaluation Team examined whether each relationship within the PTLM provided linkages that could be logically connected based on the criteria in Table 9. This assessment began by examining the overarching barriers and whether the activities addressed the barriers identified in the PTLM and moved down to ensure that outputs and outcomes could reasonably be expected from these activities. To address feasibility, the Evaluation Team identified KPIs that could be used to measure each program's performance and characterized the extent to which current data collection processes support the measurement of each KPI. The Evaluation Team assessed the feasibility of each program using the scale presented in Table 10. The Evaluation Team then recommended updates to the PTLM and KPIs to measure program performance and ensure all 3P equity programs are evaluable.

Table 9. Plausibility Criteria

Plausibility	Criteria
Plausible	▪ There is sufficient evidence to suggest that the output or outcome is or could be occurring *or* ▪ It is logical to expect an activity/output to result in theoretical outputs/outcomes.

Plausibility	Criteria
Somewhat Plausible	▪ There is *some* evidence to suggest that the output or outcome is or could be occurring *or* ▪ It is logical to expect an activity/output to *be related to* theoretical outputs/outcomes but not directly result in an output or outcome.
Not Plausible	▪ The linkage does not satisfy either of the criteria listed above.

Table 10. Feasibility Criteria

Feasibility	Criteria
Feasible	▪ Current data tracking practices are sufficient to support measurement for *all* KPIs associated with a specific output or outcome. ▪ No additional data or data tracking/reporting practices are required to measure performance toward an output or outcome.
Somewhat Feasible	▪ Current data tracking practices are sufficient to support the measurement of *some* KPIs associated with a specific output or outcome. ▪ Adjustments to current data tracking/report practices are necessary for measurement to be fully feasible.
Not Currently Feasible	▪ Current data tracking practices do not support the measurement of *any* KPIs associated with a specific output or outcome. ▪ Additional data collection and tracking/reporting practices are necessary for measurement to be feasible.

5. DETAILED FINDINGS

Due to the unique design of this study that aims to characterize the energy equity landscape in California, provide an early developmental evaluation of the 3P equity programs launched in 2023, and identify best practices and recommendations for energy equity work at the CPUC moving forward, we organized the findings of this report based on the following themes:

- The Landscape of Energy Equity in California: Policies, Processes, and Actors
- Energy Equity Definitions and Frameworks
- Audiences of Interest
- Strategic Planning and Goal Alignment
- Investing in Energy Equity
- Community Engagement and Procedural Equity
- 3P equity program Evaluability

The findings first characterize California's current energy equity landscape by summarizing relevant equity policies, protocols, guiding documents, and actors shaping energy equity activities. The subsequent sections then utilize multiple data sources (e.g., literature review, document analysis, interviews with key stakeholders) to describe the current policies and practices in California related to that theme, the applications to 3P equity programs, and the alignment of these practices and protocols with industry best practices.

5.1 ENERGY EQUITY IN CALIFORNIA: SETTING THE LANDSCAPE

This section introduces key policies, processes, and actors working on energy equity in California. We begin by summarizing key policies and documents that guide energy equity in California, including the CPUC processes to develop goals, indicators, and metrics to measure program performance within the equity segment. We then discuss which actors are actively working to develop energy equity frameworks and metrics, make and influence energy equity policy, and implement energy equity programs. We close this introductory section with a review of evaluations of California policies through an energy equity lens.

5.1.1 GUIDING DOCUMENTS AND POLICIES

California is making efforts to advance energy equity through 1) legislation defining underserved, disadvantaged, and low-income communities,[45] 2) the development of energy programs that support energy resilience, energy access, and energy affordability for customers, [46][47][48] 3) the utilization of a multi-factor analysis tool (i.e., CalEnviroScreen) to identify qualifying customers for various transportation and energy programs,[49] and 4) the CPUC's commitment to environmental and social justice goals through its ESJ Action Plan.[50] Further, California has several actors and working groups that bring various state agencies and energy stakeholders together to discuss energy policies, programs, and

[45] SB-535-Designation-Final.pdf (ca.gov)
[46] SB 350 Clean Energy and Pollution Reduction Act (ca.gov)
[47] AB-205 Energy. (ca.gov)
[48] SB 535. SB 535 Disadvantaged Communities | OEHHA (ca.gov)
[49] SB 535. SB 535 Disadvantaged Communities | OEHHA (ca.gov)
[50] esj-action-plan-v2jw.pdf (ca.gov)

metrics (e.g., Disadvantaged Communities Advisory Group, Environmental Justice Advisory Committee, CAEECC Equity & Market Support Working Group [EMSWG], and the Grounded Research Common Metrics Working Group).[51,52,53]

As mentioned previously, the CPUC's Decision 21-05-031 required the California PAs to segment their EE portfolio into programs whose primary purpose is resource acquisition, market support, or equity.[54] D.21-05-031 stated that the primary objective of the equity programs is to support the CPUC's ESJ Action Plan. Additionally, CPUC Decisions 18-05-051 and 23-06-055 strive to define goals, indicators, and metrics for the equity segment of programs. Decision 18-05-041 included common metrics and indicators across the three EE portfolio segments (resource acquisition, market support, or equity), while Decision 23-06-055 mandated the assembly of the CAEECC EMSWG to define indicators and metrics for the new equity segment of programs.

In February 2019, the CPUC adopted Version 1.0 of the ESJ Action Plan,[55] which codified its commitment to advancing environmental and social justice principles by outlining an operational framework to integrate ESJ considerations throughout the commission's work as well as the IOUs it regulates (i.e., PG&E, SCE, SoCalGas, and SDG&E). The ESJ Action Plan aims to create commission-wide collaboration, ensure accountability, and spur progress toward realizing ESJ principles. The plan is expected to be revised every two years through a public process. As a result, Version 2.0 of the ESJ Action Plan was developed and enacted in April 2022.[56] The revisions in Version 2.0 were made to promote high road careers for DACs and refine the ESJ Action Plan's key goals and objectives, as shown in Table 11.[57] Specifically, the equity programs for each PA are expected to help achieve goals 1, 2, and 5.

Table 11. ESJ Action Plan Version 2.0 Goals and Objectives

ESJ Goals (Version 2.0)	ESJ Objectives (Version 2.0)
Goal 1: Consistently integrate equity and access considerations throughout CPUC regulatory activities.	**1.1 Build Systematic Approaches for ESJ Priorities:** Continue building systematic approaches for considering ESJ issues in proceedings and decisions, as well as implementation processes included in advice letters, general orders, and resolutions. Build understanding of critical ESJ concepts and definitions to ensure alignment and deepen impact.
	1.2 Expand Opportunities for Access: Continue pursuing innovative approaches to broadening access to CPUC activities and decision-making.
Goal 2: Increase investment in clean energy resources to benefit ESJ communities and improve local air quality and public health.	**2.1 Outreach & Engagement:** Broaden and deepen outreach and engagement with ESJ communities early in proceedings and processes related to resilient, clean energy.
	2.2 Research & Analysis to Understand Impact: Further research and analytical opportunities to understand impacts in ESJ communities.
	2.3 Move Towards Mutual Eligibility & Maximizing Impact: Better leverage ongoing work by fostering cross-division, cross-commission, and cross-agency dialogues to move towards mutual eligibility and maximizing impact.
	2.4 Address Impacts in ESJ Communities: Continue to address ongoing and legacy impacts in ESJ communities in the resilient, clean energy space.

[51] AB-32 Air pollution: greenhouse gases: California Global Warming Solutions Act of 2006.

[52] CAEECC-hosted Equity Metrics Working Group, *Report and Recommendations to the California Public Utilities Commission and the Energy Efficiency Program Administrators*, October 20, 2021, https://www.caeecc.org/equity-metrics-working-group-meeting.

[53] Joint Portfolio Administrator Tier 2 Advice Letter to Comply with Ordering Paragraph 11 of Decision 23-06-055. ELEC_4438-E.pdf (sdge.com).

[54] D 21-05-031. 385864616.PDF (ca.gov)

[55] https://www.cpuc.ca.gov/news-and-updates/newsroom/environmental-and-social-justice-action-plan.

[56] esj-action-plan-v2jw.pdf (ca.gov)

[57] High road careers pay family-supporting wages, compete based on the quality of their services and products, and engage workers and their representatives in the project of building skills and competitiveness. https://cwdb.ca.gov/wp-content/uploads/sites/43/2019/09/High-Road-ECJ-Brief_UPDATED-BRANDING.pdf.

ESJ Goals (Version 2.0)	ESJ Objectives (Version 2.0)
	2.5 Continue Ongoing Investment: Continue to make prioritized resilient, clean energy investments in ESJ communities.
Goal 3: Improve access to high-quality water, communications, and transportation services for ESJ communities.	**3.1 Ensure Equitable Clean Transportation:** Pursue opportunities for ESJ communities to access clean vehicles and services from Transportation Network Companies (TNCs).
	3.2 Ensure Water Customer Resilience: Support ESJ customers and communities with discounted rates for low-income customers and sustainable systems.
	3.3 Extend Rail Safety to ESJ Communities: Pursue opportunities to bolster safety along rail lines in ESJ communities.
	3.4 Extend Essential Communications Services to ESJ Communities: Ensure implementation of new investments that offer ESJ communities access to essential communications services at affordable rates.
Goal 4: Increase climate resiliency in ESJ communities.	**4.1 Emphasize Adaptive Capacity:** Ensure ESJ communities and considerations around their adaptive capacity are incorporated into relevant programs and activities.
Goal 5: Enhance outreach and public participation opportunities for ESJ communities to meaningfully participate in the CPUC's decision-making process and benefit from CPUC programs.	**5.1 Improve Communication with ESJ Lens:** Continue to build and improve CPUC communications methods and materials to ensure ESJ audiences can better participate.
	5.2 Continue to Emphasize Engagement with CBOs: Deepen relationships and network connections with community-based organizations throughout the state.
	5.3 Build Pathways for Public Participation: Based on lessons learned and areas for improvement, build additional and enhanced pathways to welcome and involve ESJ stakeholders in CPUC processes.
	5.4 Enhance Engagement with Particular ESJ Communities and Individuals: Consider the specific needs of particular populations and work to create targeted engagement opportunities.
Goal 6: Enhance enforcement to ensure safety and consumer protection for all, especially for ESJ communities.	**6.1 Protect ESJ Consumers:** Track complaints from ESJ communities and protect against fraud and unfair business practices in CPUC-regulated industries.
	6.2 Conduct Proactive Action & Analysis in Transportation and Utility Enforcement: Utilize existing data and enforcement authority to focus on serving ESJ communities and understanding their needs.
	6.3 Apply ESJ Lens to CPUC Enforcement Policy: Ensure that the implementation of the Enforcement Policy includes opportunities for ESJ communities to benefit from maximum compliance with CPUC rules and regulations.
	6.4 Maximize Opportunities within Utility Audits: Incorporate strategies for engaging with ESJ communities and understanding cumulative impact.
Goal 7: Promote high road career paths and economic opportunities for residents of ESJ communities.	**7.1 Maximize Authority to Promote High Road:** Continue implementing Memorandum of Understanding (MOU) with the CA Workforce Development Board to develop proceeding record and outreach to nontraditional partners to understand opportunities for CPUC to maximize its jurisdiction and authority to promote high road careers.
	7.2 Educate on High Road Careers: Provide opportunities to educate CPUC staff on high road career paths, best practices, and opportunities to integrate into CPUC programs.
	7.3 Partner with Utilities and Sister Agencies: Engage sister agencies with authority and expertise on workforce-related issues and regulated utilities in promoting economic opportunity for ESJ communities.

ESJ Goals (Version 2.0)	ESJ Objectives (Version 2.0)
Goal 8: Improve training and staff development related to environmental and social justice issues within the CPUC's jurisdiction.	**8.1 Bolster Staff Knowledge of ESJ Issues and Resources:** Engage sister agencies with authority and expertise on workforce-related issues and regulated utilities in promoting economic opportunity for ESJ communities.
	8.2 Support Emerging Priorities and Skill Needs: Work in solidarity with other ESJ-aligned plans and efforts and offer new training opportunities to support shared goals.
Goal 9: Monitor the CPUC's environmental and social justice efforts to evaluate how they are achieving their objectives.	**9.1 Establish Consistent Quantitative Metrics:** Pursue opportunities to standardize metrics related to ESJ communities in CPUC programs and proceedings.
	9.2 Promote Meaningful Feedback Loops: Cultivate and deepen avenues for receiving feedback from the public and demonstrate the resulting impact to them.
	9.3 Establish Accountability Measures: Establish a public mechanism for reporting the CPUC's progress toward achieving the goals of the ESJ Action Plan.

5.1.2 CPUC DECISION-MAKING PROCESSES

To develop goals, indicators, and metrics to measure program performance within the equity segment, the CPUC initiated two parallel workstreams. One workstream occurred via coordination among the PAs. It was focused on modifying the common metrics and indicators included in D.18-05-041 and identifying methodologies to establish baselines and targets for these metrics. The other workstream comprised CAEECC-facilitated working groups, beginning with the CAEECC EMWG, which developed objectives and indicators for the new equity segment. The working groups did not have the opportunity for cross-collaboration due to the tight timelines for each group.

DECISION 18-05-041: COMMON METRICS

Decision 18-05-041 adopted 330 common metrics and indicators for the EE portfolio that PAs have been reporting on for several years. In the recent Decision 23-06-055, the CPUC indicated that "there are several common metrics that were adopted within Decision 18-05-041 that have not been used and/or may no longer be relevant or useful."[58] PG&E contracted with Grounded Research to support the PAs as they collaborated on modifications, suspensions, or removals of common metrics and indicators adopted in D.18-05-041. Through five meetings (from December 2023 to March 2024), the Grounded Research Common Metrics Working Group identified modifications to 115 common metrics and recommended the removal of 215. They recommended that the CPUC remove these 215 common metrics and indicators from the PAs' required EE portfolio reporting. The reasons for removing these metrics included:[59]

- Removing all market support or equity indicators or metrics from the common metrics list. The PAs expected useful information from the new equity and market support indicators, as developed by the CAEECC EMSWG, and those equity and market support indicators should establish what information is currently needed from those segments.
- The PAs also recommended that the CPUC drop any metrics referencing "lifecycle kW" as kW are instantaneous, so there is no meaningful way to calculate kW lifecycle savings.
- The PAs recommended removing many common metrics associated with the statewide programs (Emerging Technology Program; Workforce, Education & Training; Codes & Standards).

[58] D.23-06-055 at 29

[59] ELEC_4438-E.pdf (sdge.com)

The working group also recommended modifications to 115 of the common metrics for various reasons, including:

- Avoiding duplicative reporting. The PAs indicated that several common metrics are already regularly reported in CEDARS. Instead of the CPUC requiring annual reporting from the PAs, they recommend that stakeholders retrieve the information from CEDARS. The PAs acknowledge that, in some cases, CEDARS needs updates to make pulling relevant data easier so that stakeholders can follow changes within any indicator.
- The CPUC has shifted its priorities for EE from energy savings to total system benefits (TSB). The PAs recommended changing several energy savings metrics to indicators that do not require targets.
- The PAs recommended that the remaining metrics associated with statewide programs should only be reported by the lead PA.

Table 12 lists the common metrics the Grounded Research Common Metrics Working Group recommended keeping but modifying for future reporting. There are three key categories of remaining common metrics: energy savings, greenhouse gas (GHG) emissions reductions, and compliance improvements.

Table 12. Modified Common Metrics

Metrics Category	Number of Metrics	Metrics Description	Reason for Modification
Energy Savings	103	▪ First-year annual gross/net savings by fuel, equity segment, building type, and sector ▪ Lifecycle ex-ante gross/net savings by fuel, equity segment, building type, and sector	▪ Remove the need for duplicative reporting; data are already available within CEDARS ▪ Shift metrics to align with program goals for TSB
GHG Emission Reductions	7	▪ CO2-equivalent of net annual kWh savings by sector	▪ Remove the need for duplicative reporting; data are already available within CEDARS ▪ Shift metrics to align with program goals for TSB
Compliance Improvement	5	▪ Number of training activities ▪ Number of training participants ▪ Increase in code compliance knowledge pre-/post-training ▪ Number of organizations directly engaged in Codes & Standards activities ▪ Percent of jurisdictions directly engaged in Codes & Standards activities	▪ Modify metrics associated with the statewide programs; reporting only required by lead PA
Number of Modified Metrics	**115**		

Source: Attachment C - Common Metrics.xlsx (live.com)

For the energy savings metrics, each metric is recommended to be reported by the following:

- **Fuel:** electricity (kWh), demand (kW),[60] and natural gas (therms)[61]
- **Equity segment:** DACs and HTR markets, as defined by the ESJ Action Plan.
- **Building type:** for any single family/multifamily metrics that are modified, the PAs recommend further modification from the existing common metrics categories (e.g., in-unit, common area, master metered) to the existing building

[60] The PAs will only report first-year annual gross/net savings for demand.

[61] For the Codes & Standards sector, net energy savings are expected to be reported in GWh, MW, and MM therms (larger units of measure compared to the other sectors).

type variables already assigned in the claims (i.e., Residential Multifamily, Residential Multifamily Common Area, Residential Single Family). This streamlining allows these indicators to be tracked using CEDARS data.

- **Sector:** portfolio-level, residential single-family, residential multifamily, commercial, industrial, agricultural, public, and codes & standards

The GHG metrics are only recommended to be reported by sector, and the modified compliance improvement metrics are only applicable to the Codes & Standards sector.

DECISION 23-06-055: CALIFORNIA ENERGY EFFICIENCY COORDINATING COMMITTEE EQUITY METRICS

In January 2016, the CPUC established the CAEECC to help California achieve its energy efficiency goals.[62] Initially, CAEECC members provided input on developing IOU Business Plans, but the forum has since expanded to discuss various energy equity topics under the CPUC's supervision. CAEECC fosters collaboration among utilities, government, industry actors, and community organizations.

Between July and September of 2021, the CAEECC EMWG met to identify and define essential objectives and metrics for the new equity segment established by the CPUC. The CAEECC EMWG was tasked with the following:

- Defining specific objectives for the segment and identifying associated key metrics;
- Considering how these objectives and metrics are tied to justify portfolio segmentation, program design, forecasting benefits/values, tracking, and evaluation; and
- Specifying what needs to be included in IOU filings regarding objectives, metrics, and targets; under what conditions PAs can propose new ones; and how non-consensus objectives or metrics will be addressed in the filings.[63]

The CAEECC EMWG consisted of actors from state governmental organizations, energy providers, implementers, and other relevant EE actors, as shown in Figure 1.

Figure 1. CAEECC EMWG Members

Source: https://www.caeecc.org/equity-market-support-wg

[62] https://www.caeecc.org/.

[63] CAEECC-Hosted Equity Metrics Working Group, "Report and Recommendations to the California Public Utilities Commission and the Energy Efficiency Program Administrators" (October 20, 2021), accessed May 2, 2024, https://www.caeecc.org/9-29-21-emwg-mtg.

D.23-06-055 adopted thirteen equity indicators, many of which were metrics or indicators[64] recommended by the CAEECC EMWG. At the same time the Grounded Research Common Metrics Working Group was reviewing the common metrics list, D.23-06-055 requested that CAEECC re-engage the EMWG and Market Support Metrics Working Group—a separate effort focused on the market support segment—to discuss and develop recommendations to clarify the adopted equity and market support indicators. CAEECC reconvened by consolidating the two working group efforts into a single Equity and Market Support Working Group (EMSWG) from November 2023 to March 2024.

The CAEECC EMSWG identified equity segment objectives, adopted in D.23-06-055, for HTR, disadvantaged, and/or underserved communities:

- Address disparities in access to energy efficiency programs;
- Promote resilience, health, comfort, safety, energy affordability, and/or energy savings;
- Reduce energy-related GHG and criteria pollutant emissions; and
- Provide workforce opportunities.

To achieve these objectives, the CAEECC EMSWG identified the 13 equity indicators in Table 13.

Table 13. CAEECC EMSWG Recommended Equity Indicators

Equity Indicator #	Indicator Description Adopted in D.23-06-055
1	Count of equity target participants in equity segment, by sector
2	Sum of equity target participants' expected first-year bill savings in equity segment, by sector
3	Count of equity target participants in market support segment, by sector
4	Count of equity target participants in resource acquisition segment, by sector
5	Sum of all equity segment participants' GHG reductions (in tons of carbon dioxide equivalent) in the equity segment
6	Sum of all equity segment participants' kilowatt hour (kWh) savings in the equity segment
7	Sum of all equity segment participants' kW savings in the equity segment
8	Sum of all equity segment participants' therm savings in the equity segment
9	Sum of all equity segment participants' TSB [Total System Benefits] in the equity segment
10	Median of equity target participants expected first-year bill savings in equity segment, by sector
11	Percent of hard-to-reach customer participants in the portfolio, by residential single family/multi-family and commercial sector[a]
12	Percent of disadvantaged community customer participants in the portfolio, by residential single-family/multi-family and commercial sector[a]
13	Percent of equity target participants in equity segment, by sector

[a] The CAEECC recommends that the PAs report all equity indicators quarterly, by segment, except for indicators 11 and 12, which are recommended to be reported annually, by portfolio.
Source: CAEECC EMSWG Final Report. March 22, 2024

While the equity indicators were originally developed by CAEECC to be applied to the portfolio segment and not specific programs, language in the CAEECC EMSWG suggests the equity indicators cascade down to programs to support broader segment tracking. In March 2024, the CAEECC EMSWG reached a consensus that the equity indicators would be used to measure the impacts of equity segment programs, provide accountability for dollars spent in the equity segment, allow PAs to adjust equity segment programs based on data collected, and support the development of goals

[64] Note: while the terms indicators and metrics are often used synonymously, we utilize indicators to illustrate qualitative or quantitative measures of performance that illustrate progress toward specific goals and desired outcomes. In contrast, metrics are more specific and typically quantitative measures that are used to evaluate the effectiveness of specific actions or strategies. These provide more fine-level data that can support the tracking of indicators.

for the equity segment.[65] However, the working group made no clear adjustments to refine the equity indicators from portfolio-level to program-level measurements.

5.1.3 ACTORS WORKING ON ENERGY EQUITY

While the CPUC is a key actor that guides equity in energy efficiency programs, energy equity in California is a collaborative effort between multiple actors, including government agencies, non-profit organizations, industry professionals, coalitions, and advocacy groups. The Evaluation Team identified 45 actors participating in energy equity discussions across the state. While the majority of the 45 actors work within the energy sector (e.g., Energy Efficiency For All Coalition), they may also advocate for housing (e.g., Build it Green), broader environmental issues (e.g., Natural Resources Defense Council), public health (e.g., UCLA Luskin Center for Innovation), or workforce and economic development (e.g., Small Business Utility Advocates). These actors operate at various levels: locally, statewide, or nationally. We reviewed interviews with a subset of the energy equity actors identified and reviewed key equity resources available on their websites to summarize best practices discussed throughout this report. Below, we highlight the actors involved in the development of energy equity frameworks and metrics, the development of energy equity policy, the implementation of energy equity programs, and the evaluation of energy equity policy in California.

DEVELOPING ENERGY EQUITY FRAMEWORKS AND METRICS

Broader energy equity framework and metric development have been led by national energy equity actors, including:

- American Council for an Energy-Efficiency Economy (ACEEE)[66]
- Initiative for Energy Justice (IEJ)[67]
- National Association for the Advancement of Colored People (NAACP)[68]
- Pacific Northwest National Laboratory (PNNL)[69]
- United States Department of Energy (DOE)[70]
- University of Michigan's Energy Equity Project (EEP)[71]
- Urban Sustainability Directors Network (USDN)[72]

Within California, the CEC developed a Justice, Access, Equity, Diversity, and Inclusion (JAEDI) Framework to guide their commitment to energy equity.[73] The CEC and CPUC also utilize the Disadvantaged Communities Advisory Group (DACAG) Equity Framework to guide feedback on existing programs and proceedings from both government agencies.

---

[65] CAEECC EMSWG Final Report p. 11.

[66] Drehobl, A. 2021. ACEEE's Leading with Equity Initiative: Key Findings and Next Steps. Washington, DC: American Council for an Energy-Efficient Economy. ACEEE Report

[67] *JUSTICE IN 100: Analysis of the First Ten 100% Laws in the US* (Initiative for Energy Justice, 2023), https://iejusa.org/wp-content/uploads/2023/09/IEJ-Report-Final-1.pdf.

[68] Just Energy: Reducing Pollution, Creating Jobs Toolkit | NAACP

[69] Tarekegne B.W., B. Pennell, D.C. Preziuso, and R.S. O'Neil. "Review of Energy Equity Metrics" 2021. Pacific Northwest National Laboratory. pnnl.gov/main/publications/external/technical_reports/PNNL-32179.pdf.

[70] Equity in Energy™ | Department of Energy

[71] Energy Equity Project, 2022. "Energy Equity Framework: Combining Data and Qualitative Approaches to Ensure Equity in the Energy Transition." University of Michigan – School for Environment and Sustainability (SEAS).

[72] Jeremy Hays et al., *Equity and Buildings: A Practical Framework for Local Government Decision-Makers* (Urban Sustainability Directors Network, June 2021), https://www.usdn.org/projects/equity-in-buildings-framework.html.

[73] California Energy Commission "Justice Access Equity Diversity Inclusion (JAEDI) Framework" February 2023. CEC JAEDI Framework (ca.gov).

Other actors, such as the Greenlining Institute,[74] and the California Environmental Justice Alliance (CEJA),[75] have developed equity frameworks to support policy advocacy and increased investments in DACs.

In addition to the CAEECC Working Groups' efforts to develop EE equity segment metrics for California, the Los Angeles Department of Water and Power (LADWP) has been a leader in defining metrics with its Equity Metrics Data Initiative that began in 2016.[76] The Equity Metrics Data Initiative tracks, measures, and reports on LADWP program performance and establishes a framework that helps ensure fair and reasonable services to all ratepayers.[77]

MAKING AND INFLUENCING POLICY

Beyond the governor and state legislature, governmental agencies such as the CPUC, CEC, the California Air Resources Board (CARB), and the California Natural Resources Agency (CNRA) have their own proceedings to ensure that environmental concerns and the provision of clean and affordable energy are prioritized in achieving California's energy equity goals. The Low-Income Oversight Board advises the CPUC on low-income electric, gas, and water corporation customer programs and serves as a liaison for the CPUC on low-income customer issues.[78]

Outside of government, non-profits, coalitions, and unions advocate for stakeholder interests in California. Coalitions such as Energy Efficiency for All (EEFA)[79] and the Building Energy, Equity & Power (BEEP) Coalition[80] heavily advocate for policies promoting energy efficiency in low-income and disadvantaged communities. These groups aim to provide affordable housing solutions for residents with high energy burdens. The need for collective action to address social and environmental disparities has led to coalitions built on local (e.g., BEEP) and national (e.g., EEFA) scales. Coalitions may engage with unions that represent the workforce, ensuring that the transition to clean energy is fair for all workers by advocating for job training, fair wages, and safe working conditions. Together, coalition partners address both the systemic policies and the social implications of the energy transition, ensuring that it benefits everyone equitably.

IMPLEMENTING ENERGY EQUITY PROGRAMS

Energy programs are often offered in California under the CPUC through IOU portfolios,[81] CARB-utilizing funds from California's Greenhouse Gas Reduction Fund (GGRF),[82] Regional Energy Networks (RENs) and Community Choice Aggregators (CCAs). There are often closer partnerships with non-profits, consulting companies, and, in some cases, industry partners that execute these programs. RENs and CCAs partner with local governments to enhance energy efficiency, invest in renewable energy, cut GHG emissions, align with broader sustainability goals, and address localized demands. Third-party implementation firms are hired by the PAs (IOUs, RENs, CCAs) to support the delivery of programs to improve underserved customer access to clean energy, energy efficiency, electrification, and other energy benefits.

EVALUATING ENERGY POLICY

Within the US, industry organizations such as ACEEE conduct national evaluations of energy policy and programs. Since 2006, ACEEE has utilized scorecards to evaluate state policies and program efforts in advancing energy efficiency. In 2022, ACEEE updated the scorecards to include energy equity. California received ACEEE's highest scorecard ranking

[74] Sonrisa Cooper & Alvaro Sanchez, "Greenlined Economy Guidebook: Transforming Community Development Transforming our Economy". 2020. Greenlining Institute. Greenlined-Economy-Guidebook-2020.pdf (greenlining.org)
[75] California Environmental Justice Alliance, "Building a Just Energy Future". 2020. CEJA-CCA-REPORT-EX-SUMMARY-FINAL.pdf (caleja.org)
[76] Equity Metrics Data Initiative | Los Angeles Department of Water and Power (ladwp.com)
[77] https://empowerla.org/ladwp-equity-metrics-update/
[78] https://liob.cpuc.ca.gov/
[79] Energy Efficiency for All (EEFA) | National Housing Trust
[80] Overview of BEEP & Recent CEC Efforts (ca.gov)
[81] D.23-06-055.
[82] California Climate Investments Funded Programs | California Air Resources Board

for the second year in 2022. ACEEE indicated, "California serves as a leader for other states by saving energy on multiple fronts with the adoption of advanced clean energy building codes, stringent vehicle emissions standards, and industry-leading appliance standards".[83] Specifically, regarding energy equity, California received high scores for possessing a dedicated equity task force and an energy affordability/justice goal within its state government initiatives, having utilities that track and report equity-related program data for low-income programs, and having programs for electrification in affordable housing and encouraging equitable transportation electrification.

Additionally, in 2021, a study examined the pathways public utility commissions (PUCs) are creating to advance decarbonization and energy equity goals into their mandates.[84] Of the 24 dockets examined that included decarbonization and energy equity advancement language, 12 came from CPUC dockets illustrating California's commitment to both energy equity and decarbonization efforts.

Finally, in August of 2023, IEJ published a report examining the quality of state energy policies.[85] While this report focuses on renewable energy policy in California, it highlights opportunities for EE policy considerations moving forward. The IEJ examined the quality of the first ten 100% renewable energy policies enacted in the US and its associated territories, including California's SB100, passed in 2018. Their analysis rated each state or territory (i.e., Washington DC and Puerto Rico) based on five key indicators: process, restoration, decision-making, benefits, and access.[86] When compared to legislation from other leading states, California placed eighth of the ten territories, receiving 5.5 out of the 46 potential points across the equity categories (See Figure 2).[87] California's renewable energy policy scored lower than other jurisdictions because California did not explicitly identify a process to examine the impacts of energy on marginalized communities. By comparison, the IEJ indicated that New York, which ranked highest, had a clear prioritization of marginalized communities in its policy, supported energy and non-energy benefits in goal setting, and had a clear method for identifying marginalized communities. Despite New York's policy receiving the most overall points across the five equity categories (n=19.25), this represented less than half of the potential points (n=46), suggesting that there are additional opportunities—particularly around restoration, decision-making, and benefits—to improve the integration of equity into state-level energy policy. Based on the findings from this study, future energy policies in California should explicitly provide language on (1) how to take action to remedy previous harms done to communities who have been negatively impacted by the energy industry, (2) how to prioritize and measure non-energy benefits such as economic, social, and health benefits for marginalized communities, and (3) how marginalized community members were or will be involved in law-making, decision-making and implementation processes.

[83] Subramanian, S., W. Berg, E. Cooper, M. Waite, B. Jennings, A. Hoffmeister, and B. Fadie. 2022. *2022 State Energy Efficiency Scorecard*. Washington, DC: ACEEE. www.aceee.org/research-report/u2206.

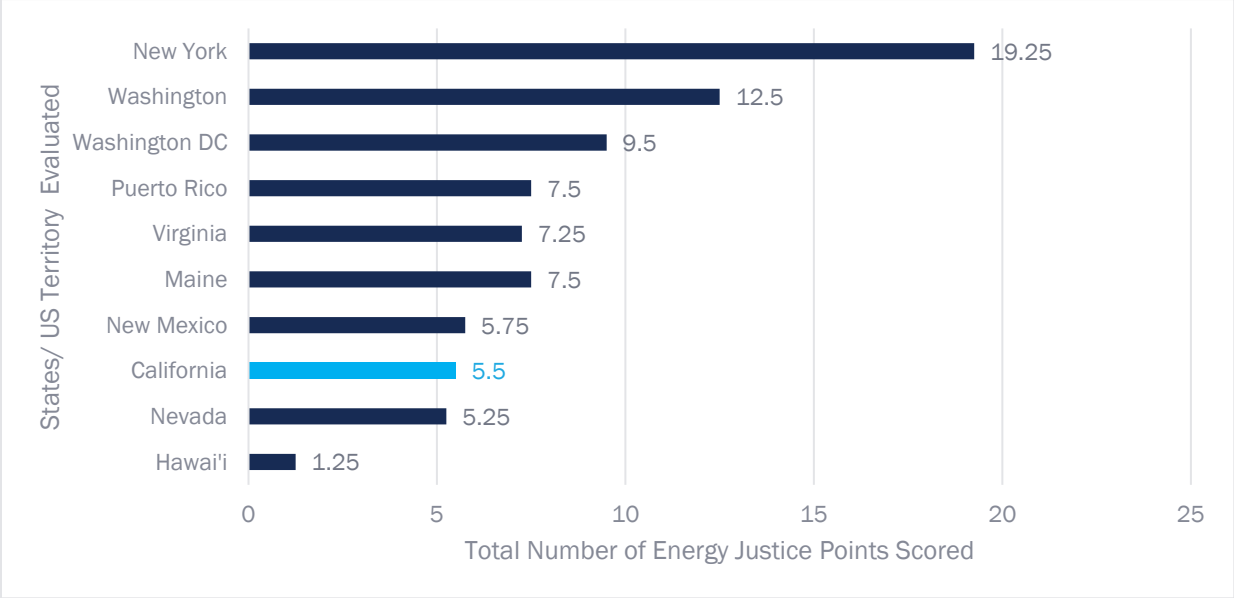
[84] E9 Insight, "Pathways to Changing the PUC Mandate: A Regulatory Review." June 2021. https://e9insight.com/wp-content/uploads/2021/10/IMT-Research-Memo-Final.pdf.

[85] Initiative for Energy Justice, "Justice in 100: Analysis of the first ten 100% laws in the US." August 2023. IEJ-Report-Final-1.pdf (iejusa.org)

[86] Ibid.

[87] California's scorecard. IEJ Appendix California (SB100).pdf - Google Drive

Figure 2. 2021 Initiative for Energy Justice Rating of 100% Renewable Energy Policies by State/Territory



5.2 ENERGY EQUITY DEFINITIONS AND FRAMEWORKS

A critical prerequisite to energy equity programs is to have clearly defined definitions or frameworks that help guide organizational equity activities, such as strategic planning, investing resources in equity programs and processes, and the design, implementation, and evaluation of equity programs. This section provides definitions of equity, and how it differs from equality and justice, and the different types of equity that can be considered by organizations. We then utilize these definitions to evaluate the current frameworks (i.e., DACAG and JAEDI) that are utilized in California.

5.2.1 THE DIFFERENCES BETWEEN EQUALITY, EQUITY, AND JUSTICE

According to the literature review, equity can be broadly defined as the process in which marginalized individuals are provided resources, opportunities, and other forms of support to ensure they can achieve desired outcomes. This differs from equality, which provides individuals with the same number of resources or support despite their needs. Finally, justice is a term that is often used interchangeably with equity; however, justice also interrogates existing policies, procedures, and structures that continue to lead to disproportionate outcomes for individuals of different identities or backgrounds.

As actors move to address inequalities in the energy sector, they often move along an equality-justice spectrum—where they may start by ensuring everyone receives the same support and offerings (i.e., equality-based solutions); they then move to recognize differences in desired outcomes based on individuals' backgrounds and life experiences (i.e., equity-based solutions), and finally, work to develop new structures and processes that support meaningful partnerships and collaborations in decision-making and ultimately lead to community empowerment (i.e., justice-based solutions). [88]

[88] Sarah Naiman, "Terms Matter: Teasing Apart the Differences between Energy Equality, Equity, and Justice," Making It All Work: Electrification, Equity, and Energy Management (Association of Energy Services Professionals, July 2, 2023), https://opiniondynamics.com/terms-matter-teasing-apart-the-differences-between-energy-equality-equity-and-justice/.

5.2.2 TYPES OF ENERGY EQUITY AND EXISTING FRAMEWORKS

Within broader discussions of equity, actors have developed frameworks and definitions to characterize the different types of equity or justice. Historical discussions of equity and justice consider four aspects:

- Distributive—the extent to which individuals have access to goods and are exposed to harms,
- Procedural—addressing barriers to participation in decision-making processes,
- Recognition--the extent to which individuals' experiences, perspectives, and ideas are respected and not dismissed, and
- Capabilities—the empowerment of communities and support of capacity building for marginalized and burdened communities.[89]

These concepts have been integrated into exemplary energy equity frameworks used to advance energy equity nationwide, including the University of Michigan's School of Environment and Sustainability (SEAS) EEP Framework,[90] ACEEE's Leading with Equity Initiative, [91] the Pillars of Energy Justice developed by the IEJ, and the USDN definition of equity.[92] Table 14 lists how each form of equity is categorized by each exemplary source, identifying the various terms used to refer to these common forms of equity and justice in the relevant literature.

Table 14. Traditional Equity Concept Alignment with Nationally Recognized Energy Frameworks

Original Concept/Terminology	Energy Equity Project (SEAS)	Leading with Equity (ACEEE)	Pillars of Energy Justice (IEJ)	USDN
Distributive	Distributive	Distributional	Substantive	Distributional
Procedural	Participatory	Procedural and Structural	Procedural	Procedural
Recognition	Recognition	N/A	N/A	Structural
Capabilities	Restorative	Transgenerational	Restorative	Transgenerational

5.2.3 CALIFORNIA ENERGY EQUITY FRAMEWORKS

According to equity actors interviewed, two key frameworks are considered in California when advancing energy equity in the state. These frameworks are not necessarily meant to inform best practice energy equity program design but provide a foundation for the state's stakeholders to embed equity into all elements of the clean energy transition. In 2018, the Disadvantaged Communities Advisory Group (DACAG) issued an Equity Framework to the CPUC to guide future discussions of CPUC and CEC activities. More recently, the CEC published the JAEDI framework in February 2023.

The CPUC, CEC, and CAEECC EMSWG referenced these guidance documents and the nationally recognized equity frameworks mentioned above when developing goals, metrics, and indicators for California's equity segment programs.

DISADVANTAGED COMMUNITIES ADVISORY GROUP EQUITY FRAMEWORK

[89] David Schlosberg, *Defining Environmental Justice: Theories, Movements, and Nature* (Oxford: Oxford University Press, 2007).
[90] Energy Equity Project, 2022. "Energy Equity Framework: Combining Data and Qualitative Approaches to Ensure Equity in the Energy Transition." University of Michigan – School for Environment and Sustainability (SEAS).
[91] Drehobl, A. 2021. ACEEE's Leading with Equity Initiative: Key Findings and Next Steps. Washington, DC: American Council for an Energy-Efficient Economy. ACEEE Report.
[92] Jeremy Hays et al., *Equity and Buildings: A Practical Framework for Local Government Decision-Makers* (Urban Sustainability Directors Network, June 2021), https://www.usdn.org/projects/equity-in-buildings-framework.html.

Formation of the DACAG was called for in Senate Bill 350, the Clean Energy and Pollution Reduction Act of 2015, to review CPUC and CEC clean energy programs and policies to ensure that disadvantaged communities, including tribal and rural communities, benefit from proposed clean energy and pollution reduction programs.[93] In March 2018, the CPUC appointed the nominees to the DACAG, and the CEC approved them. In August 2018, the DACAG published an equity framework to guide the DACAG as it moves forward in discussing and commenting on various proceedings and programs before the CPUC and CEC, ensuring that access and adequate resources reach the implementation stage and benefit communities in a meaningful and measurable way.[94] The framework is intended to be applied to all climate-related policies, bills, proceedings, requests for proposals, and other documents to ensure that equity is front and center when considering any climate investment or intervention in California. A 2024 update to the DACAG framework was open for public comment in May of 2024, but has yet to be approved and was not included as part of this review.

The DACAG equity framework is very brief and provides five lenses that must be considered when discussing energy policy and programs: Health and Safety, Access and Education, Financial benefits, Economic Development, and Consumer Protection. Table 15 includes the descriptions of each lens and the forms of equity addressed by each lens. The only form of equity not included in the DACAG equity framework is recognition. There is no element of the framework that incorporates a feedback loop that would ensure that individuals' experiences, perspectives, and ideas are heard, respected, and not dismissed.

Table 15. DACAG Equity Framework Lenses

Equity Lens	Equity Lens Description	Form(s) of Equity Addressed
Health & Safety	Energy policies and programs should be observed through the lens of public health to identify impacts and optimize the health and well-being of California's most vulnerable communities, advance health interventions related to climate change through education, and provide ways to value health benefits and impacts, build resiliency, mitigate climate-related illnesses, injury and deaths and reduce climate-related healthcare costs.	Distributive
Access & Education	Access and education are key to ensuring that DACs benefit from clean energy technologies, energy efficiency, and other environmental investments by focusing on special outreach efforts, ensuring that these interventions are applicable and that the communities' interests and needs are represented, and communities receive culturally relevant and sensitive education to prepare for climate resilience.	Distributive; Procedural
Financial Benefits	California's investments in clean energy technologies, energy efficiency, and other environmental investments should benefit all DACs directly by providing financial benefits, incentives, and cost savings while also considering affordability and rate impacts.	Distributive
Economic Development	Climate policies and programs should invest in a clean energy workforce by promoting and funding workforce development pathways to high-quality careers in the construction and clean energy industries, setting and tracking hiring targets for low-income, disadvantaged, and underrepresented populations (e.g., women, re-entry) to enter these industries, ensuring that these careers are high road, with a career-ladder, family-sustaining wages and benefits, training the next generation of climate leaders and workers for the clean energy economy, and supporting small and diverse business development and contracting.	Capabilities
Consumer Protection	Climate-related policies and programs should not create incentives for predatory lending or exploitation of communities for financial gain. Programs should have adequate consumer protection measures, disclosures, and accountability measures to ensure that financially vulnerable customers are not exploited or defrauded.	Procedural

Source: DACAG Equity Framework

[93] https://www.cpuc.ca.gov/industries-and-topics/electrical-energy/infrastructure/disadvantaged-communities/disadvantaged-communities-advisory-group

[94] https://www.cpuc.ca.gov/-/media/cpuc-website/divisions/energy-division/documents/infrastructure/disadvantaged-communities/dacag-equity-framework.pdf?sc_lang=en&hash=130F6FD0AEA89095CD0EAC455D0C60EE

JUSTICE ACCESS EQUITY DIVERSITY INCLUSION (JAEDI) FRAMEWORK

In 2022, the CEC conducted its regular Integrated Energy Policy Report Update process, which inspired the development of an equity framework.[95] In February 2023, the CEC published its JAEDI Framework, which outlines the CEC's commitment to embedding energy equity and environmental justice in California's clean energy future. The JAEDI framework serves as an internal framework for embedding equity into internal operations of the CEC than it is a framework for embedding equity into future policy or programming; however, the CEC indicates it "believes that if its employees experience equity and justice first-hand and understand what it means, they will be inspired to create more opportunities and better outcomes for all Californians through the agency's policies, programs, projects, and operations."[96]

The CEC considered several reputable sources when developing the JAEDI framework, including:

- The Justice40 Initiative,[97]
- The Principles of Environmental Justice,[98]
- Jemez Principles for Democratic Organizing,[99]
- Disadvantaged Communities Advisory Group (DACAG) Equity Framework,[100]
- California Environmental Justice Alliance (CEJA) Environmental Justice Principles,[101]
- The Greenlining Institute's Make Equity Real,[102]
- The Building Energy, Equity and Power Coalition,[103]
- The Energy Justice Workbook,[104] and
- The Energy Equity Project (EEP).[105]

The JAEDI framework includes eight values representing guiding principles for CEC proceedings and 15 best practices to embed an equity and environmental justice lens into CEC's work and help staff implement the guiding principles.

The JAEDI framework includes considerations for embedding equity and environmental justice, embedding equity into investments, and determining benefits metrics. The framework considerations for embedding equity and environmental justice are listed in Table 16. The CEC indicated that this list of considerations may be used in the design phase of a

[95] https://www.energy.ca.gov/data-reports/reports/integrated-energy-policy-report/2022-integrated-energy-policy-report-update
[96] https://www.energy.ca.gov/sites/default/files/2023-11/CEC-JAEDI-Framework_ada.pdf
[97] https://www.whitehouse.gov/environmentaljustice/justice40/
[98] EJ Principles. http://www.columbia.edu/cu/EJ/Reports_Linked_Pages/EJ_principles.pdf
[99] Jemez Principles. http://www.ejnet.org/ej/jemez.pdf. The Jemez Principles for Democratic Organizing were adopted in a December 1996 meeting in Jemez, New Mexico, hosted by the Southwest Network for Environmental and Economic Justice with the intention of hammering out common understandings between participants from different cultures, political affiliations, and organizations.
[100] Disadvantaged Communities Advisory Group. https://efiling.energy.ca.gov/GetDocument.aspx?tn=224742
[101] CEJA. Environmental Justice Principles webpage. https://ceja-action.org/ej-decision-maker/ej-principles/
[102] Greenlining. Make Equity Real webpage. https://greenlining.org/make-equity-real/
[103] Energy Justice Statement. https://docs.google.com/document/d/1iSN-_TSSjKd9-9yXi7xNkvYgEC0-XDs4heDXTEmQs30/edit; https://ww2.arb.ca.gov/sites/default/files/2022-03/BEEP%20Letter%20and%20Report_Equitable%20Decarb%20March%202022.pdf
[104] Initiative for Energy Justice. The Energy Justice Workbook. https://iejusa.org/wp-content/uploads/2019/12/The-Energy-Justice-Workbook-2019-web.pdf .
[105] University of Michigan, School for Environment and Sustainability. 2022. "Energy Equity Framework: Combining Data and Qualitative Approaches to Ensure Equity in the Energy Transition." Energy Equity Project. https://seas.umich.edu/sites/all/files/2022_EEP_Report.pdf?utm_source=pr&utm_campaign=eep&utm_id=eep+framework.

program, policy, or project and can also be used at the end to evaluate success and determine ways to course correct. Table 16 also indicates the form of equity addressed within each consideration.

Table 16. JAEDI Framework Considerations for Embedding Equity and Environmental Justice

Framework Consideration Type	Consideration	Form(s) of Equity Addressed
Participation	Will targeted groups be able to participate meaningfully and with sufficient support?	Procedural
Remedies	Does the initiative, policy, or project aim to remedy prior and present harms faced by targeted groups who have been negatively impacted by the energy system?	Recognition and Capabilities
Decision-Making	Does the initiative, policy, or program consider the input of targeted groups during the decision-making process?	Recognition and Procedural
Benefits	Does the initiative, policy, or program include economic, social, health, or other benefits for targeted groups?	Distributive
Access	Does the initiative, policy, or program in some way make clean energy or transportation more accessible or affordable to targeted groups?	Distributive

Source: JAEDI Framework

5.3 DEFINING AUDIENCES OF INTEREST FOR EQUITY PROGRAMS

In addition to frameworks and definitions of equity, defining groups of individuals who encounter barriers to participating in energy efficiency programs or receiving the associated benefits from these programs (e.g., cost, health, safety) is a critical prerequisite for developing and implementing energy equity programs. An understanding of the audience of interest can ensure that programs and activities are tailored to the audience's needs. Within this section, we begin by discussing definitions used by the CPUC in California for identifying audiences of interest for equity programs, discuss best practices for defining audiences of interest, and evaluate the effectiveness of utilizing these definitions in 3P equity programs.

5.3.1 AUDIENCES OF INTEREST FOR THE CPUC

For the CPUC, the ESJ Action Plan in combination with Decision 23-06-055 directs the IOU equity segment programs to provide energy efficiency to HTR or underserved customers and DACs, advancing the CPUC's ESJ Action Plan. The ESJ Action Plan Version 2.0 lists definitions for HTR, underserved, and DACs, as shown in Table 17.[106]

[106] CPUC. Environmental & Social Justice Action Plan Version 2.0. April 2022. esj-action-plan-v2jw.pdf

Table 17. CPUC Definitions for Environmental and Social Justice and Disadvantaged Communities

Equity Segment Category	Definition
Hard-to-Reach	Customers who do not have easy access to program information or generally do not participate in energy efficiency programs due to a combination of language, business size, geographic, and split incentive barriers. For the **Residential** sector (two criteria are considered sufficient if one of the criteria met is geographic): ▪ **Language:** Primary language spoken is other than English ▪ **Geographic:** Homes in disadvantaged communities (as designated by CalEPA) and/or areas other than the United States Office of Management and Budget Combined Statistical Areas of the San Francisco Bay Area, the Greater Los Angeles Area, and the Greater Sacramento Area or the Office of Management and Budget metropolitan statistical areas of San Diego County ▪ **Income**: Those customers who qualify for the California Alternative Rates for Energy (CARE) or the Family Electric Rate Assistance Program (FERA) ▪ **Housing Type:** Multifamily and mobile home tenants (rent and lease) For **Small Businesses** (two criteria are considered sufficient if one of the criteria met is geographic): ▪ **Language:** Primary language spoken is other than English ▪ **Geographic:** Businesses in disadvantaged communities (as designated by CalEPA) and/or areas other than the United States Office of Management and Budget Combined Statistical Areas of the San Francisco Bay Area, the Greater Los Angeles Area, and the Greater Sacramento Area or the Office of Management and Budget metropolitan statistical areas of San Diego County ▪ **Business Size:** Less than ten employees and/or classified as Very Small (customers whose annual electric demand is less than 20kW, or whose annual gas consumption is less than 10,000 therms, or both) ▪ **Leased or Rented Facilities:** Facility is rented or leased by a business customer
Underserved	A community that meets one of the following criteria: ▪ **"Disadvantaged communities,"** or communities in the 25% highest scoring census tracts according to the California Communities Environmental Health Screening Tool (CalEnviroScreen), as well as all California tribal lands, census tracts with median household incomes less than 60% of state median income; and census tracts that score in the highest 5% of Pollution Burden within CalEnviroScreen, but do not receive an overall CalEnviroScreen score due to unreliable public health and socioeconomic data. ▪ **"Low-income communities,"** or census tracts with median household incomes at or below 80% of the statewide median income or with median household incomes at or below the threshold designated as low income by the Department of Housing and Community Development's list of state income limits. ▪ Located within an area identified as among the **most disadvantaged 25%** in the state, according to the California Environmental Protection Agency and based on CalEnviroScreen. ▪ A community in which at least **75% of public school students are eligible to receive free or reduced-price meals** under the National School Lunch Program. ▪ A community **located on lands belonging to a federally recognized California Indian tribe**.
Disadvantaged Communities	Communities in the **25% highest scoring census tracts according to CalEnviroScreen**, as well as all **California tribal lands**, census tracts with **median household incomes less than 60% of state median income**, and census tracts that score in the **highest 5% of Pollution Burden** within CalEnviroScreen, but do not receive an overall CalEnviroScreen score due to unreliable public health and socioeconomic data.

Source: CPUC. Environmental & Social Justice Action Plan Version 2.0. April 2022. esj-action-plan-v2jw.pdf

The JAEDI framework includes definitions for two targeted groups, or priority beneficiaries, for CEC proceedings: tribes and justice communities. Tribes include California Native American Tribes, and Justice Communities include disadvantaged communities, low-income communities and households, underserved communities, and people living with disabilities. The definitions for these targeted groups roughly align with the ESJ Action Plan Version 2.0 (but the JAEDI framework does not reference the document or use matching terminology in its definitions). The DACAG equity framework includes a definition of disadvantaged communities that aligns with the current equity segment definitions

included in the ESJ Action Plan Version 2.0 (e.g., CalEnviroScreen, as defined by Cal EPA, tribal lands, census tracts with area median household income/state median income, less than 80%, and households with median household income less than 80% of AMI).

5.3.2 BEST PRACTICES IN DEFINING EQUITY AUDIENCES

The IEJ commented on California's decision to exclude race and ethnicity from consideration when defining DACs.[107] The IEJ pointed out that in California, Proposition 209, passed in 1996, prohibits state and local entities from using race, ethnicity, or sex as criteria in public employment, public contracting, and public education Proposition 209 has created complexity in matching the benefits of public programs to peoples' vulnerabilities that are rooted in historic racism. [108] Without consideration of race, they argue that individuals will continue to face inequalities related to exposure to environmental harms (e.g., pollution) that will continue to have health implications for this population.

Almost all of California's definitions utilize Census Tract or other geographic data to identify communities or individuals historically marginalized or underserved. Nationally, public and private institutions have developed GIS Mapping tools (e.g., CalEnviroScreen, New York's Disadvantaged Communities Criteria,[109] Harvard and Brown University's Opportunity Atlas,[110] Sacramento Municipal Utility District (SMUD)'s Sustainable Communities Resource Map in California [111]) to support programs and activities identification of communities of interest based on multiple criteria, such as social criteria (e.g., income, linguistic isolation, poverty, unemployment), health outcomes (e.g., asthma, mortality rates, cardiovascular disease), environmental hazards (e.g., flooding and pollution), or other socioeconomic criteria (e.g., incarceration rates, housing burden, eviction rates).

While geographic tools tied to census tracts represent easily collected public information to develop and verify equity segment definitions, they do not always ensure that individuals in the most need qualify for programs or receive the support they need to benefit from equity-centered activities. In interviews with energy equity actors, several individuals were critical of GIS-based criteria as they leave people in need behind. One energy equity actor indicated,

> *"So, we can have neighbors across the street who are just outside of that area who will get nothing, and then we have folks who are just inside that targeted area who will get whatever the full gamut of the services. We believe that energy equity means that it should be accessible to all people in an area and not narrowly defined or restricted…"*

However, the IEJ commended New York's Climate Leadership and Community Protection Act, which created a "disadvantaged communities" definition that includes indicators related to environmental burdens, climate change risk, population characteristics, and health vulnerabilities.[112] The IEJ states, "this comprehensive, cumulative index involved extensive community outreach, listening sessions, and engagement with environmental justice organizations and other stakeholders." The index is used to define environmental justice communities and create mapping tools that show

[107] Initiative for Energy Justice, "Justice in 100: Analysis of the first ten 100% laws in the US". August 2023. IEJ-Report-Final-1.pdf (iejusa.org)
[108] "California Proposition 209, Affirmative Action Initiative (1996)." Ballotpedia. Accessed June 19, 2023. https://ballotpedia.org/California_Proposition_209,_Affirmative_Action_Initiative_(1996)
[109] https://climate.ny.gov/Resources/Disadvantaged-Communities-Criteria
[110] The Opportunity Atlas
[111] Sustainable Communities Resource Priorities Map (arcgis.com)
[112] New York Climate Justice Working Group. "Disadvantaged Communities Criteria." New York Climate Act, 2023. https://climate.ny.gov/resources/disadvantaged-communities-criteria/

individual and cumulative burdens of environmental, energy, and climate justice concerns,[113] indicating that mapping tools can be beneficial if the criteria used to define the equity segment are inclusive.

Table 18 synthesizes a list of potential criteria to consider when defining audiences of interest based on the literature reviewed by the Evaluation Team. Within the table, criteria that overlap with the current CPUC equity segment definitions (e.g., DACs, low-income, underserved customers, and hard-to-reach customers) are noted and described in the table notes.

Table 18. Factors to Consider when Identifying Audience of Interest in the Residential and Commercial Sector

Residential	Commercial
Race/Ethnicity	Owner Demographics
Individuals with A Disability or Medical Needs	Business Size (number of employees)[H]
Other Social Identities (e.g., LGBTQIA+, veteran, gender)	Energy Use[H]
Primary Language[H,D,U]	Geographic Location: Environmental Conditions (e.g., heat, pollution, flooding)[H]
Internet Accessibility	Employee Demographics, including Primary Language[H]
Age	Geographic Location: Rural vs. Urban[H]
Employment	Geographic Location: Primary Service Provider
Income, Energy, Transportation, or Housing Burden[D]	Local Grid Infrastructure Quality
Eviction, Poverty, Incarceration, and Death Rate[D]	Building Ownership (i.e., lease, rent, own)[H]
Access to Personal vs. Public Transportation	Firms Experiencing Public Safety Power Shut-offs (PSPSs)
Access to Electric Vehicle Charging Infrastructure	Building Type, Value, And Age
Access to Healthcare	Energy Efficiency of Building
Local Grid Infrastructure Quality	Geographic Location: Tribal Lands
Homeownership Status[H]	
Individuals Experiencing Public Safety Power Shut-offs (PSPSs) or Other Disconnections	
Late Energy Payment Rate or Perceived Difficulty Paying Monthly Energy Bills	
Participation in Government Assistance, Bill Assistance Programs, or other Social Programs (e.g., affordable housing, LIHEAP, SNAP)[U]	
Building Type, Value, and Age[H]	
Geographic Location: Environmental Conditions (e.g., heat, pollution, flooding, etc.)[D]	
Geographic Location: Rural vs. Urban[H]	
Geographic Location: Tribal Lands[D,U]	

[D] Currently utilized as part of the DAC definition in California. [H] Currently utilized as part of the HTR customer definition in California. [U] Currently utilized as part of the underserved community definition in California.

5.3.3 3P EQUITY PROGRAM AUDIENCES

All four of the 3P equity programs included in this evaluation specify in program documents that they target HTR customers and those located in DACs. The implementation plans did not utilize other audience terms (such as "underserved"). The Simplified Savings Program is the only evaluated program targeting commercial customers.

[113] David Konisky, Daniel Gonzalez, and Kelly Leatherman, "Mapping for Environmental Justice: An Analysis of State Level Tools" (Indiana University, July 2021), https://eri.iu.edu/research/environmental-justice-mapping-tools.html.

TARGETING THE RESIDENTIAL EQUITY SECTOR

Within the residential market, there are barriers to reaching customers residing in multi-family buildings—namely renters. The REA-NR program aims to reach renters, landlords, and residential property owners to raise awareness and knowledge of EE products and associated benefits. During interviews, implementation staff discussed concerns about the disconnect between individuals who receive communication from the utility—namely renters—and the individuals who were the ultimate property decision-makers (i.e., property owners or managers). As a result, decision-makers may not receive communication from their utility or be aware of programs available for their properties. Additionally, a PA shared that renter building improvements may spark fears of gentrification and displacement among HTR customers: "I absolutely think that's probably a thought in people's minds: 'If they come in and they do things to make the building look better, what does that mean for me? Am I going to be pushed out?'"

In addition to concerns about the impact of energy improvements within buildings, implementers also shared difficulties with utilizing DACs as the main qualification for measurement of outreach activities. While implementers are expected to conduct outreach and educational activities within DACs, one implementer shared that this may not be the most effective way of reaching customers in DACs. One effective way of reaching customers in DACs is by attending established events or activities so that outreach is "the most cost-effective and reaches the most customers." The implementer felt restricted in its ability to conduct outreach due to limitations placed by the IOU. They shared that they believed there were opportunities to reach customers in DACs through activities and events in neighboring zip codes: "[the IOU] is pretty insistent about strictly hitting those DAC communities…They are hesitant to have us participate [in activities and events outside those areas] even though there's a lot of spillover crowd from the DAC communities."

TARGETING THE COMMERCIAL EQUITY SECTOR

Implementation staff working on the Simplified Savings Program indicated confusion about the definition of commercial sector equity in interviews. This interviewee indicated difficulties identifying and verifying disadvantaged or HTR commercial customers:

> *"A hard-to-reach or a disadvantaged worker, how are they defined? Right now, they're defined based on their zip code. Well, if their zip code happens to be in a [DAC], defined by SB 535, but they're physically working in a non-DAC community, where do they fit? Are they disadvantaged? Are they not disadvantaged? And then what about the company? If the company is headquartered outside of a DAC area, but the employees come from a disadvantaged community, do we count the company as DAC?"*

The interviewee continued by raising additional challenges in identifying commercial equity customers:

> *"You got to start somewhere and learn and evolve from there. The definitions of some of these things that we're working around are not entirely in line with the outcomes that equity is meant to achieve… Disadvantaged communities are based on the census tract. It's tied more to local environmental things, which is only a small piece of the puzzle… there's no representation of financial income [of the business] or other factors to represent the true market."*

Program staff also shared difficulties in identifying eligible commercial customers that lease their business space, which is part of the HTR commercial customer definition. The Simplified Savings Program implementer staff indicated there are difficulties identifying program eligibility for a commercial customer with a shared meter:

> *"If [the customer] is not 50 kW or less [of usage], they can't be served [by the program]. The problem is that there are a lot of customers out there who are in a strip mall, and the strip mall meter is 51 kW. Each individual business operating on that meter is now ineligible when we should still be able to serve them."*

5.4 STRATEGIC PLANNING AND GOAL ALIGNMENT

Once energy equity types and audiences have been clearly defined, the next step is to develop a strategic plan with specific goals, objectives, and measures of success. In this section, we focus on evaluating the alignment of the CPUC's ESJ Action Plan with IOU Businesses, the 3P equity programs, and best practices pulled from the literature review and interviews with energy equity actors.

5.4.1 ESJ ACTION PLAN, IOU BUSINESS PLANS, AND 3P EQUITY PROGRAM DESIGN

While the IOUs are expected to ensure that their current business strategies, operations, and decision-making processes align with the policy goals and objectives outlined in the ESJ Action Plan, they are not expected to finalize their proposed accountability goals, associated objectives, targets, and KPIs for the equity segment programs until March 1, 2025.[114] According to the CPUC, the equity segment goals should be developed for a 12- to 24-year timeframe, be broken into interim accountability goals at 4-year increments, and identify baseline information necessary to measure goal achievement.

ALIGNMENT WITH IOU BUSINESS PLANS

The Evaluation Team examined the IOU Business Plans for 2024–2031 in relation to the ESJ Action Plan Version 2.0 policy goals and objectives.[115] Based on this analysis, the Evaluation Team found that the IOU with the Business Plan that had the most alignment with the CPUC policy goals and objectives was Southern California Gas (SoCalGas), addressing 15 of the 28 ESJ Objectives, followed by SCE (n=13), SDG&E (n=11), and PG&E (n=9), as shown in Table 19. Please note that this analysis covers the entirety of each IOU's Business Plan, not just the equity segment of its programs.

Table 19. Summary of ESJ Goals and Alignment with 2024–2031 IOU Business Plans

ESJ Goals (Version 2.0)	ESJ Objectives (Version 2.0)	PG&E	SCE	SoCalGas	SDG&E
Goal 1: Consistently integrate equity and access considerations throughout CPUC regulatory activities.	1.1 Build Systematic Approaches for ESJ Priorities	✓	✓	✓	✓
	1.2 Expand Opportunities for Access	✓	✓	✓	✓
	2.1 Enhance Outreach & Engagement	✓	✓	✓	✓

[114] D.23-06-055

[115] https://www.caeecc.org/2022-business-plan-application-documen

ESJ Goals (Version 2.0)	ESJ Objectives (Version 2.0)	PG&E	SCE	SoCalGas	SDG&E
Goal 2: Increase investment in clean energy resources to benefit ESJ communities and improve local air quality and public health.	2.2 Continue Research & Analysis to Understand Impact			✓	
	2.3 Move Towards Mutual Eligibility & Maximizing Impact	✓			
	2.4 Address Impacts in ESJ Communities			✓	✓
	2.5 Continue Ongoing Investment			✓	✓
Goal 3: Improve access to high-quality water, communications, and transportation services for ESJ communities.	3.1 Ensure Equitable Clean Transportation				
	3.2 Ensure Water Customer Resilience				
	3.3 Extend Rail Safety to ESJ Communities				
	3.4 Extend Essential Communications Services to ESJ Communities				
Goal 4: Increase climate resiliency in ESJ communities.	4.1 Emphasize Adaptive Capacity	✓	✓	✓	✓
Goal 5: Enhance outreach and public participation opportunities for ESJ communities to meaningfully participate in the CPUC's decision-making process and benefit from CPUC programs.	5.1 Improve Communication with ESJ Lens		✓		✓
	5.2 Continue to Emphasize Engagement with CBOs				
	5.3 Build Pathways for Public Participation		✓		
	5.4 Enhance Engagement with Particular ESJ Communities and Individuals	✓	✓	✓	
Goal 6: Enhance enforcement to ensure safety and consumer protection for all, especially for ESJ communities.	6.1 Protect ESJ Consumers	✓	✓	✓	
	6.2 Conduct Proactive Action & Analysis in Transportation and Utility Enforcement				
	6.3 Apply ESJ Lens to CPUC Enforcement Policy				
	6.4 Maximize Opportunities within Utility Audits				
Goal 7: Promote high road career paths and economic opportunities for residents of ESJ communities.	7.1 Maximize Authority to Promote High Road				
	7.2 Educate on High Road Careers			✓	
	7.3 Partner with Utilities and Sister Agencies		✓	✓	✓
Goal 8: Improve training and staff development related to environmental and social justice issues within the CPUC's jurisdiction.	8.1 Bolster Staff Knowledge of ESJ Issues and Resources		✓	✓	✓
	8.2 Support Emerging Priorities and Skill Needs			✓	
Goal 9: Monitor the CPUC's environmental and social justice efforts to evaluate how they are achieving their objectives.	9.1 Establish Consistent Quantitative Metrics		✓	✓	✓
	9.2 Promote Meaningful Feedback Loops		✓		
	9.3 Establish Accountability Measures				

Looking more closely at how each specific IOU adheres to the policy goals and objectives of the ESJ Action Plan, the Evaluation Team noted significant differences in the types of goals incorporated. The successes and opportunities for improvement in IOU Business Plan Alignment are summarized in Table 20.

Table 20. Successes and Challenges with IOU Business Plan Alignment with ESJ Action Plan (Version 2.0)

ESJ Goals (Version 2.0)	Successes in Goal Alignment	Challenges to Goal Alignment
Goal 1: Consistently integrate equity and access considerations throughout CPUC regulatory activities.	▪ All the IOU business plans outlined goals that supported the integration of equity and access into regulatory processes in ESJ communities.	▪ N/A

ESJ Goals (Version 2.0)	Successes in Goal Alignment	Challenges to Goal Alignment
Goal 2: Increase investment in clean energy resources to benefit ESJ communities and improve local air quality and public health.	▪ Enhancing outreach and engagement (Objective 2.1) is included in all four IOU business plans.	▪ Resource investment does not go beyond financial (other potential resources include staffing, time, and more)
Goal 3: Improve access to high-quality water, communications, and transportation services for ESJ communities.	▪ N/A	▪ IOUs do not have control over water or railway services. ▪ IOUs have clean transportation initiatives, which are not included in the EE proceeding's business plans.
Goal 4: Increase climate resiliency in ESJ communities.	▪ All the IOU business plans outlined goals that supported increased climate resiliency in ESJ communities.	▪ California has no clear definition or framework to describe climate resilience or adaptive capacity.
Goal 5: Enhance outreach and public participation opportunities for ESJ communities to meaningfully participate in the CPUC's decision-making process and benefit from CPUC programs.	▪ All but one of the IOUs specifically cited strategies to improve their engagement with ESJ Communities and Customers (Objective 5.4).	▪ It is unclear what the standardized ESJ lens is and how it can be utilized for outreach and public participation processes.
Goal 6: Enhance enforcement to ensure safety and consumer protection for all, especially for ESJ communities.	▪ Through their main responsibility, all the IOUs aim to protect ESJ consumers (Objective 6.1).	▪ There is a need to define ESJ Lens and how it can be used for enforcement.
Goal 7: Promote high road career paths and economic opportunities for residents of ESJ communities.	▪ Only one IOU business plan did not include goals for educating staff or individuals on high road career paths.	▪ Action Item 7.2.1 from Version 2.0 of the ESJ Action Plan, suggests that the CPUC had not developed or shared best practices for a high road approach to workforce development internally or with IOUs and 3P Implementers.
Goal 8: Improve training and staff development related to environmental and social justice issues within the CPUC's jurisdiction.	▪ All but one IOU business plan aims to bolster staff knowledge about ESJ issues and provide additional resources to support the equity segment of their portfolio.	▪ There is a limited definition or description of what training and staff development on ESJ entails.
Goal 9: Monitor the CPUC's environmental and social justice efforts to evaluate how they are achieving their objectives.	▪ Through participation in the CAEECC EMWG, IOUs worked to develop consistent quantitative metrics for the equity segment of their portfolio.	▪ The IOUs have not yet set any equity goals and will not be expected to until 2025.

ALIGNMENT WITH 3P EQUITY PROGRAM DESIGN

According to D.21-05-031, in their design, the programs under each equity segment of the IOU portfolios are tasked with "providing energy efficiency to hard-to-reach or underserved customers and disadvantaged communities." The IOUs' Equity Programs included in the 2024–2031 Business Plans were intended to support Goals 1, 2, and 5 of the ESJ Action Plan, as stated in D.21-05-031. Table 21 summarizes the ESJ Action Plan alignment with these three goals across the 3P equity programs. Specifically, based on our review of the 3P equity program Implementation Plans and interviews with key program staff, the REA-R, REA-NR, DACMO, and Simplified Savings Programs align with the ESJ Action Plan Goals 1, 2, and 5 in the following ways:

- **Goal 1:** All evaluated 3P equity programs aligned with ESJ Objective 1.2 (Expand Opportunities for Access). The Simplified Savings Program is the first equity program to provide offerings to micro- and small business customers, thus expanding opportunities for access to EE benefits among harder-to-reach segments. The remaining equity programs aim to support increased engagement among residential HTR customers who have opportunities to participate in traditional resource programs but may be limited by existing barriers such as costs, split

incentives[116], and language barriers. None of the evaluated equity programs align with Objective 1.1 (Build Systematic Approaches for ESJ Priorities), but it is unclear how the programs could impact CPUC or IOU procedures and structures to center ESJ priorities.

- **Goal 2:** All but Objective 2.2 (Continue Research & Analysis to Understand Impact) was integrated into at least one evaluated 3P equity program design. Currently, it is not relevant to implementers as the types of studies discussed in the ESJ Action plan are focused on sector-level studies across IOU territories rather than investigating program-specific impacts.[117] To support customer and contractor participation in IOU programs (Objective 2.3), each program conducted activities to address barriers faced by HTR customers and contractors in California. Almost all the programs sought to improve customer awareness of EE programs, products, and benefits by ensuring that outreach materials were developed to be locally relevant and accessible (REA-NR, Simplified Savings, DACMO). To address the barrier of high costs, resource programs (i.e., REA-R and Simplified Savings) provide low or no-cost measures to customers, while non-resource equity programs (i.e., REA-NR and DACMO) conduct activities utilizing technical assistance and cross-program marketing to support customer participation in other relevant IOU resource programs. Finally, to address program and process complexity for contractors and customers, the Simplified Savings Program developed streamlined processes to reduce customer and contractor wait times associated with measure installation, incentive payment, and receipt of associated benefits. All programs except for DACMO planned to measure the impact of program activities on desired outputs and outcomes. This included conducting primary data collection to measure the effectiveness of outreach activities, program services, and program satisfaction among customers (Objectives 2.4 and 2.5)
- **Goal 5:** Each of the evaluated 3P equity programs supported Objective 5.4, enhancing engagement with ESJ Communities by developing community-specific materials and in-language outreach events and identifying opportunities to connect with HTR customers through existing community events and functions. The REA-R, REA-NR, and Simplified Savings Programs integrated CBOs into their outreach activities as a means to build trust with community members, leverage CBO's existing networks to promote awareness of the program, and, in one case, build positive relationships with CBOs to increase their likelihood of participating in future IOU programming or CPUC processes (Objectives 5.2 and 5.3). None of the programs supported communication with an ESJ Lens (Objective 5.1), as that has yet to be defined by the CPUC and thus is not currently relevant to implementers.

Table 21. ESJ Action Plan Alignment by 3P Equity Program

ESJ Goals	ESJ Objectives	REA-R	REA-NR	DACMO	Simplified Savings
Goal 1: Consistently integrate equity and access considerations throughout CPUC regulatory activities.	1.1 Build Systematic Approaches for ESJ Priorities				
	1.2 Expand Opportunities for Access	✓	✓	✓	✓
Goal 2: Increase investment in clean energy resources to benefit ESJ communities and improve local air quality and public health.	2.1 Enhance Outreach & Engagement	✓	✓	✓	✓
	2.2 Continue Research & Analysis to Understand Impact				
	2.3 Move Towards Mutual Eligibility & Maximizing Impact	✓	✓		✓
	2.4 Address Impacts in ESJ Communities	✓	✓		✓
	2.5 Continue Ongoing Investment	✓	✓		✓
	5.1 Improve Communication with ESJ Lens				

[116] When property owners are the ones who receive the incentive for the installation of energy efficiency measures, but another party—namely the renter receives the benefit of this upgrade through lower utility bills, this is referred to as a "split incentive".

[117] ESJ Action Plan Appendix A. cpuc.ca.gov/-/media/cpuc-website/divisions/news-and-outreach/documents/news-office/key-issues/esj/esj-action-plan-v2jw.pdf

ESJ Goals	ESJ Objectives	REA-R	REA-NR	DACMO	Simplified Savings
Goal 5: Enhance outreach and public participation opportunities for ESJ communities to meaningfully participate in the CPUC's decision-making process and benefit from CPUC programs.	5.2 Continue to Emphasize Engagement with CBOs	✓	✓		✓
	5.3 Build Pathways for Public Participation		✓		
	5.4 Enhance Engagement with Particular ESJ Communities and Individuals	✓	✓	✓	✓

3P EQUITY PROGRAM DESIRED OUTCOMES

Beyond supporting Goals 1,2 and 5 within the ESJ Action Plan, D.21-05-031 also states that program activities conducted under the equity segment should not only improve energy savings but also "provide corollary benefits such as increased comfort and safety, improved air quality, and more affordable utility bills."[118] The subsequent objective developed by the CAEECC EMSWG elaborated further, "[f]or hard-to-reach, disadvantaged, and/or underserved individuals, households, businesses, and communities: address disparities in access to energy efficiency programs and workforce opportunities; promote resilience, health, comfort, safety, energy affordability, and/or energy savings; and reduce energy-related greenhouse gas and criteria pollutant emissions."

The design of the evaluated 3P equity programs aims to not only address disparities in access to energy efficiency programs but also to support the realization of non-energy benefits such as cost, social, environmental, and economic benefits, as shown in Table 22.

In the short and medium term, the evaluated 3P equity programs aim to increase awareness and interest in IOU programs, build community trust in IOU offerings, and increase participation in IOU EE programs. Within the PTLM for the REA-R and Simplified Savings Programs, both anticipated customer participation in their 3P equity program would increase participation in other IOU programs and offerings in the long term. All four 3P equity programs anticipated impacts on energy and non-energy benefits, such as increased community participation in program design, implementation, and evaluation (REA-NR), workforce development benefits (REA-R), and other health or environmental benefits (Simplified Savings, DACMO) would be longer-term outcomes resulting from each program's activities.

Table 22. Desired Outcomes for 3P Equity Programs based on PTLM Review

Topic Area	Desired Outcomes	REA-R	REA-NR	DACMO	Simplified Savings
Market Support	Awareness of IOU programs	S	S	S	S
	Customer interest in IOU programs	M	S	M	M
	Increased participation in IOU programs and adoption of energy-saving products or behaviors	M/L	M	L	S/L
	Customer and CBO Satisfaction		M		L
Energy and Cost Savings	Electric or Gas Savings	M	L	L	M
	Energy Bill Savings	M	L	L	M
Non-Energy Benefits	Workforce and Economic Development	M/L			
	Health, Comfort, Safety and Other Non-Energy Benefits		L	L	M
Social Benefits	Customer and CBO Participation in Feedback and Decision-Making Processes		M		L

[118] D.21-05-031 p. 14.

Topic Area	Desired Outcomes	REA-R	REA-NR	DACMO	Simplified Savings
	Customer and CBO Interest in Participating in Future Feedback and Decision-Making Processes		L		
	Increased Trust in Utilities and Their Offerings		M		S

Note: S indicates short-term outcomes, M indicates medium-term outcomes, and L indicates long-term outcomes.

CHALLENGES QUANTIFYING INTERSECTIONAL BENEFITS

Some of the intersectional benefits (e.g., health, social, economic) that can result from equity-centered activities can be difficult to quantify. One energy equity actor we interviewed shared the challenges of measuring the impact of activities on individuals' quality of life:

> *"How do you quantify the fact that the little old lady whose home we weatherized can turn the thermostat up a little bit in the wintertime and not have to wear four sweaters to keep warm anymore? How do you put a value on that?*
>
> *We have to do this energy audit to justify the cost-effectiveness of the measures. Well, how do we justify [the health/comfort] portion? How do you say, "they're more comfortable"? … So far, we haven't been able to come up with those factors, but it needs to be incorporated."*

Implementers and PAs shared their challenges with collecting customer data requirements and tracking data for non-energy KPIs. One program's implementer and PA said there were unclear data requirements in their program design. The implementer remarked that they need accurate and updated customer data from the IOU to validate customer information properly when recruiting participants. Currently, they lack available customer data to streamline this validation process. However, the PA team said they are contractually prohibited from providing the depth of customer data requested by the implementation team. One member of the PA team said they have concerns with the security of customer data in these situations:

> *"The commission put out a decision that we need to provide customer data as needed to [participating] third parties. But you can't just go and say 'okay, here's all the customer data you want'. You must have your cyber policies and insurance in place. There are things that you must do to build it out."*

While many 3P equity program designs plan to track non-energy benefits like improved air quality or indoor comfort, most PAs and implementation team members said they are difficult to collect and track. One PA said that non-energy benefits unrelated to bill savings are "nice to haves" and "quasi-reliable" for commercial equity programs. Still, customers are more likely to value bill savings instead. One implementer from this program agreed that non-energy benefits are "more applicable to residential programs," and they don't receive much feedback on these benefits from commercial customers. Another implementer in this program said that non-energy benefits happen organically through program activities but aren't necessarily collected via program data collection:

> *"When we work with a business, we focus on pollution prevention, solid waste reduction, water conservation, energy conservation, and transportation. So, we're providing services in*

those areas as well. So, we'll give them free waste bins where they're available, as well as waste recycling and organics. We'll generally cut their waste bin bill in half when we're done working with them."

One PA also highlighted the importance of shifting outreach and marketing strategies for HTR and DAC customers to emphasize energy bill cost savings:

"For equity, it's more bill-focused… When dealing with HTR and DAC customers, the idea here is that we obviously want energy efficiency, load off the grid, and be greener… But these are people who are disadvantaged, so anything that they can do to reduce their bill is going to be more important to them than the energy efficiency part."

PAs and implementers from residential programs said that non-energy benefits are not used as a KPI but as an initial benchmark of what a customer wants from a program. One implementer said they call customers before conducting installations to determine the "goals and desires" for their program participation. They use this to indicate whether non-energy benefits are important to customers and can help formulate a measure list that fits these needs. The implementer also planned to survey customers after installations to measure their success in meeting bill- or non-energy-focused goals.

5.5 INVESTING IN ENERGY EQUITY

Actors require a variety of resources and investments to accomplish their equity goals. While funding is the main form of investment considered in program implementation, many other resources (e.g., implementation partnerships, internal protocols, upskilling, and community collaborations) are critical to support energy equity activities and their success. Since the 3P equity programs launched in 2023 were among the first equity programs implemented within this segment, we examined successes and opportunities to improve CPUC and IOU investment in the 3P equity programs at various stages of implementation from the request for proposals through program implementation. Additionally, we highlight how 3P programs have invested in local partnerships and collaborations to implement their programs and support community needs.

5.5.1 THIRD-PARTY IMPLEMENTATION

The CPUC created new structures and procedures to shift from IOU design and implementation of EE programs to 3P implementers to promote diverse thought and innovations among programs.[119] The IOUs contract with third-party firms to implement the programs while the IOUs oversee program activities.

When the PAs were developing their business plans, they requested proposals for implementation firms to pitch equity program designs and implementation plans. After receiving the proposals, the PAs utilized scoring criteria to choose the implementer and designs for the 3P equity programs. Scoring is a standard practice conducted by a specific solicitation and contracting department within each IOU. Two of the three IOUs interviewed shared that the same scoring rubric is utilized for the equity programs to evaluate implementer proposals for the traditional resource and market support

[119] See Footnotes 31 and 32.

programs. Despite this standardization, one PA spoke about the importance of community-based connections when scoring the proposals for equity programs:

> *"We knew that to put the best foot forward [with the equity programs], we needed to fit ourselves into the customer's world as opposed to getting the customer into our program. Hometown familiarity was what rang true with [the selected] implementer and their offering. [The implementer] also happen to be a diverse business entity, so that scored in their favor, and they created a network of [contacts] that were part of the [target] market."*

Once an implementer has been selected, they negotiate a contract with IOU staff. The Evaluation Team found differences in the payment structure based on whether the equity program was a resource or non-resource program (i.e., would the program yield energy savings that the IOUs could claim or not). Resource contracts across the IOUs were pay-for-performance and provided specific KPIs that programs were expected to be measured against (e.g., ex-ante energy, gas, and demand savings). The non-resource programs were either deliverable-based (e.g., payment for activities completed) or pay-for-performance based on the number of touchpoints reached with various program activities.

Following the implementation of a contract, implementation staff and IOU PAs work together during the ramp-up phase of the program to review and approve program marketing materials, arrange data collection and data-sharing protocols to ensure that implementers are collecting information in a format that is compatible with the IOU's database, and in some cases, that implementers have access to IOU customer data to support their outreach activities. Broadly speaking, the IOU PAs oversee the implementation of the programs by reviewing program invoices, verifying participant qualifications and reported energy savings, and completing other necessary program tasks (e.g., number of outreach materials developed, individuals reached). One of the IOU PAs defined their role compared to the implementer's:

> *"[The IOU tracks] the inputs, meaning what's coming to us, [like] the projects, measures, and end-use customers. In the end, we can look at energy savings and total system benefit and all these different things. But when you're going to cross-reference marketing versus project, those are all things happening on [the implementer's] end."*

All the implementers interviewed shared that they were responsible for developing program outreach materials, conducting outreach, recruiting TAs, and receiving project submissions. While they may hire subcontractors to support the completion of the activities, the prime contractor regularly interfaces with the IOU PAs. One subcontracted implementer said they were not included in any "discussions between [the prime contractor] and the IOU about the budget" of their program. Another cited that their contract is with the prime contractor, not the IOU. However, most of the implementers (prime contractors) said they have positive relationships with their assigned PAs. One described their PA as a "great collaborative partner," and another said that their PA has helped the program get "moving well." PAs reported similar relationships with implementation team members, with one saying they "get along fantastically" with their implementer.

Three of the four programs did not launch on the expected timeline. Both implementation staff and PAs referenced different causes for these delays, which varied from four to six months. According to interviews, internal turnover, particularly changes in management at the IOU, reset some of the programs' early ramp-up processes (e.g., approval of marketing materials and website design). An implementation team member cited other contracts with the IOU that had "highly corporate" and "bureaucratic" processes, and another program's implementer said the IOU had assigned them

four different project managers in the past year. They also said that this late adjustment inhibited their ability to meet the timeline for program launch and implementation:

> *"[The IOU] assigned a new program manager who rescinded all of the approvals because they were 'wrong,' and everything had to be rebuilt… we had to change how we co-branded [marketing materials]. Everything had to be redone. But now, we're still at the point of starting to market to customers."*

From the PA perspective, these delays in program implementation were necessary to ensure the program is iterated on and is ready for launch:

> *"I feel like I was able to come in and go, 'Wait, we shouldn't be doing it this way. We should be doing it that way. Have we thought about this?' Sometimes, you have to revisit things. I think it's never necessarily a bad thing when people come in with a fresh perspective. So, I think I knew more things to look for, and that's nobody's fault."*

Unforeseen complications with customer data caused other 3P equity programs to delay their launches. An implementation team member said customer meter data and geographic data were not in the same database, and these two variables are important in determining customer eligibility. This required the implementation team to "mesh" the data together, and they said this caused delays in implementation. However, an implementation team member said that "these are things that you don't know until you start" and that the only way to overcome them is "to solve it as you go."

Despite these delays, one implementation team has recruited a trade ally network to conduct program installations, and the PA was set to receive the program's first project submissions in mid-April 2024. Another team was able to move forward with developing their contractor and participant pipeline while they worked through processes with the PAs in support of the program launch. Despite delays, the program team indicated during interviews that they were optimistic they would be able to meet program targets.

5.5.2 COMMUNITY CAPACITY BUILDING

According to the 2019 Greenlining Institute Report,[120] a common investment for advancing energy equity is educating and training the local workforce or disadvantaged workers. Programs or actors can ensure that when creating jobs, they are accessible to a wide array of candidates and are of high quality. Actors can partner with workforce development and learn-while-you-earn programs (e.g., YouthBuild and apprenticeships) to provide a career pathway for individuals within targeted communities. These investments have been made through workforce, education, and training (WE&T) programs provided by the IOU PAs.

During interviews, implementation staff discussed difficulties in recruiting contractors to participate in an IOU program due to the payment terms of the program and its financial impact on contractors. One implementer sought local diverse business entities (DBEs) to serve as TAs for an equity program but noted that smaller firms struggle to operate with lag time in payments. In some cases, the implementer shared that the contractors serving as TAs did not receive payments for their first program installations for three months due to the pay-for-performance structure of the contracts with the

[120] See Footnote 74.

IOUs. For other TAs, the payments are delayed "anywhere from 60 to 120 days [after installation]." As a result, at least one contractor was forced to lay off employees due to financial losses from participating in the program. The implementer shared that the work needs to be "worth it for the contractors" moving forward, not only in terms of how swiftly they receive payment but also the amount of the incentive to cover the long-distance travel that yields minimal profits for participating contractors. For TAs, "it's not really worth it from a profit standpoint" to work on program projects that are "45 minutes away" and are asking them to "change two lightbulbs."

Implementers shared the importance of integrating workforce development into their program designs. Free training opportunities that focus on "intensive training… for customer service, hands-on installations… and education and outreach" can not only ensure that the TAs participating in the program are well-trained and knowledgeable but also that the broader energy workforce in the DAC can benefit from learning these additional skills even if they do not serve as a TA in the equity program. Another implementer said recruiting local TAs benefits the program greatly by building trust between customers and contractors. They found that few customers "recognize the contractor's name" but care "more about the employees, how they're trained, and whether or not they speak the same language."

Beyond training a workforce for the energy tasks needed in a program, there are opportunities to provide broader education and capacity development opportunities. Examples could include but are not limited to educating community members about key governmental processes (e.g., policies, funding, feedback), utilization of analysis tools (e.g., GIS), or other key skills necessary to actively engage in energy equity activities (e.g., fundraising, grant-writing, community organizing). Additionally, there are numerous barriers to accessing governmental feedback mechanisms and forums. While they may be open to the public, they may not be accessible (i.e., time, language, location) to community members. The Greenlining Institute report suggested offering tools, technical assistance, and other benefits to support individuals interested in participating in governmental decision-making processes or program activities.

5.6 COMMUNITY ENGAGEMENT AND PROCEDURAL EQUITY

Beyond identifying investments, another critical element to the design, implementation, and evaluation of energy equity activities is community engagement. For any equity program, marketing and outreach are needed to recruit participants; however, there are opportunities for programs and actors to further procedural equity by identifying ways to integrate community member perspectives into program design, implementation, and evaluation of the effectiveness of the program at meeting their needs. Within this section, we synthesize the CPUC's guidance on community engagement goals and metrics as they relate to equity programs. We then evaluate the extent to which community perspectives have been integrated into the design, implementation, and evaluation of program success. We close this section with best practices to implement and evaluate community engagement activities based on our review of the literature and interviews with energy equity actors.

5.6.1 CPUC GUIDANCE ON COMMUNITY ENGAGEMENT

Within Decision 23-06-055, the CPUC instructed PAs to "develop indicators to measure community engagement and include them in their Mid-Cycle advice letters in 2025" (along with finalized goals for the equity segment).[121] According to the CPUC, the design of community engagement indicators should (1) include the perspectives of CBOs and ESJ communities, (2) include quantitative and qualitative indicators to track the quantity and quality of community engagements, and (3) "should not be oversimplified to allow summation across different engagement methods for

[121] D.23-06-055 p. 126.

different target audiences."[122] As a result, when the 2023 3P equity programs launched, no clear equity goals were set at the IOU level, and the CPUC did not adopt standardized community engagement metrics.

5.6.2 3P EQUITY PROGRAM COMMUNITY ENGAGEMENT

After examining the program designs, we found that all the 3P equity programs contained a community engagement component to support their implementation. As illustrated in Table 22, all programs aimed to raise awareness of IOU programs, increase individuals' interest in IOU programs and ultimately increase participation in IOU resource programs. Most implementers interviewed by the Evaluation Team incorporated community engagement and partnering with CBOs into their 3P equity program design. They leveraged these CBOs to help market the program as a trusted organization to the targeted customer population. Two implementers had preexisting networks of local organizations that they utilized to market their programs.

Despite these efforts, interviews with PAs and implementation staff revealed they continue to experience barriers to HTR customer participation in the 3P equity programs due to a lack of customer familiarity with the implementer company and their lack of trust in the contractors conducting program-affiliated activities. One implementer shared that there is a general "mistrust" of contractors and implementers because "historically, fraud permeates these [disadvantaged] communities." A member of another implementation team said they were seeing little success with initial outreach efforts because of the branding in their marketing materials. They initially planned for materials to be co-branded as an IOU program, but instead, the final product utilized "a tiny [IOU] logo in the corner" and was only approved utilizing the implementer's "look and feel" such as coloring, font, etc. This made outreach difficult due to customers' lack of awareness of the implementer and their offerings, which created "extra resistance" about legitimacy to target customers.

In addition to shifting focus on outreach and marketing, two of the four programs also addressed the lack of customer trust in IOUs and their associated programs. Staff believe this lack of trust has developed due to customers' lack of experience or negative experiences with IOUs. To address this, stakeholders designed their programs to involve partnerships with trusted local groups and provide free services to rebuild this trust with equity customers going forward.

BUILDING COMMUNITY RELATIONSHIPS AND IDENTIFYING COMMUNITY NEEDS

One program implementer said that forming relationships with CBOs differs from forming business relationships. They called the CBOs "social workers" with objectives that are "for the people," indicating that IOUs frequently misunderstand this nuance. In this implementer's experience, IOUs want to utilize programmatic KPIs to measure outreach by CBOs. However, the goals of CBOs may differ from the IOU's goals. CBOs vary in their interest area, with some being community-oriented and not necessarily "environmentally conscious." In contrast, others work more for environmental and social justice causes "different from low-income equity."

To account for differences in CBO foci, one implementer indicated they wanted to meet with community leaders early in the program ramp-up period to advocate for the program and listen to their perspectives to help guide outreach materials; however, the program's PA said the implementer should wait to create "formal" relationships with CBOs. Instead, the PAs thought the implementer should have "everything in place first… you need your marketing and in-language materials in place" before going into communities to speak with trusted members.

Stakeholders with CBO involvement in their program designs said community organizations are instrumental in reaching customers "within communities." One PA said CBOs are vital for producing in-language marketing materials, which

[122] D.23-06-055 p. 68.

helps remove the language barrier during outreach and customer education. One implementation team member said that CBOs are frequently organizations that residential and commercial customers interact with, like their local Chambers of Commerce, so they are trusted and known among target populations. An essential consideration raised by an implementer was the need to ensure funding is available to CBO partners, "[you] can't expect CBOs to do the outreach for [the program] and recruit businesses without paying them." Payment for CBO's partnership was considered at the design stage of program development and thus was reflected in the program's implementation.

One PA noted the importance of understanding customer needs before designing the RFPs for the 3P equity programs:

> *"It would've been nice if there would've been some funding available to the IOUs to do a focus group in the community. I feel like oftentimes, there's this notion that we're going to dictate what we think the customer wants instead of asking what the customer needs. I think that is such a missed opportunity."*

While it is early in the implementation process, implementers shared that the 3P equity programs have been well-received by customers, as they serve customers who were not likely to participate in other IOU programs (due to upfront costs) or who need services to counter the raising energy prices in their areas.

Another implementer said customers were "very happy about the program in terms of what it would offer them." Almost every customer they interacted with talked about how high their bill was and was interested in adopting discounted measures that might decrease their bill. They continued sharing how the connection between the equity program's outreach and educational materials has helped customers enroll in "low-hanging fruit" programs that provide benefits like a summer discount plan. A member of another implementation team said their assessment process generates "quick value service" for customers by providing a streamlined installation process that is minimally disruptive to the customer. They shared an example of how the program has impacted not just the customer enrolled but the community surrounding them:

> *"We have to remember that these are community businesses serving disadvantaged people. My favorite example was when the client asked us why we spent $28,000 in incentives on a thrift store… I was able to pull it up on Google… you can see the depressed neighborhood around it, likely depending on that thrift store for clothes."*

5.6.3 BEST PRACTICES FOR COMMUNITY ENGAGEMENT

Below, we synthesize key considerations for designing, implementing, and evaluating community engagement activities for programs based on existing literature and interviews with energy equity actors.

FREQUENCY AND EASE OF COMMUNITY ENGAGEMENT

To engage with members of targeted audiences, start by understanding the current level of this audience's participation and identifying opportunities to improve this engagement by understanding and addressing barriers to community member participation in dialogues about goal setting, program design, implementation, and evaluation.

Beginning with the level of participation desired, individuals' level of engagement or participation falls on a spectrum from not being invited to participate in conversations or having their perspectives ignored (i.e., marginalization) to being

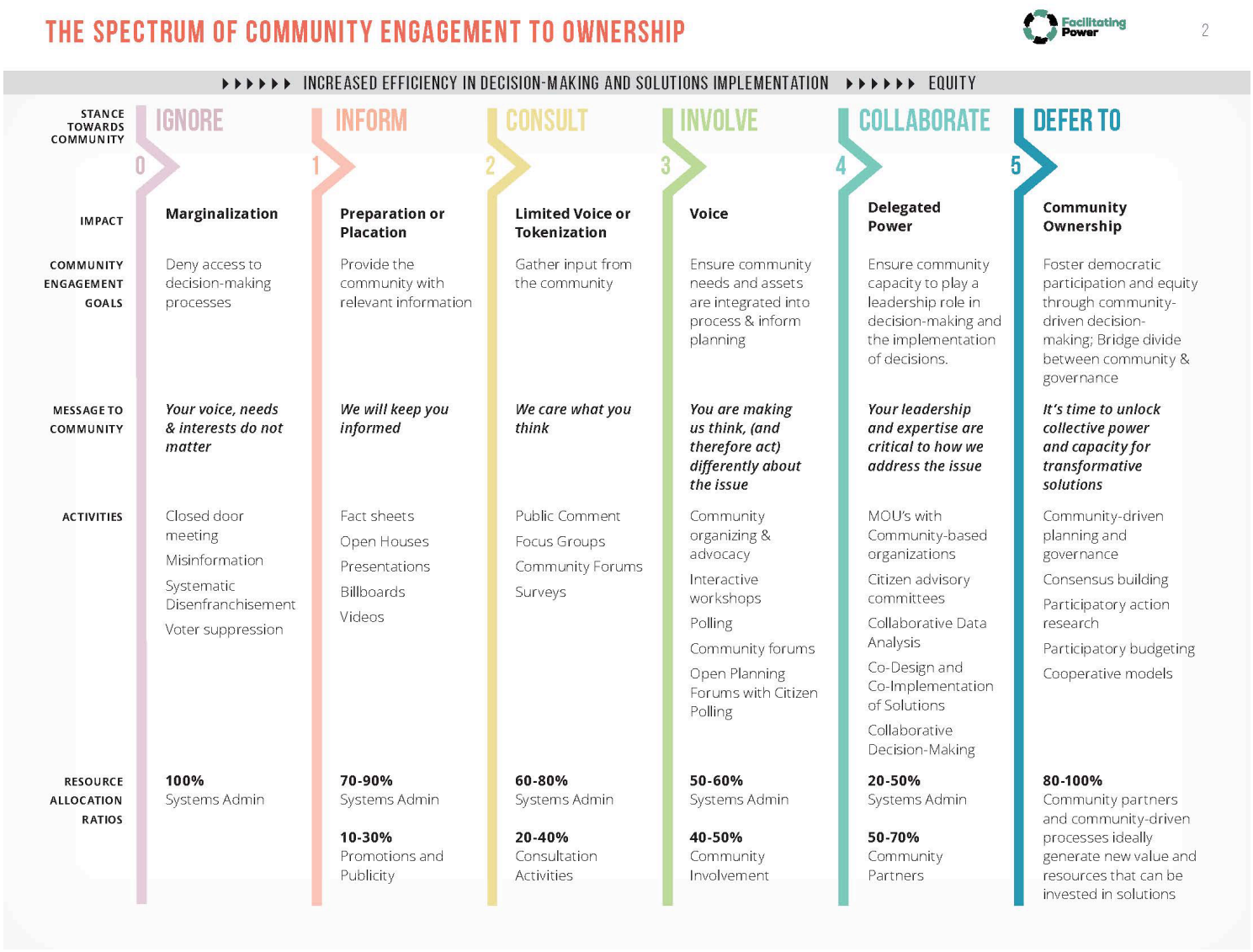
the ultimate decision-makers on a topic (i.e., community ownership). A comprehensive figure of this spectrum and a description of the types of activities that fit into each of these levels was developed by Facilitating Power (Figure 3).[123] There are opportunities to improve community engagement based on the number of opportunities provided to community members, the quality of engagement activities, and the effectiveness of the engagement activities in accomplishing desired outcomes. Historically, community members have not had a seat at the table with respect to identifying the problems impacting their communities, developing and implementing solutions to address these problems, or evaluating the success of these solutions.[124] However, the ESJ Action Plan set goals and objectives to rectify this in California.

When there is little to no communication between actors and community members, opportunities must be created to inform community members of the work being done (in this case, equity programs being offered). To design inclusive community engagement activities, organizations should, at minimum, consult with community members to inform the types of activities preferred by community members (e.g., in-person, discussion at existing events, or focus groups), the best time to coordinate activities based on work schedules and other preferences, what additional support could be provided to facilitate their participation (e.g., providing childcare, location of activities, compensation for their participation or feedback), and finally who may be the best facilitator of collaborations or conversations based on the community members' trust. Once organizations understand key stakeholder preferences, the activities designed should align with those needs. The 3P equity program activities currently focus on informing HTR customers about EE products, IOU offerings, and the associated benefits. Some accessibility considerations such as language, location of events, and tailored messaging have been used, but our interviews with implementation staff did not indicate that customers were consulted before the design or implementation of the equity programs.

[123] Facilitating Power. "The Spectrum of Community Engagement to Ownership" 2020, https://www.facilitatingpower.com/spectrum_of_community_engagement_to_ownership.

[124] California Public Utility Commission. "Environmental and Social Justice Action Plan Version 1.0". 2019. Microsoft Word - Env and Social Justice ActionPlan_ 2019-02-21.docx (ca.gov)

Figure 3. The Spectrum of Community Engagement to Ownership Developed by Facilitating Power



Source: Facilitating Power. "The Spectrum of Community Engagement to Ownership" 2020, https://www.facilitatingpower.com/spectrum_of_community_engagement_to_ownership.

QUALITY OF COMMUNITY ENGAGEMENT

One critical barrier named by several energy equity actors during interviews was the accessibility of the language that was used for community engagement. Conversations that are full of jargon or assume that individuals have the necessary background knowledge inhibit them from participating meaningfully in dialogues or decision-making processes. Energy actors cited government officials feeling frustrated by the presence of community members who "…don't know what they're talking about. They try to participate in the conversation, but they're unhelpful…". This situation can be difficult if all stakeholders do not ensure the same baseline understanding before conversations begin. The energy equity actor continued about the tension between wanting to solicit community input and the effectiveness of those meetings:

And it's tough for everybody because, on the one hand, it's wasting everybody's time. But on the other hand, it is a place where people are getting heard. We just can't do anything about half the things that [community members] are asking for.

One reason for the inability to address the things being asked for is that there are no other forums for community members to share their feedback, concerns, or needs. As a result, community members may share concerns or feedback on pricing, EE measures options or other topics that may not be aligned with the meeting agenda. One potential solution is to offer multiple opportunities in different formats to allow different stakeholders to engage in decision-making processes. CBOs and other actors advocating for community needs shared that the only avenue for them to participate in decision-making or provide feedback is through participation in state or CPUC hearings. They suggested other opportunities to support meaningful involvement, such as "an ongoing working group to provide direct input." They continued that it would better support community needs so that the programs designed are "more proactive and less reactive."

EVALUATING COMMUNITY ENGAGEMENT

A synthesized list of potential metrics to consider when evaluating community engagement based on the literature review can be found in Table 23. Broadly, the evaluation of community engagement activities can be broken into three main categories: quantity, quality, and impact on desired outcomes. Quantity often includes tracking the engagement activities conducted and how many individuals attended. It is likely the easiest to track but does not guarantee a positive impact on community members. Instead, organizations must look closely at the quality of each activity by investigating the accessibility of engagement materials and practices (e.g., dialect, cultural relevance, location), participant satisfaction with the engagement process, and overall trust in the organization. Finally, community engagement may be geared towards building trust, integrating community feedback into decision-making processes, or serving as a marketing and outreach tool for organizational programs, resources, and activities. Depending on the desired outcome associated with each engagement activity, energy equity actors must measure the extent to which these activities correlate to final outcomes resulting from activities (e.g., participation in programs and improved knowledge about civic engagement). We discuss the types of metrics utilized to evaluate success towards community engagement goals for the 2023 3P equity programs in the next section.

Table 23. Metrics for Measuring the Success of Community Engagement

Category	Sample Metric	Metric Type
Outreach Activities	Number of outreach activities conducted	Quantity
	Total number of people reached by outreach activity	Quantity
Level of Participation or Power Given to Community Members	Number of activities with each of the following goals for participation: ▪ Inform ▪ Consult ▪ Involve ▪ Collaborate ▪ Defer to	Quantity
	Community member perceptions of the organization's receptiveness to feedback	Quality
	Number of ideas or comments that were provided by community members	Quality
	Number of ideas or comments that were considered by organizations	Quantity
	Number of ideas or comments that were included in the final decision.	Quantity

Category	Sample Metric	Metric Type
Accessibility	The proportion of engagement activities and materials that were tailored to the literacy, age, language, and culture of a target audience	Quality
	Number of individuals actively participating vs. passively participating at meetings, events, or other social activities	Quality
	Number of ideas and comments provided by community members	Quality
	Location and format of engagement activity (e.g., online, in-person, centrally located)	Quality
	The number of different stakeholder types present at the engagement activity	Quality
Organizational Trust and Credibility	Community Member satisfaction with stages of the process (e.g., communication, design, integration of feedback)	Quality
	Community Member rating of the organization's commitment to equity	Quality
	Community Member rating of trust with organization partners (e.g., CBOs)	Quality
	Community Member feelings of respect during meetings	Quality
Impact on Desired Outcomes	Community Member satisfaction with the outcome	Quality
	Likelihood for community members to participate in community engagement or decision-making in the future	Quality

5.7 3P EQUITY PROGRAM EVALUABILITY

While community engagement was one aspect of the 3P equity programs, they also aimed to provide energy and non-energy benefits to HTR and underserved customers (See Table 22). To identify whether the programs could currently evaluate progress towards success, we conducted an evaluability assessment to examine the extent to which the original program theory provided by the IOUs and implementation teams could be evaluated reliably and credibly for each 3P equity program. There are two primary considerations in conducting an evaluability assessment: plausibility and feasibility. Therefore, the goal of the evaluability assessment is to address the following two questions:

- **Is it plausible to expect intended outcomes?** Are there logical connections between activities and intended short-, medium- and long-term outcomes?
- **Is it feasible to assess or measure the intended outcomes?** Given the collected data and available resources, can the intended outcomes be measured?

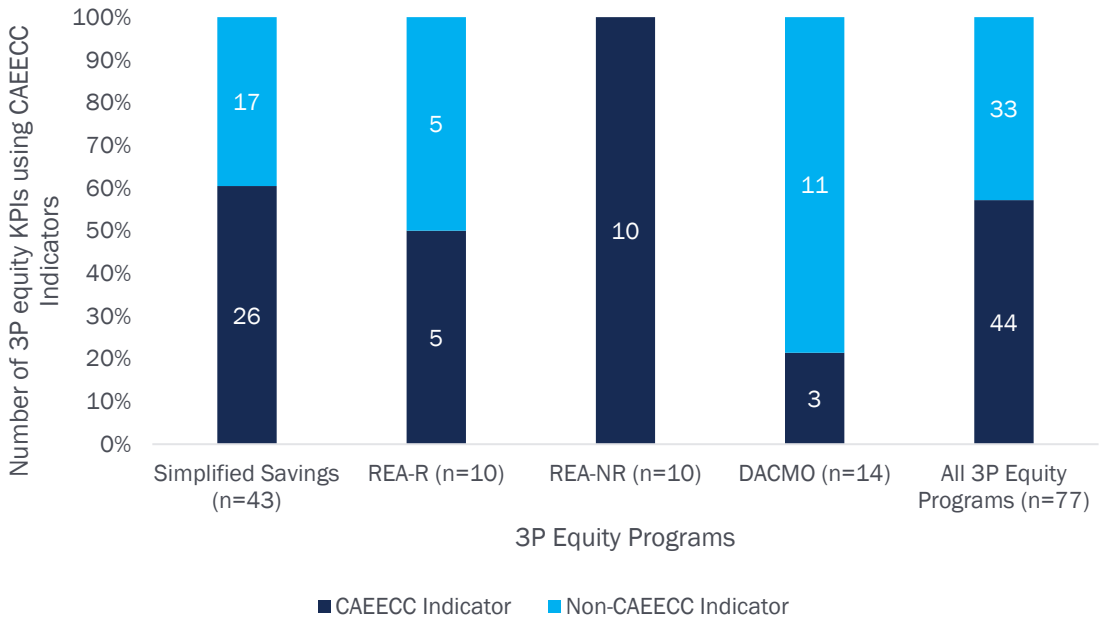
The Evaluation Team conducted evaluability assessments of each 3P equity program. We reviewed the plausibility and feasibility of program activities, outputs, and outcomes as they appeared in the original PTLMs provided by program teams. The detailed findings from the evaluability assessments are included in Appendix B.

The 2021 report from the CAEECC EMWG stated that the indicators developed by the working group "should focus on measuring performance of the overall [equity] segment, not of individual programs;"[125] however, the Evaluation Team found that IOU PAs included many of the CAEECC EMWG indicators in the RFPs requesting bids for 3P equity program designs and subsequent contracts for 3P implementation vendors. To examine the extent to which the PAs incorporated the CAEECC indicators to measure program success, the Evaluation Team reviewed each KPI provided by the 3P equity programs and compared the language to indicators included in the CAEECC EMWG Final Report. Indicators that had identical language were labeled as "CAEECC Indicators," and all remaining indicators were labeled as "Non-CAEECC."

[125] CAEECC-Hosted Equity Metrics Working Group, "Report and Recommendations to the California Public Utilities Commission and the Energy Efficiency Program Administrators" (October 20, 2021) https://www.caeecc.org/9-29-21-emwg-mtg. p. 10.

Figure 4 illustrates the prevalence of the CAEECC and non-CAEECC indicators for each 3P equity program. Across all the 3P equity programs, more than half of the indicators included in program implementation plans were identical to CAEECC EMWG indicators. While there was variation from program to program, the only notable difference was DACMO, which included marketing, outreach, and education indicators as measures of success. The use of the CAEECC EMWG indicators to evaluate program success does not provide adequate specificity to measure the impact of program activities on desired outcomes. Since the indicators were designed for segment-level analysis, they focused on the total number of "equity-target households that were served by the program" or the "total GHG emissions reduced" by the equity programs. These indicators were not explicitly tied to program activities or desired outcomes. For example, a KPI for community engagement was "community engagement activities during program design and to identify community needs and solutions". The indicator lacks specificity as to the type of community engagement activities, the number, or how to measure the effectiveness of these activities at identifying community needs and solutions.

Figure 4. CAEECC and Non-CAEECC Indicators Among 3P Equity Programs



In our review of the PTLM and KPIs of each 3P equity program, we found that the original logic models and proposed KPIs were not feasible to measure without significant improvements. The Evaluation Team found that very few KPIs had targets or goals associated with them. Although some programs, like the Simplified Savings Program, have specific targets, such as serving 75% hard-to-reach and 25% disadvantaged customers, this specificity is not consistently seen across all metrics and indicators. This inconsistency highlights a broader issue: while most programs include a metric or indicator for Customer Participation, almost none set clear targets, indicating a significant area for improvement. Further, while all programs had some form of community outreach and engagement activities to support the recruitment of participants, all of the programs only had metrics that focused on the number of outreach activities conducted or the total number of customers reached, but no measures of quality of the outreach activities such as community member satisfaction with accessibility of the outreach materials, level of participation, building organizational trust and credibility, or impact on desired outcomes (e.g., awareness of IOU programs, interest in participating in IOU programs, or likelihood to participate in IOU programs and decision-making processes in the future).

Moreover, the specification and tracking of non-energy benefits present another challenge, as these benefits are often ambiguous and imprecise. Despite health, comfort, and safety being crucial metrics, their evaluation is complicated by the reliance on self-reporting without clear criteria, leading to inconsistencies. For example, the Simplified Savings and REA-NR Programs both measure non-energy benefits like health, comfort, and safety through participant self-reports,

which can be unreliable. This underscores the need for more rigorous and standardized methods to assess the impact of such programs accurately.

Although none of the evaluated 3P equity programs were evaluable based on the initial PTLM and metrics provided to the Evaluation Team, the evaluability assessment appendices include revised PTLM and KPI tables that will make each program evaluable in the future.

5.7.1 REA PROGRAMS (REA-R AND REA-NR)

The Evaluation Team determined that the REA-R Program design was not evaluable because of a lack of data tracking to measure intended short-, medium-, and long-term outcomes. As seen in Table 24, none of the current intended outcomes for the REA-R Program were feasible. While most outcomes have at least partial data available to track their KPIs, all need additional data collected to be completely feasible. For example, the REA-R Program plans to track TAs that conduct installations for participants but does not plan to track which TAs receive training from the program. If the program tracks the number of TAs who complete program-sponsored training, the medium-term outcome of "increased supply of contractors with training" will be feasible.

Table 24. REA Resource Program Evaluability Assessment Summary

Outcome Timeframe	Intended Outcomes	Plausibility Based on Preceding Activities and Outputs	Feasibility to Measure Based on Current Data Tracking Practices
Short-Term	Customer receives information based on recommended measures	Plausible	Somewhat feasible
	Customer realizes savings from direct install measures	Plausible	Somewhat feasible
	Contractors enroll as program TAs	Plausible	Somewhat feasible
Medium-Term	HVAC and Water Heating Equipment is upgraded with high-efficiency technologies	Plausible	Somewhat feasible
	Increased supply of contractors with training and certification to install EE measures	Plausible	Somewhat feasible
Long-Term	Gas equipment and appliances are substituted for high-efficiency alternatives	Somewhat plausible	Somewhat feasible
	Increased qualified workforce available to serve DACs and HTR customers	Plausible	Not feasible
Initial Program Design is Not Currently Evaluable			

The REA-NR Program design lacks similar data tracking, so few outcomes were feasible. The program design does not include the development of a baseline understanding of customers' trust in utility programs nor does it include a participant survey following participation. Both of these data collection activities are important for measuring KPIs, such as the impact of the program on customer trust in utility programs and satisfaction. For instance, survey data would make the "increased trust and interest" outcome feasible to measure because those KPIs are based on participant feedback. Some outcomes rely on tracking participant activity across other programs like the "making more efficient choices" and "energy efficiency benefits delivered" outcomes. These outcomes would become feasible to measure if participant activity was collected from participation in other programs.

Table 25. REA Non-Resource Program Evaluability Assessment Summary

Outcome Timeframe	Intended Outcomes	Plausibility Based on Preceding Activities and Outputs	Feasibility to Measure based on Current Data Tracking Practices
Short-Term	CBOs communicate program benefits to the community	Plausible	Somewhat feasible
	Increased awareness among landlords and property owners regarding program benefits	Plausible	Somewhat feasible
	Increased interest and participation in EE programs among HTR customers and those residing in DACs	Plausible	Somewhat feasible
Medium-Term	Increased trust and interest in program offerings among HTR customers and DACs	Plausible	Not currently feasible
	Increased participation among HTR renters and renters residing in DACs	Somewhat Plausible	Somewhat feasible
	Customers make more efficient choices when choosing to upgrade equipment and make home improvements	Plausible	Not currently feasible
Long-Term	CBOs participate in the program's continuous improvement process	Somewhat Plausible	Not currently feasible
	Energy efficiency benefits delivered to HTR renters and renters residing in DACs	Somewhat plausible	Somewhat feasible
	Customers combine resources from complementary programs to increase access to EE and clean energy benefits	Plausible	Not currently feasible
Initial Program Design is Not Currently Evaluable			

5.7.2 DACMO PROGRAM

None of the DACMO Program's outcomes were feasible to measure given current data collection practices, and almost all outcomes are not plausible given program activities and outputs. Because the DACMO Program is a non-resource program, none of the outcomes involving energy savings like "reduction in kW, kWh, or therms and water use" nor "Increased installation of EE measures" are plausible or feasible to measure. The program does not conduct any activities that include the installation of EE measures. Hence, none of the outcomes related to their benefits are plausible or feasible.

Table 26. DACMO Program Evaluability Assessment Summary

Outcome Timeframe	Intended Outcomes	Plausibility Based on Preceding Activities and Outputs	Feasibility to Measure based on Current Data Tracking Practices
Short-Term	Increase/improve EE/ DR and Electrification program awareness, knowledge, and/or attitude, and reduce market barriers	Somewhat plausible	Not currently feasible
Medium-Term	Knowledgeable customers willing to participate in EE/DR and Electrification programs	Somewhat plausible	Not currently feasible
	Increased participation in EE/DR and Electrification Direct Install programs	Not plausible	Not currently feasible
	Reduction in kW, kWh, or therms and water use	Not plausible	Not currently feasible
	Environmental and other non-energy benefits	Not plausible	Not currently feasible
	Participant spillover of verified reduction in kWh, kW, therms use	Not plausible	Not currently feasible
Long-Term	Increased installation of EE measures and market participation	Not plausible	Not currently feasible
	Energy Code Changes	Not plausible	Not currently feasible
	Long-term reduction in kW, kWh, and therms and water use	Not plausible	Not currently feasible
	Long-term environmental and other non-energy benefits	Not plausible	Not currently feasible
Initial Program Design is Not Currently Evaluable			

5.7.3 SIMPLIFIED SAVINGS PROGRAM

While most outcomes are somewhat plausible based on program activities and outputs, and some KPIs are feasible to measure given current data collection methods, the Evaluation Team determined that the Simplified Savings Program was not evaluable, as seen in Table 27. It is not likely that the program will increase long-term public participation by customers in DACs and HTR customers in the CPUC's decision-making process, for none of the short- or medium-term outcomes reference a feedback mechanism to the CPUC or other agencies. Further, most long-term outcomes are not currently feasible to measure because the program is not currently collecting data on GHG emissions, compliance with CPUC policy, or ESJ community participation in the policymaking process.

Table 27. Simplified Savings Program Evaluability Assessment Summary

Outcome Timeframe	Intended Outcomes	Plausibility Based on Preceding Activities and Outputs	Feasibility to Measure based on Current Data Tracking Practices
Short-Term	Immediate realized benefits through streamlined process	Somewhat plausible	Somewhat feasible
	Enhanced customer trust and awareness of utility and its offerings	Somewhat plausible	Somewhat feasible
	75% or more participants from DAC locations	Somewhat plausible	Feasible
	Well-trained, experienced TA and CBO network to deliver program services	Somewhat plausible	Somewhat feasible
	Average of 5% in bill savings with a priority for peak demand savings	Somewhat plausible	Somewhat feasible
Medium-Term	Delivery of cost-effective and Health and Community Services (HCS) benefits	Somewhat plausible	Somewhat feasible
	Significantly increased micro and small business engagement and participation in DACs/HTR	Not plausible	Feasible
	Improved TA presence and engagement with DAC and HTR customers	Somewhat plausible	Feasible
	Increased customer satisfaction	Somewhat plausible	Not currently feasible
Long-Term	Increased program awareness and participation in demand-side management (DSM)/peak load reduction opportunities	Somewhat Plausible	Somewhat feasible
	Achieve deep penetration with customers in DAC/HTR communities with increased HCS and resiliency as well as energy benefits	Somewhat plausible	Somewhat feasible
	ESJ Goal 5: Enhanced outreach & public participation by ESJ communities in CPUC's decision-making process & benefit from CPUC programs	Not plausible	Not currently feasible
	Ensure compliance with all CPUC policies while maintaining an element of nimbleness and flexibility that can ensure high stakeholder satisfaction	Somewhat plausible	Not currently feasible
	Increase adoption rates of EE and DSM programs that result in decreased GHG emissions in DACs	Somewhat plausible	Not currently feasible
Initial Program Design is Not Currently Evaluable			

6. CONCLUSIONS AND RECOMMENDATIONS

Below, we summarize the conclusions, key findings, and recommendations that emerged from this study.

6.1.1 3P EQUITY PROGRAM ALIGNMENT WITH IOU BUSINESS PLANS AND ESJ ACTION PLAN

Conclusion 1: As instructed by the CPUC, the 2023 3P equity program designs align with goals 1, 2, and 5 of the Environmental & Social Justice (ESJ) Action Plan, and most of the objectives. According to D.21-05-031, in their design, the programs under the equity segment of the IOU energy efficiency portfolios are tasked with "providing energy efficiency to hard-to-reach or underserved customers and disadvantaged communities," as defined by the CPUC's ESJ Action Plan.[126] The ESJ Action Plan provides nine goals and 28 objectives that illustrate the broad vision and steps the CPUC will take to ensure equity in its programs and services. Specifically, the IOUs' equity programs included in the 2024-2031 Business Plans were intended to support Goals 1, 2, and 5 of the ESJ Action Plan, as stated in D.21-05-031. The 2023 3P equity programs (REA-R, REA-NR, DACMO, and Simplified Savings) align with most of the objectives under the ESJ Action Plan goals 1, 2, and 5. The objectives that the 2023 equity programs do not address are not relevant to the implementers as they focus on standardized CPUC processes (ESJ Objectives 1.1 and 5.1) or studies of the impact of EE strategies on ESJ community health, well-being, and other benefits (ESJ Objective 2.2). While the 3P equity programs may collect data regarding the non-energy benefits received by program participants, the current description of Objective 2.2 is focused on sector-level studies across IOU territories.

Each of the 2023 3P equity programs leverages ESJ Action Plan definitions for HTR customers and DACs to target potential participants, and each of the programs expands opportunities for access among these target segments. The Simplified Savings Program is the first equity program to provide offerings to micro and small business customers, thus expanding opportunities for access to energy efficiency benefits among HTR commercial segments. The remaining programs each support increased engagement among HTR residential customers. To accomplish this, almost all of the programs—with the exception of REA-R—aim to improve customer awareness of energy efficiency programs, products, and benefits by 1) ensuring that outreach materials are developed to be locally relevant and accessible and 2) identifying opportunities to connect with HTR customers through existing community events and functions.

- Recommendation 1: To continue to support Goals 1, 2, and 5 of the ESJ Action Plan, the CPUC and IOUs should collaborate to invest resources to improve community engagement activities, particularly around 3P Equity program design, implementation, and measures of success. This should involve identifying community needs, barriers to participation, and preferred engagement modes. Beyond supporting CPUC's goal of improving community participation in decision-making processes, this investment would also help inform the development of future requests for abstracts/proposals for 3P Equity Programs so the program designs are rooted in community needs. These novel 3P equity programs may benefit from developmental evaluations[127] that provide recommendations on improving program activities at various stages of equity planning, program development, implementation, and final impact evaluation.

Conclusion 2: The CPUC initiated workstreams to develop portfolio- and segment-level metrics and indicators to measure equity performance, but there is a lack of guidance for program-level tracking. The CPUC has issued decisions to define goals, indicators, and metrics for the EE portfolio and the equity segment.[128] D.18-05-041 included common metrics and indicators across the three energy efficiency portfolio segments (resource acquisition, market

[126] https://www.cpuc.ca.gov/-/media/cpuc-website/divisions/news-and-outreach/documents/news-office/key-issues/esj/esj-action-plan-v2jw.pdf

[128] While the terms indicators and metrics are often used synonymously, the CPUC differentiates these for the equity segment. Indicators may help to establish baselines and serve as a precursor for metrics which are more specific quantitative measures that are used to evaluate the effectiveness of specific actions or strategies towards desired goals or targets.

support, and equity), and D.23-06-055 mandated the assembly of the CAEECC EMWG to define indicators for the new equity segment. Specifically, the CPUC established the CAEECC EMWG to develop the objectives for the equity segment and design indicators to evaluate success toward these objectives. While the CPUC provided clear guidance that the equity segment of PA portfolios should support goals 1, 2, and 5 of the ESJ Action Plan, according to D.23-06-055, IOUs are not expected to develop their own equity-specific program goals, targets, and associated metrics until March 2025. Currently, goals, metrics, and indicators are published in at least these three sources (i.e., the ESJ Action Plan, CAEECC EMSWG report, and Grounded Research Common Metrics Working Group report), and it is not clear what level of consolidation is requested or required by the CPUC.

In D.23-06-055, the CPUC instructed the IOUs to contract with a vendor to support the process of proposing and adopting long-term equity segment accountability goals, including defining goal constructs, demonstrating alignment with objectives, identifying the granularity of reporting detail (statewide, by PA, by territory), identifying relevant metrics and indicators to measure progress to goals, determining timeline for goal achievement, and providing necessary baseline information. To support the development of these goals and metrics, the CPUC is preparing a request for proposal (RFP) for a Market Rate NEBs Equity Segment Study that aims to improve the quantification of non-energy benefits[129] (NEBs). In June 2024, the IOUs participated in a Working Group to support the development of the RFP.[130] It is not clear to what extent the vendor will leverage existing sources to consolidate historic efforts and create a pathway for the equity segment and its programs moving forward. Finally, the CPUC recently issued an RFP for Energy Efficiency Technical Consultant Services that will also support the development of equity segment accountability goals to quantitatively measure segment performance.

- **Recommendation 2:** The CPUC should consider providing guidance to the PAs on how existing goals in the ESJ Action Plan Version 2.0 may translate or cascade down to the equity segment and then to IOU processes and programs.
- **Recommendation 2A:** Upon the completion of the Market Rate NEBs Equity Segment Study, we recommend that the IOUs utilize standardized key performance indicators (KPIs) and methodologies to quantify NEBs for the equity segment of their portfolio.
- **Recommendation 2B:** Once equity segment goals, metrics, and indicators are established and finalized with the CPUC, PAs should work with program implementers to translate these into program implementation plans to ensure clear documentation for how the equity segment goals, metrics, and indicators align with each equity program's PTLMs, how program data will be collected and by whom, and how/when these data will be reported to the CPUC. Due to the current EE program cycle, this will ideally be implemented in preparation for the February 2026 application cycle.
- **Recommendation 2C:** It may benefit stakeholders (including the PAs, CPUC, and other energy equity stakeholders) to have all relevant California energy equity documentation in one place (e.g., the ESJ Action Plan or the CAEECC website) so there is one guiding source for equity information. CPUC should assign an entity to inventory all energy equity documents for the state in one location (e.g., CPUC Energy Division, CAEECC, or other entity). This repository should include a dictionary of key and relevant terms for energy equity (e.g., goals, NEBs) to ensure consistency in terminology across energy equity actors. Ensure the repository is marketed to relevant stakeholders so the public is aware of these valuable materials.

[129] According to the CAEECC Equity Metrics Working Group, non-energy benefits include health benefits (e.g., indoor air quality, outdoor air quality), comfort (e.g., noise, temperature), safety of appliance, and economic or other non-energy benefits (https://www.caeecc.org/9-29-21-emwg-mtg). Additionally, the ESJ Action Plan 2.0 includes pollution or GHG reduction, quality of services, and person-oriented decisions (esj-action-plan-v2jw.pdf (ca.gov).

[130] Advice No.6338-G, et al., "Joint Non-Energy Benefits Study Working Group's Recommendations pursuant to D.23-06-055".

6.I.2 RELEVANT CA POLICIES AND FRAMEWORKS THAT GUIDE ENERGY EQUITY

Conclusion 3: There are three existing frameworks that guide energy equity in California. There are several guiding documents and ongoing efforts to support energy equity in California, including the CPUC's ESJ Action Plan, the California Energy Commission (CEC) Justice Access, Equity, Diversity, and Inclusion (JAEDI) Framework, and the DACAG Equity Framework[131]. Each key energy equity framework referenced in California covers at least three of the four forms of equity, as shown in Table 28. All three frameworks aim to support distributive equity and capabilities among target equity populations (e.g., hard-to-reach and underserved customers and disadvantaged communities) but are not consistent in providing guidance on procedural equity and recognition.

Table 28. Forms of Equity Addressed in California Energy Equity Documents

Forms of Equity	CPUC ESJ Action Plan	DACAG Framework	CEC JAEDI Framework
Distributive—the extent to which individuals have access to goods and are exposed to harms.	✓	✓	✓
Procedural—addressing barriers to participation in decision-making processes.	✓	✓	✓
Recognition--the extent to which individuals' experiences, perspectives, and ideas are respected and not dismissed.	✓		✓
Capabilities—the empowerment of communities and support of capacity building for marginalized and burdened communities.	✓	✓	✓

6.I.3 COMMONALITIES IN THE PROGRAM THEORY AND LOGIC MODELS OF THE 3P EQUITY PROGRAMS

Conclusion 4: The 2023 3P equity programs have overlapping program theories, and each targets hard-to-reach customers and disadvantaged communities. Although the 2023 3P equity programs target different sectors (REA-R, REA-NR, and DACMO targeting residential and the Simplified Savings Program targeting commercial), each specifically targets hard-to-reach customers and those residing/operating in DACs. In the short and medium term, programs aimed to increase awareness and interest in IOU programs, build community trust in IOU offerings, and increase participation in IOU EE programs. The REA-R and Simplified Savings programs do this more directly by offering free assessments and direct install measures for immediate energy and bill savings to the customer. REA-R and the Simplified Savings Program also provide workforce training to improve access to qualified contractors in disadvantaged communities. The REA-NR and DACMO programs seek to achieve increased awareness through marketing, outreach, and engagement activities. The two programs take cultural competency into consideration when developing marketing materials and engagements, including developing in-language materials and DACMO partners with CBOs to increase trust with customers.

Conclusion 5: Existing PTLMs for the 2023 3P Equity programs do not follow PTLM design best practices. The original REA-R, REA-NR, and Simplified Savings PTLMs provided to the Evaluation Team by program staff did not provide explicit links between program activities, outcomes, and associated outcomes, nor logical connections between various short-, medium-, and long-term outcomes. Including these elements in a PTLM is tantamount to ensuring program activities lead to expected outcomes and KPIs can be established to measure program success. The original PTLM for DACMO followed some PTLM best practices, including linkages from program activities to outputs and outcomes. However, the original DACMO PTLM did not provide plausible connections between various short-, medium-, and long-term outcomes

[131] The DACAG was created by SB 350 and advises the CPUC and CEC on how to more effectively design and implement energy policies and programs with DACs in mind. The DACAG framework was updated in 2024, but the updated version came out after the analysis conducted in this report. The 2024 update of the DACAG framework includes recognition.

and expected program outputs. Each original PTLM was based on a template provided in RFP documents from the PAs to 3P implementation firms. The Evaluation Team updated the original PTLMs to follow PTLM design best practices as part of this evaluation study. The updated PTLM for each program is included in Appendix B.

- **Recommendation 5:** Adopt the PTLM updates proposed by the Evaluation Team for each program.
- **Recommendation 5A:** The current PTLM template provided by the IOUs to 3P implementers proposing equity program designs should be updated to reflect best practices, such as identifying linkages and providing a logical description of each linkage to support the development of indicators and evaluation of 3P Equity programs. A sample PTLM template that could be used for future equity programs can be found in Appendix D.

6.1.4 EVALUABILITY OF THE 3P EQUITY PROGRAMS

Conclusion 6: Not all desired outcomes of the 2023 3P equity programs are plausible without further theoretical linkages between the activities and outcomes. A list of each program's outcomes and the plausibility of them occurring based on the original program design can be found in Section 5.7. The Evaluation Team provided updated PTLMs to ensure plausible linkages for each of the 3P equity programs (See Appendix B); however, the following outcomes were removed from the updated PTLMs for each program due to unclear linkages between program activities and outcomes. For REA-R, the expectation that a long-term outcome of the REA-R program will be "gas equipment and appliances substituted for high-efficiency electric alternatives" is not likely without fuel substitution-focused interventions. For DACMO, the expectation that a long-term outcome of the program will be "energy code changes" is not likely given that the program targets customers rather than other market actors, such as code officials, so energy code changes are not currently a theoretical outcome of the program. Additionally, the Simplified Savings Program activities do not plausibly lead to ESJ communities participating in CPUC decision-making processes. In the original PTLM, the Simplified Savings Program intended to fulfill objectives under Goal 5 of the CPUC's ESJ Action Plan.[132] However, the expectation that a long-term outcome of the program will be "enhanced outreach and public participation by ESJ communities in CPUC's decision-making process" is not likely. The program targets small business customers in ESJ communities with energy-efficiency program offerings but expecting this experience to lead to participation in regulatory processes is not a theoretical outcome of the program.

- **Recommendation 6:** If fuel substitution is an expected long-term outcome of the REA-R program, we recommend that program staff update the PTLM to specify program activities that lead to a fuel substitution output. Activities may include fuel substitution-focused training for contractors or education campaigns for customers.
- **Recommendation 6A:** If "energy code changes" are an intended outcome of DACMO, we recommend that program staff update the PTLM to include activities that clearly lead to energy code changes, such as interventions that specifically target code officials and/or other stakeholders that influence code-making decisions. These activities, however, may be better suited for a Codes & Standards program.
- **Recommendation 6B:** If "Enhance outreach and public participation opportunities for ESJ communities to meaningfully participate in the CPUC's decision-making process" is an expected outcome of the Simplified Savings Program, we recommend that the PTLM add program activities that lead to this outcome. Tailored outreach materials could reference the importance of participating in CPUC decision-making processes, the benefits to customers for doing so, and opportunities for participation.

Conclusion 7: Most of the KPIs identified for the 2023 3P equity programs are not feasible to measure based on current data collection/tracking practices. REA-R and REA-NR are only somewhat feasible to measure based on current

[132] https://www.cpuc.ca.gov/news-and-updates/newsroom/environmental-and-social-justice-action-plan#:~:text=5.,and%20benefit%20from%20CPUC%20programs.

data collection/tracking practices, while the KPIs for DACMO and Simplified Savings are not currently feasible to measure. Current data collection practices do not collect the data required for future program evaluation of all KPIs. Additionally, the KPIs identified to measure program performance do not fully capture all intended outcomes from the program activities.

- **Recommendation 7:** For each 3P equity program assessed as part of this study, adopt the KPIs proposed by the Evaluation Team in Appendix B (within the detailed evaluability assessment reports). Each of the KPIs was designed to measure the intended outcomes of each program activity.
- **Recommendation 7A:** We recommend that the PAs update the existing data collection and tracking practices for each of the 2023 3P equity programs and ensure all the data necessary to measure the proposed KPIs are collected and tracked. An example data request is included in each evaluability assessment report included in Appendix B to provide the expected level of detail and unit of measure for each data field. The PAs should assign clear responsibilities to implementation staff and contractors (or other market actors) to identify who is responsible for tracking which data and how it will be reported to PA and CPUC staff. The PAs should also ensure any issues or concerns with data privacy are addressed early on in the process.

6.1.5 SUCCESSES AND BARRIERS TO IMPLEMENTING 3P EQUITY PROGRAMS IN CALIFORNIA

Conclusion 8: There has been limited pursuit of community perspectives prior to the design and implementation stages of the 2023 3P equity programs. There was no explicit solicitation of community feedback for IOU PAs on developing the RFP for 3P equity programs outside of the Procurement Review Groups (PRGs) at each IOU. PAs expected 3P implementers to have conducted sufficient research to inform the program design that met the RFP; however, implementers predominantly based their proposals on previous experience rather than collecting ESJ community feedback on the design of the proposed program. Following contracting, some implementers sought to reach out to community leaders to ensure that the outreach and communication materials were relevant but were met by resistance from PAs who wanted finalized outreach materials prior to engaging with community members about the program.

- **Recommendation 8:** The CPUC should allow for IOU budgets to include funding for community listening sessions in 3P Equity program contracts. These community listening sessions should be completed soon after the contract award to verify that the program design aligns with community experiences and needs (e.g., barriers). If it is discovered that there is misalignment, this allows the implementers and IOU PAs to work together to modify the program to better meet community needs, program goals, and equity-segment goals. This also serves as an initial step in developing community relationships and supporting future community engagement activities.

Conclusion 9: The 3P equity programs aim to overcome trust barriers with vulnerable populations through community engagement. During interviews, program staff identified a lack of trust among underserved customers as a main barrier to implementing 3P equity programs. As such, three of the four Programs (REA-R, REA-NR, and Simplified Savings) have design elements that incorporate CBOs and local contractor networks into program delivery to build trust with community members, leverage CBO's existing networks to promote awareness of the program, and build positive relationships with CBOs to increase their likelihood of participating in future IOU programming.

- **Recommendation 9:** Despite programs being in the ramp-up phase of implementation, the implementers should continue to evolve program activities to incorporate CBOs and local contractors over time. The PAs should also initiate opportunities for community stakeholders to provide feedback on program design and evolution opportunities. We recommend that the PAs invest in opportunities to improve community engagement by understanding and addressing barriers to community participation in dialogues about goal setting, program design, implementation, and evaluation through communication and research directly with community members and CBOs.

- **Recommendation 9A:** While implementation teams emphasize the positive impact of using local contractors to build trust in IOU offerings by establishing more personal connections with customers, it is important to recognize that developing these trusted relationships takes time. We understand that implementers may feel an urgency to launch these programs, but we advise against rushing the development of these relationships just to meet program launch deadlines. We realize this is a difficult balance.

Conclusion 10: Most of the 3P equity programs expected for launch in 2023 were delayed. Internal turnover at IOUs, novel program eligibility requirements, and data sharing complications caused program launch delays. The DACMO and PG&E's Simplified Savings Program both launched in 2023, but the REA-R, REA-NR, and Simplified Savings programs in SCE and SDG&E territories are delayed into 2024. As each 3P equity program adopts KPIs developed as part of this evaluation, communication regarding data sources, access, and transfer protocols among implementers and evaluators will be pertinent.

- **Recommendation 10:** We recommend that IOU PAs communicate with the 3P implementation vendors regarding the data sources and requirements for the 3P Program before finalizing the program design or early in the ramp-up/implementation process. Additionally, if the PAs can designate a deputy program manager who is briefed on program activities at a high level, it may enhance program stability during unexpected staff turnover and improve relationships with implementers and other program stakeholders.

APPENDIX A. LITERATURE REVIEW SOURCES

Source Title	Author	Year	Historic Document / Policy	Evaluation Report	Definition / Framework	Equity Metrics	Best Practices	Guidebook / Toolkit	Link
Principles of Environmental Justice	People of Color Environmental Leadership Summit	1991	✓						Principles of Environmental Justice / Environmental Justice Principles (ejnet.org)
AB32: Air pollution: greenhouse gases: California Global Warming Solutions Act of 2006.	California State Assembly	2006	✓						AB 32 Global Warming Solutions Act of 2006 | California Air Resources Board
SB350: Clean Air and Pollution Reduction Act of 2015	California State Senate	2015	✓						Clean Energy and Pollution Reduction Act - SB 350 (ca.gov)
Equity in Sustainability: An Equity Scan of Local Government Sustainability Programs	Urban Sustainability Directors Network (USDN)	2015		✓	✓		✓		USDN_Innovation_Report_Tools_Equity_Scan-3-2015.pdf
D.16-08-019	California Public Utility Commission (CPUC)	2016	✓						166232537.PDF (ca.gov)
The Los Angeles 100% Renewable Energy Study (LA 100)	Los Angeles Department of Water and Power (LADWP) ; National Renewable Energy Laboratory (NREL)	2016				✓			Los Angeles 100% Renewable Energy Study | NREL
Designation of Disadvantaged Communities Pursuant to Senate Bill 535	California Environmental Protection Agency (CalEPA)	2017	✓						https://calepa.ca.gov/wp-content/uploads/sites/6/2022/05/Updated-Disadvantaged-Communities-Designation-DAC-May-2022-Eng.a.hp_-1.pdf

Source Title	Author	Year	Historic Document / Policy	Evaluation Report	Definition / Framework	Equity Metrics	Best Practices	Guidebook / Toolkit	Link
Advancing Climate Justice in California: Guiding Principles and Recommendations for Policy and Funding Decisions	Climate Justice Working Group	2017					✓	✓	CJWG final document with appendix (00370494-4).DOCX (ca.gov)
Racial Equity: Getting to Results	Local and Regional Government Alliance on Race & Equity (GARE)	2017						✓	GARE Public Resources - Racial Equity Alliance
D.18-01-004	California Public Utility Commission (CPUC)	2018	✓						205560586.PDF (ca.gov)
Review of Energy Equity Metrics	Pacific Northwest National Laboratory (PNNL); Department of Energy (DOE)	2018		✓		✓			Review of Energy Equity Metrics | Report | PNNL
Disadvantages Community Advisory Group (DACAG) Equity Framework	The Disadvantaged Communities Advisory Group	2018			✓				dacag-equity-framework.pdf
Making Equity Real in Climate Adaption and Community Resilience Policies and Programs: A Guidebook	The Greenlining Institute	2019			✓		✓	✓	https://greenlining.org/wp-content/uploads/2019/08/Making-Equity-Real-in-Climate-Adaption-and-Community-Resilience-Policies-and-Programs-A-Guidebook-1.pdf
The State of Equity Measurement: A Review for Energy-Efficiency Programs	Urban Institute & Green & Healthy Homes Initiative	2019		✓					the_state_of_equity_measurement_0_0.pdf (urban.org)
Greenlined Economy Guidebook	The Greenlining Institute	2020			✓		✓	✓	The Greenlined Economy Guidebook - The Greenlining Institute

Source Title	Author	Year	Historic Document / Policy	Evaluation Report	Definition / Framework	Equity Metrics	Best Practices	Guidebook / Toolkit	Link
Measures Matter: Ensuring Equitable Implementation of Los Angeles County Measures M&A	University of Southern California (USC) Dornsife Equity Research Institute	2020	✓		✓	✓			Measures Matter: Ensuring Equitable Implementation of Los Angeles County Measures M & A - USC Equity Research Institute (ERI)
Health and Energy Program Design	American Council for an Energy-Efficient Economy (ACEEE)	2021			✓				Equity session slides.pdf - Google Drive
Report and Recommendations to the California Public Utilities Commission and the Energy Efficiency Program Administrators	CAEECC-hosted Equity Metrics Working Group (EMWG)	2021				✓			Equity Metrics Working Group Meeting | CAEECC
D.21-05-031	California Public Utility Commission (CPUC)	2021	✓						385864616.PDF (ca.gov)
Pathways to Changing the PUC Mandate: A Regulatory Review	E9 Insight	2021		✓					IMT Research Report.docx (e9insight.com)
Emerald Cities Collaborative (ECC) Energy Democracy	Emerald Cities Collaborative (ECC)	2021			✓			✓	Energy Democracy Advancing Equity in Clean Energy Solutions (emeraldcities.org)
EEAC Equity Working Group Summary to EEAC	Energy Efficiency Advisory Council (EEAC)	2021			✓	✓			Workshop-5-Equity-Working-Group-Process-and-Recommendations-01.08.21-MM-Final-002.pdf (ma-eeac.org)
LA 100 Equity Strategies	National Renewable Energy Laboratory (NREL)	2021			✓	✓			Equity Strategies | Los Angeles 100% Renewable Energy Study | NREL

Source Title	Author	Year	Historic Document / Policy	Evaluation Report	Definition / Framework	Equity Metrics	Best Practices	Guidebook / Toolkit	Link
Diversity and Inclusion Strategic Plan	New York State Energy Research and Development Authority (NYSERDA)	2021			✓				Diversity, Equity, and Inclusion at NYSERDA - NYSERDA
Sonoma Clean Power Programs Equity Framework	Sonoma Clean Power	2021			✓				ENG-Programs-Equity-Framework_-APRIL.pdf (sonomacleanpower.org)
Energy Equity Action Planner	Southeast Energy Efficiency Alliance (SEEA)	2021			✓		✓	✓	Energy Equity Action Planner - Southeast Energy Efficiency Alliance (seealliance.org)
Greenlining Institute Strategic Plan 2021-2023	The Greenlining Institute	2021			✓				Greenlining-Just-Economy-Strategic-Plan-2021.pdf
NAACP Solar Equity Initiative: Equitable Solar Policy Principals	The National Association for Advancement of Colored People (NAACP)	2021					✓	✓	Equitable Solar Policy Principles | NAACP
The Nexus: Guidance for Local Governments Centering Racial Equity in Climate Planning and Practice	The Sustainability Director's Network (USDN)	2021			✓				_usdn_nexus_document_draft_wm_3-26-21.pdf
USDN Equity and Buildings: A Practical Framework for Local Government Decision Makers	Urban Sustainability Directors Network (USDN)	2021			✓				Equity and Buildings: A Practical Framework for Local Government Decision Makers - USDN: Urban Sustainability Directors Network
ACEEE Summary of Equity and Workforce Development	American Council for an Energy-Efficient Economy (ACEEE)	2022				✓	✓		Equity Metrics and Workforce Development | ACEEE

Source Title	Author	Year	Historic Document / Policy	Evaluation Report	Definition / Framework	Equity Metrics	Best Practices	Guidebook / Toolkit	Link
ACEEE 2022 State of Energy Efficiency Scorecard Report	American Council for an Energy-Efficient Economy (ACEEE)	2022				✓	✓		ACEEE Report
Engage the Community: A Guide for Developing a Community Engagement Plan	California Air Resources Board (CARB), California Energy Commission (CEC)	2022						✓	Engage the Community_100622 (cleanmobilityoptions.org)
CPUC ESJ Action Plan	California Public Utility Commission (CPUC)	2022			✓	✓	✓	✓	esj-action-plan-v2jw.pdf (ca.gov)
AB205: Committee on Budget. Energy	California State Assembly	2022	✓						Bill Text: CA AB205 | 2021-2022 | Regular Session | Chaptered | LegiScan
Energy Equity Project (EEP) Framework	Energy Equity Project. University of Michigan-School for Environment and Sustainability (SEAS)	2022		✓	✓	✓	✓		220174_EEP_Report_8302022.pdf (energyequityproject.com)
Ingredients for Equitable Electrification: Analyzing Equity in Statewide Electric Vehicle Rebate Programs	Greenlining Institute	2022				✓			Ingredients for Equitable Electrification - The Greenlining Institute
LADWP Rates and Equity Metrics Semi-Annual Report 2021	Los Angeles Department of Water and Power (LADWP)	2022				✓			Rates_and_Equity_Metrics_Semi_Annual_Report_Feb_2022.pdf (ladwp.com)
LADWP Equity Metrics Data Initiative	Los Angeles Department of	2022	✓			✓			Equity Metrics Data Initiative | Los Angeles Department of Water and Power (ladwp.com)

Source Title	Author	Year	Historic Document / Policy	Evaluation Report	Definition / Framework	Equity Metrics	Best Practices	Guidebook / Toolkit	Link
	Water and Power (LADWP)								
e4thefuture Database of Screening Practices (DSP)	Navigation and Ecosystem Sustainability Program (NESP)	2022					✓		Database of State Efficiency Screening Practices - NESP (nationalenergyscreeningproject.org)
Up in the Air: Revisiting Equity Dimensions of California's Cap-and-Trade System	University of Southern California (USC) Dornsife Equity Research Institute	2022		✓		✓			Up in the Air: Revisiting Equity Dimensions of California's Cap-and-Trade System - USC Equity Research Institute (ERI)
Pro-Equity Anti-Racism (PEAR) Strategic Action Plan	Washington Utility Commission (UTC)	2022			✓				Pro-Equity Anti-Racism | Office of Equity (wa.gov)
Leading with Equity: Centering Equity across ACEEE's Scorecards	American Council for an Energy-Efficient Economy (ACEEE)	2023			✓				Leading with Equity Initiative | ACEEE
CARB 2023 Report	California Air Resources Board (CARB)	2023				✓			California Climate Investments 2023 Annual Report, Cap-and-Trade Auction Proceeds
Justice Access Equity Diversity Inclusion (JAEDI) Framework	California Energy Commission (CEC)	2023			✓		✓		CEC JAEDI Framework (ca.gov)
Exploring Energy Equity Frameworks and Definitions	ESource	2023			✓				PowerPoint Presentation (esource.com)
Illinois Energy Efficiency Policy Manual Versions 3.0: A Manual Guiding the Operation of Illinois	Illinois Energy Efficiency Stakeholder Advisory Group	2023			✓				IL_EE_Policy_Manual_Version_3.0_Final_11-3-2023.pdf (ilsag.info)

Source Title	Author	Year	Historic Document / Policy	Evaluation Report	Definition / Framework	Equity Metrics	Best Practices	Guidebook / Toolkit	Link
Energy Efficiency Programs									
Justice in 100: Analysis of the First Ten 100% Laws in the U.S,	Initiative for Energy Justice	2023	✓	✓					IEJ-Report-Final-1.pdf (iejusa.org)
Diversity, Equity, and Inclusion Plan	Oregon Public Utility Commission (OPUC)	2023			✓				2023-PUC-DEI-Plan.pdf (oregon.gov)
Docket No. 21-05-15 Pura Investigation into Performance-based regulation framework for the Electric Distribution Companies	Public Utility Regulatory Authority (PURA)	2023	✓						21-05-15 Final Decision (lpdd.org)
CEC Energy Equity Indicators Story map	California Energy Commission (CEC)	2024	✓					✓	Energy Equity Indicators – Interactive Story Map | California Energy Commission GIS Open Data (arcgis.com)
Key Challenges for California's Energy Future	California Council on Science and Technology (CCST)	2024			✓		✓		CCST-Key-Challenges-for-Californias-Energy-Future.pdf
Community Action Plan for Energy Efficiency Tool	Northeast Energy Efficiency Partnerships (NEEP)	2024						✓	https://neep.org/action-plan/capee-fact-sheet-energy-committee
TEPRI Community Voices in Energy Survey	Texas Energy Poverty Research Institute (TEPRI)	2024		✓			✓		2024 Community Voices in Energy Survey - Statewide Report - Texas Energy Poverty Research Institute (tepri.org)
A Call to Invest in Community Power: Lessons from 10 Years of California Climate	The Greenlining Institute	2024					✓		A Call to Invest in Community Power: Lessons from 10 Years of California Climate Investments for the State and the Nation - The Greenlining Institute

Source Title	Author	Year	Historic Document / Policy	Evaluation Report	Definition / Framework	Equity Metrics	Best Practices	Guidebook / Toolkit	Link
Investments for the State and the Nation									
Engaging with Public Utilities and Service Commissions	The National Association for Advancement of Colored People (NAACP)	2024					✓		Engaging With Public Utilities and Public Service Commissions | NAACP
Just Energy Policies and Practices Action Toolkit (Modules 1-8)	The National Association for Advancement of Colored People (NAACP)	2024					✓	✓	Just Energy: Reducing Pollution, Creating Jobs Toolkit | NAACP
Community Inclusion Guidance	California Air and Resource Board (CARB)	N/A				✓			STEP Community Inclusion Guidance (caeecc.org)

APPENDIX B. DETAILED 3P EQUITY PROGRAM EVALUABILITY ASSESSMENT REPORTS

Below are the full Evaluability Assessment Reports and associated recommendations for each of the 3P equity programs:

REA-R and REA-NR

DACMO

Simplified Savings

APPENDIX C. SUMMARY OF KEY FINDINGS BY RESEARCH QUESTION

Table 29 lists the study objectives, associated research questions, and key findings that address each question.

Table 29. Summary of Research Objectives/Questions and Associated Key Findings

Research Objective	Research Questions	Key Findings or Location of Findings in Report
Assess the extent to which each program plan aligns with the IOU business plans and CPUC ESJ Action Plan regarding goals, metrics, and timelines.	What are the key program elements documented for each 3P equity program launched in 2023?	The REA and Simplified Savings Programs contained a resource component that offered free home assessments, direct install measures, and incentives for other relevant measures to HTR customers. These programs also included workforce training for contractors to support this work and outreach activities to support customer participation in the resource arm of the program and promote HTR customer participation in other IOU program offerings. The DACMO Program did not contain a resource arm and was focused on providing tailored outreach materials to HTR customers to raise awareness of all IOU and relevant offerings. A full description of program elements can be found in each program's Evaluability Assessment Report (Appendix B)
	What are the goals/metrics each program uses to track success?	Programs were focused on providing market support and energy and cost savings to HTR customers and those within DACs. Most of the KPIs provided in their implementation plans were focused on energy and cost savings, with limited metrics or KPIs associated with non-energy benefits despite including those as desired outcomes in their PTLMs. An evaluation of the implementation plans and KPIs can be found in each program's Evaluability Assessment Report (Appendix B)
	What entity defined these goals/metrics?	The CAEECC Equity Metric Working Group (EMWG) developed an initial set of equity segment objectives. Most of these were adopted and instructed to be used by IOUs in D.23-06-005. While the indicators were designed for portfolio-level evaluations, IOU PAs utilized these indicators in contracting with third-party implementers responsible for the equity programs. The specific short-, medium-, and long-term desired outcomes and associated metrics were developed by 3P implementers during the proposal phase.
	How have the 3P equity programs integrated CPUC's definition of equity into their program design?	The 3P equity programs aim to support the CPUC's work of (1) increasing EE access to underserved customers (ESJ Goal 1), (2) enhancing outreach and engagement with ESJ Communities (ESJ Goal 5), and (3) providing benefits to ESJ Communities through investment, collaborations, and opportunities for meaningful participation (ESJ Goal 2).
Document relevant CA policies that guide energy equity, identify key CA actors involved in equity framework/metric development, and describe best practices from existing equity metrics/frameworks.	What are the energy equity policies in CA relevant to the 3P equity programs?	Beyond the CPUC ESJ Action Plan and key CPUC Decisions that create and guide the Equity Segment of IOU portfolios (i.e., D.21-05-031 and D.23-06-055), there are historical documents that define various audiences of interest for energy equity in California (e.g., DACs, low-income, hard-to-reach) and associated tools and working groups developed to support energy equity (e.g., CalEnviroScreen, Environmental Justice Advisory Committee). A more detailed discussion of relevant policies can be found in Section 5.1.1.
	What frameworks/metrics have been established regarding energy equity programs?	Section 5.3 discusses relevant frameworks and definitions. Section 5.5.2 discusses energy and non-energy benefit metrics, and Section 5.6.2 discusses community engagement metrics.
	Are there existing frameworks/metrics from other jurisdictions that could be	When the CAEECC EMWG developed its framework, the Energy Equity Project Framework and associated metric evaluation had not yet been published. This framework and the United Sustainability Directors

Research Objective	Research Questions	Key Findings or Location of Findings in Report
	beneficial to CA's 3P equity programs?	Network Framework are cited as the most comprehensive resources and can be beneficial for programs to consider moving forward. Sections 0 and 5.2 discuss these frameworks.
Identify commonalities in the program theory and logic models (PTLM) of the current 3P equity programs.	What sectors are covered by each program and why? Appendix B	Three programs (i.e., REA-R, REA-NR, and DACMO) are in the residential sector, while Simplified Savings serves commercial customers. The IOUs determined the sector and associated customers served prior to the RFA/RFP process. Implementers were responsible for designing activities within the sector to address key barriers for underserved customers.
	Does a PTLM exist for each 3P equity program?	All four of the 3P equity programs contained a PTLM, but our review found that in their original form, they lacked specificity. Some connections between activities and desired outcomes were not plausible, and evaluation of the program's success was not feasible. The Evaluation Team suggested updates to ensure the programs are evaluable moving forward. The original PTLMs and recommended updates for each program can be found in each program's Evaluability Assessment Report (Appendix B).
	What is the program theory for each 3P equity program?	
	How is the program intended to bring about expected results?	
	How does the program plan to recruit DAC/HTR customers to participate in the program?	The programs utilized a variety of marketing and outreach approaches, including collaborating with local CBOs, contractors, and businesses to support outreach activities. In addition to these partnerships, all programs developed tailored outreach materials in multiple languages to ensure the relevance and accessibility of HTR customers.
	What are the program activities and outputs?	A synthesis of the activities conducted by each program can be found in Section 0. A more detailed description of the activities and related outputs can be found in each program's Evaluability Assessment Report in Appendix B.
	What are the program's short-, medium-, and long-term outcomes?	In the short and medium term, programs aimed to increase awareness and interest in IOU programs, build community trust in IOU offerings, and increase participation in IOU EE programs. The 3P equity programs anticipated impacts on energy and non-energy benefits, such as increased community participation in program design, implementation, and evaluation (REA-NR), workforce development benefits (REA-R), and other health or environmental benefits (Simplified Savings), would be longer-term outcomes resulting from each program's activities. A synthesis of the desired outcomes can be found in Section 0, and a more detailed description of the activities and related outputs can be found in each program's Evaluability Assessment Report in Appendix B.
	Are the program's activities producing desired outcomes?	It is too early to measure the success of activities on desired outcomes—particularly medium- and long-term outcomes. Initial interviews with implementer staff from the REA and simplified Savings Programs shared that outreach activities and program offerings have been well-received by customers; however, delays to program launch have impacted their ability to enroll individuals in the program to actualize associated energy benefits of the programs. For more information about the successes and challenges of early community engagement for the 3P equity programs, see Section 5.6.2.
	What are the commonalities of the PTLM across 3P equity programs?	All four of the 3P equity programs contained a PTLM, but our review found that in their original form, they lacked specificity. Some of the connections between activities and desired outcomes were not plausible, and evaluation of the program's success was not feasible. The Evaluation Team provided suggested updates to ensure the programs are evaluable moving forward. The original PTLMs and

Research Objective	Research Questions	Key Findings or Location of Findings in Report
		recommended updates for each program can be found in each program's Evaluability Assessment Report (Appendix B). A synthesis of the barriers addressed by each program, activities conducted, and desired outcomes can be found in Sections 0 and 0
Determine the evaluability of the 3P equity programs.	Are the data needed to quantify program success from the implementation plan being collected, or can they be collected for each 3P equity program?	In our initial review of each 3P equity program, we found significant concerns regarding the plausibility of desired outcomes and the feasibility of measuring success. Namely, there was a lack of specificity in the PTLMs and associated metrics. Some of this is due to the use of CAEECC Equity metrics that are broadly designed to evaluate IOU portfolio success rather than specific program success. We have proposed updated PTLMs for each program and associated metrics that are more feasible to collect (See Appendix B).
	Are the goals/metrics intended for each 3P equity program appropriate to measure program success?	
	Can non-energy goals (e.g., bill savings, safety and comfort, indoor air quality) be evaluated for each program?	Programs focused on bill and cost savings as the main metrics of success for HTR customer motivation to participate in IOU programming. Programs that did aim to address bill savings and other non-energy outcomes were provided with recommended metrics to support the evaluation of their program, which can be found in the evaluability assessment reports in Appendix B.
Describe the current successes and barriers to implementing 3P equity programs in California.	To what extent do 3P implementation staff and utility PAs integrate community voices and perspectives into the design, implementation, and measurement of the success of each equity program?	For IOU PAs, there was no explicit solicitation of community feedback on the development of the RFP for 3P equity programs outside of the Procurement Review Groups (PRGs) at each IOU. PAs expected 3P implementers to have conducted sufficient research to inform the program design that met the RFP. In our interviews with program staff, implementers predominantly utilized previous experience to inform program designs but did not collect community feedback to incorporate community needs or voices into their design. While two programs established relationships with local community members to support the implementation of their program, only one has planned to solicit feedback from CBO partners and customers to identify opportunities to improve future community outreach activities and program participation
	What were the reasons stakeholders participated/did not participate in the 3P equity program design, implementation, or evaluation process?	
	What lessons were learned in the first year of implementing 3P equity programs (e.g., barriers, successes, unexpected challenges)?	For all the 3P equity programs, one of the major barriers in the first year was significant delays in program launch. Successfully launched programs have been recruiting customers to their program or executing planned marketing and outreach activities despite these initial delays.
	To what extent are the 3P equity programs on track to meet the goals/objectives set in the implementation plans?	
	How could 3P equity programs be improved to better meet the needs of equity (DAC/HTR/underserved) customers in California?	In interviews with program staff and IOU PAs, they sought opportunities to integrate community feedback into the design of the RFP and subsequent programs. This feedback is to ensure that programs are meeting community needs. Additionally, the program has few feedback mechanisms to gauge customer satisfaction with program design and implementation, which could support future 3P equity program designs or iterations of currently offered programming.
	What is the estimated 3P equity program awareness among	This is currently unknown. At the time of this study, none of the programs had been running for six months. While programs planned to

Research Objective	Research Questions	Key Findings or Location of Findings in Report
	equity (DAC/HTR/underserved) customers?	collect customer feedback, they had not yet done so. We did not include customer research in this study to avoid affecting program activities.
	What are the expected motivations/barriers for 3P equity program participation among equity (DAC/HTR/underserved) customers?	The 3P equity programs aim to address the following barriers: ▪ Initial upfront cost to participate in programs ▪ Program complexity for customers and contractors ▪ Lack of customer trust with IOUs ▪ Lack of knowledge of EE programs, products, and benefits ▪ Lack of awareness of programs due to language barriers ▪ Misalignment of program design and customer needs (e.g., participation criteria, desired benefits) ▪ Difficulty finding qualified and affordable contractors who participate in programs

APPENDIX D. PTLM DEVELOPMENT RESOURCE GUIDE

INTRODUCTION TO DEVELOPING A PROGRAM THEORY AND LOGIC MODEL (PTLM)

Underlying a program is a theory of how and why an initiative works. Theory-based programs anticipate project-caused effects by identifying program activities and the intended outputs and outcomes linked to those activities. A PTLM is a simplified picture of a program, initiative, or intervention that helps stakeholders understand the theory behind the program—why and how it's expected to produce the desired outcomes.

A PTLM is a systematic and visual way to represent the relationships among the resources available to operate a program, the activities planned, and the changes or results the program intends to achieve.[133] Specifically, a PTLM:

- Depicts a program's theory of change
- Shows a categorization of program activities, outputs, and outcomes
- Ties programs activities to outcomes and impacts
- Focuses on outcomes of program activities, not its program processes

A theory-based program has a clear definition of the problem intended to be solved, including a defined target market, objectives, market barriers, and strategies that are consistent with program objectives. It is important to clearly articulate the assumptions associated with the problem a program is aiming to solve so that program activities can be designed to overcome these with actionable strategies. There are typically five areas a PTLM should clearly address, as shown in Table 30.

Table 30. PTLM Components and Best Practice Considerations

PTLM Component	Purpose for PTLM	Best Practice Considerations
Barriers	Problem(s) to be addressed by the program	Ensure program activities are designed to adequately overcome identified barriers
Audience	Who the program is targeting for services	Clearly define based on targeted segment and sector (such as small-to-medium businesses within disadvantaged communities)
Activities	What services or elements the program will be offering or developing	These can be categorized based on the type of intervention (such as Financial assistance, technical assistance, information and education, infrastructure deployment)
Outputs	Program deliverables; the amount of product or service the program will provide	This is usually quantitative (such as the number of people who adopt energy measures or number of people enrolled in a listserv)
Outcomes	Desired impacts or what happens because of the outputs	These are typically categorized based on expectations for the timeline to achieve each outcome (such as short-term, medium-term, and long-term); the timeline for each category is dependent upon the program (for example, short-term can be within the first 1-2 years of program implementation based on expectations for when short-term outcomes can be reasonably achieved)

A PTLM can be useful to program staff at all stages of a program life cycle. During the planning stage, a PTLM can help stakeholders reach a common understanding of program objectives and offer a framework to develop program strategies. During implementation, a PTLM can be used to develop a detailed management plan, identify areas of program operations to track and monitor, focus efforts on prioritized activities, and ensure day-to-day activities are

[133] Logic Model Development Guide. W.K. Kellogg Foundation, 2004.

consistent with program objectives. During evaluation, a PTLM provides a roadmap that allows evaluators to test the validity of the program theory. If the program is underperforming, evaluators use the model to gather evidence and determine whether the issue lies with the program's processes or with the program theory itself.

PTLM AND LINKAGES TEMPLATE

Figure 5 provides a sample PTLM template for future equity and other CPUC programs. Once the PTLM components are identified (i.e., barriers, audience, activities, outputs, outcomes), program staff must identify the linkages between each to explain why intended outputs and outcomes are expected. Table 31 provides a template for explaining the PTLM linkages. Labels for each box in the PTLM support program staff in easily tying the linkages together and identifying needs for data collection to enable program performance tracking. There may be instances in which program activities may feed into each other. Program staff should add separate linkages for each, describing why those linkages occur (e.g., audience learns about a program through a training, audience learns about the training through a program). Each theory linkage should not just report that Activity A leads to Output D but provide additional context regarding the program and include the "why" behind each theory segment, where relevant.

Figure 5. PTLM Sample Template

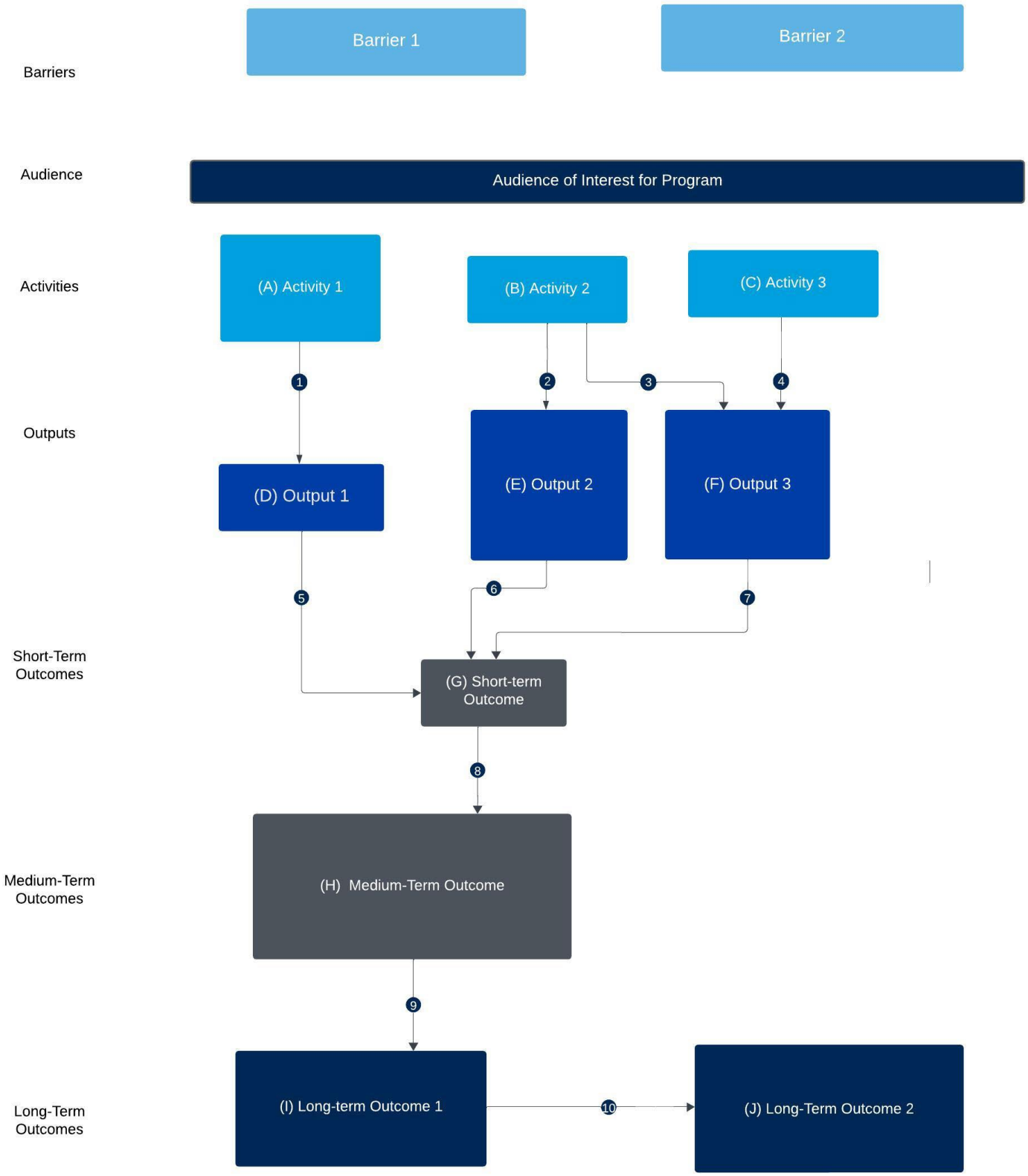


Table 31. Template for Linkage Theories

Link	Linkage Theory
1	The activity (A) will lead to Output 1 (F). This is important to the program because… X, Y, Z
2	Activity 2 (B) will lead to Output 2 (E) because… X, Y, Z
3	Activity 2 (B) will also lead to Output 3 (F) because… X, Y, Z
4	Activity 3 (B) will also lead to Output 3 (F) because… X, Y, Z
5	Output 1 (D) will lead to Short-term Outcome (G) because… X, Y, Z
6	Output 2 (E) will lead to Short-term Outcome (G) because… X, Y, Z
7	Output 3 (F) will lead to Short-term Outcome (G) because… X, Y, Z
8	In the medium-term, Short-term outcome (G) will lead to Medium-term Outcome (H) because… X, Y, Z
9	In the long-term, Medium-term Outcome (H) will lead to Long-term Outcome 1 (I) because… X, Y, Z
10	Long-term Outcome 1 (I) is expected to cause Long-term Outcome 2 (J) because… X, Y, Z

SOFTWARE AND RESOURCES:

Table 32 provides software options for program staff to create a PTLM. Below are some additional resources to support a team's development of a PTLM.

How to Develop a Program Logic Model (evaluation.gov)

Logic Model Training Handouts (pointk.org)

W.K. Kellogg Foundation Logic Model Development Guide (betterevaluation.org)

Table 32. Software Options to Create PTLMs

Software	Format	Cost	Ease of Use	Collaboration
Draw.io Online Diagram and FlowChart Maker	Online App	Free	Limited options for shapes, but sufficient for basic black and white graphics Projects must be saved outside of the application (e.g., Google Drive, Hard Drive) and then reopened in the online application.	Collaboration is available using Google Drive or other filesharing applications (e.g., BOX, OneDrive) where individuals can open an existing project, but no ability for live collaboration
LucidChart	Online App	Freemium (limited features) Premium ($7.95 per month)	Premium provides pre-established templates to support Offers cloud storage within the application to reduce the likelihood or losing progress or documents.	Premium allows for live collaboration, version control, and easy exporting of images and final documents
Microsoft Visio	Online App Desktop App with Premium	$5 per month (limited features) $15 per month	Steep learning curve, but can make complex diagrams and figures	OneDrive/Microsoft Compatible

Opinion **Dynamics**

CONTACT:

Ellen Steiner, PhD
Vice President
esteiner@opiniondynamics.com

Jeana Swedenburg
Director
jswedenburg@opiniondynamics.com

Sarah Naiman, PhD
Managing Consultant
snaiman@opiniondynamics.com

BOSTON
PORTLAND
SAN DIEGO
SAN FRANCISCO

All product or company names that may be mentioned in this publication are tradenames, trademarks or registered trademarks of their respective owners.