Proceeding: A.26-03-009 et al.

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NREN

2028-2031 PORTFOLIO PLAN AND 2032-2035 BUSINESS PLAN

Note: Pursuant to Rule 11.6 of the Commission's Rules of Practice and Procedure, Inland Regional Energy Network requested that the final date to submit all information directed in the September 2, 2026 Administrative Law Judge's Ruling Directing Submission of Corrections and Supplemental Information from all Business Plan Applicants be extended to September 30, 2026. The Administrative Law Judges Fitch and Kao granted this extension in the September 9, 2026 Email Ruling Granting Motion for Extension of Time to Comply with September 2, 2026 Ruling.

Northern Rural Energy Network

YOUR LOCAL ENERGY SOLUTIONS

California Public Utilities Commission

Energy Division Tariff Unit

505 Van Ness Ave

Fourth Floor

San Francisco, CA 94102-3298

March 16, 2026

Northern Rural Energy Network

Energy Efficiency
Portfolio Application

2028–2035

Exhibit 1: 2028-2031 Portfolio Plan and 2032-2035 Business Plan

List of Abbreviations

Abbreviation	Definition
AFN	Access and Functional Needs
BayREN	Bay Area Regional Energy Network
BLR	Blue Lake Rancheria
BPA	Business Plan Application
C&S	Codes and Standards
CAC	Community Advisory Committee
CAEAFTA	California Alternative Energy and Advanced Transportation Financing Authority
CARE	California Alternate Rates for Energy
CBO	Community Based Organizations
CCA	Community Choice Aggregator
CCRREN	Central California Rural Regional Energy Network
CEC	California Energy Commission
CEDARS	California Energy Data and Reporting System
DAC	Disadvantaged Communities
DACAG	Disadvantaged Communities Advisory Group
DEER	Database for Energy Efficiency Resources
DOE	Department of Energy
DR	Demand Response
E	Equity
EAC	Equity Advisory Committee
EBD	Equitable Building Decarbonization
ECAA	Energy Conservation Assistance Act
ECE&T	Energy Career Education and Training
ED	Energy Division
EE	Energy Efficiency
EIA	Energy Information Administration
EIA	Energy Information Administration
ESA	Energy Savings Assistance
ESA	Energy Savings Assistance
ESJ	Environmental and Social Justice

Abbreviation	Definition
ETA	Elect-to-Administer
eTRM	Electronic Technical Reference Manual
FERA	Family Electric Rate Assistance Program
GGF	GoGreen Financing
GHG	Greenhouse Gas
HES	Home Energy Score
HTR	Hard-To-Reach
IDSM	Integrated Demand Side Management
IOU	Investor-Owned Utilities
JCM	Joint Cooperation Memorandum
JPA	Joint Powers Authority
KPI	Key Performance Indicators
LAPC	Lake Area Planning Council
Low-GWP	Low Global Warming Potential
MCOG	Mendocino Council of Governments
MMIP	Missing and Murdered Indigenous Persons
MS	Market Support
MT	Market Transformation
NEB	Non-Energy Benefits
NMEC	Normalized Metered Energy Consumption
NREN	Northern Rural Energy Network
OBF	On Bill Financing
OP	Ordering Paragraph
PA	Portfolio Administrator
PAC	Program Administrator Cost
PG&E	Pacific Gas and Electric
PSPS	Public Safety Power Shutoff
RA	Resource Acquisition
RCEA	Redwood Coast Energy Authority
RCEW	Redwood Coast Energy Watch
RIM	Ratepayer Impact Measure
RREN	Rural Regional Energy network
RTB	REN Total Benefit
SBC	Sierra Business Council
SCT	Societal Cost Test
SNEW	Sierra Nevada Energy Watch
TRC	Total Resource Cost
TSB	Total System Benefit

Abbreviation	Definition
TSB	Total System Benefit
UVM	Unique Value Metric
VCE	Valley Clean Energy
WE&T	Energy Career Education and Training
YEP	Yolo Energy Partnership

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Chapter 1: Executive Summary

The Northern California Rural Regional Energy Network (also known as the Northern Rural Energy Network or NREN) updates its program portfolio and market sectors through this Business Plan Application (BPA). This BPA will update, refine, and expand NREN's portfolio of energy efficiency (EE) programs across its service area. NREN's overarching intent is to address the unique challenges of rurality, which shape every facet of customer participation, technology adoption, workforce availability, and equitable access to clean energy programs.

Rural communities across Northern California experience higher energy burdens[1], more frequent power outages and greater grid unreliability[2] than higher population communities. They also face limited broadband access and fewer contractors available to provide energy-efficiency services. Lower population density and geographic distance have historically left these communities with gaps in service by Investor-Owned Utility (IOU) energy efficiency programs. It is NREN's objective to address these gaps. This BPA is informed by robust community engagement, including needs assessments, direct input from local governments, coordination with community-based organizations, and feedback from local individuals. There is a demonstrated need for more accessible, localized, and trusted program delivery in NREN's region.

NREN's BPA proposes to strengthen its suite of programs to ensure rural customers receive equitable access to the full range of energy efficiency, electrification, workforce, and financing services authorized under its portfolio framework. This includes planning

[1] Ross, Lauren, et al. The High Cost of Energy in Rural America. July 2018, ACEEE. https://www.aceee.org/sites/default/files/publications/researchreports/u1806.pdf
[2] PG&E, 2024 Annual Electric Reliability Report, https://www.pge.com/assets/pge/docs/about/pge-systems/2024-annual-electric-reliability-report.pdf

for growth in program reach and goals, as well as planning for the expansion of NREN's region. The intent behind these updates is grounded in the demonstrated needs of rural communities for these services. The communities NREN serves range from propane-reliant households in remote areas to small businesses and tribal facilities that have never previously been eligible for or served by IOU programs.

A core objective of NREN's BPA is to increase equitable access to energy efficiency and building decarbonization services for residents who face the greatest participation barriers. To accomplish this, NREN will deepen partnerships with trusted Community Based Organizations (CBOs), tribal governments, local leaders, and municipal agencies, and will expand local staffing and in-person engagement to ensure ratepayers can access necessary information and participate in programs through familiar, community-rooted channels.

NREN's Residential Sector

NREN's residential strategy will focus on serving rural single-family and manufactured-home customers through its Home Energy Advisors and Home Energy Upgrades programs. These programs are designed to meet customers where they are and target equity[3] households, whether they are renters or homeowners. By pairing simplified eligibility with deep technical assistance, NREN ensures rural and underserved households can participate in and benefit from home upgrades that improve comfort, reduce energy burden, prepare homes for electrification, and create persistent greenhouse gas (GHG) and total system benefit (TSB)-aligned savings.

NREN's Commercial Sector

NREN's commercial strategy targets small businesses, tribal enterprises, and nonprofit and CBO facilities through its Non-Residential Energy Services program. These facilities

[3] Definition adopted in D.23-06-055 COLs 31-32

have historically been underserved by IOU and statewide programs. Through region-specific outreach, direct install offerings, and electrification incentives, NREN helps commercial customers overcome barriers such as limited capital and lack of access to contractors.

NREN's Public Sector

NREN's public sector strategy expands energy efficiency and decarbonization services to rural public agencies, including counties, cities, and tribal governments through its Public Energy Services program. Public facilities often lack the staff capacity and technical expertise needed to identify, fund, and implement energy efficiency projects. NREN will fill this gap through services that help rural public agencies modernize aging buildings, improve resilience, lower operational costs, and adopt technologies that support statewide decarbonization.

NREN's Workforce, Education, and Training (WE&T) Sector

NREN's WE&T strategy is designed to build a sustainable, locally rooted clean energy workforce capable of delivering electrification, weatherization, and energy efficiency upgrades across all sectors. NREN's Energy Career Education and Training program integrates activities from its former Codes and Standards program with this WE&T program to ensure that building officials, contractors, and designers are equipped to implement and enforce energy code requirements.

NREN's Finance Sector

NREN's cross cutting Energy Upgrade Financing program expands access to capital, which is one of the most persistent barriers to rural energy efficiency and electrification by providing access to and technical assistance for loans, incentive stacking guidance, and loan concierge services for residential, commercial, and public customers. By helping customers finance electrification, building envelope improvement, and resilience upgrades, the Energy Upgrade Financing program ensures that rural ratepayers can

complete projects that generate meaningful energy savings, GHG reductions, and improved comfort, regardless of income level or access to traditional financing.

Regulatory Context of Filing

The Rural Regional Energy Network (Rural REN) was initially established by D.23-06-055 as an equity-focused REN to address the specific needs of rural communities. On May 21, 2024, the Administrative Law Judge filed a Ruling Seeking Comment on Potential Path Forward for Rural Regional Energy Network that proposed dividing RuralREN into two separate entities, one serving the North Coast and Northern Sierra regions, and the other serving the Central Coast and Central Valley areas. This proposal was approved in D.24-09-031, which ordered a modification to the Rural Regional Energy Network approved in D.23-06-055 to two RENs, the Northern California Rural Regional Energy Network (Northern Rural Energy Network or NREN) and the Central California Rural Regional Energy Network (CCRREN).

On December 23, 2024, Redwood Coast Energy Authority, as the lead portfolio administrator of NREN, filed a Tier 3 Advice Letter submitting a revised Business Plan for the period 2024 through 2027 in compliance with D.24-09-031, Ordering Paragraph (OP) 9. The revised Business Plan was approved through Resolution E-5400 adopted on August 28, 2025 (RRN AL #003-E/003-G).

OP 5 of D.21-05-031 guides PAs to submit their four-year portfolio and eight-year business plan application filings on February 15, 2022, and every four years thereafter, making the deadline for this application February 15, 2026. On December 15, 2025, the CPUC Executive Director granted an extension to all PAs until March 16, 2026, to file their applications for the eight-year business plan period and the four-year portfolio period beginning in 2028.

D.23-06-055 directs PAs to include certain efforts in this Business Plan Application. D.23-06-055, OP 2 directs PAs to coordinate and propose a statewide program portfolio assessment process to review and recommend changes to the portfolio of statewide programs. NREN includes the results of the proposed assessment process in this application. D.23-06-055, OP 23 directs PAs to include its preferred approaches to regular reporting of demographic energy efficiency program participation information. NREN includes its preferred approaches Chapter 3, Strategy 10 of this BPA.

The CPUC Environmental & Social Justice (ESJ) Action Plan serves as a commitment to furthering ESJ principles as well as an operating framework to integrate ESJ considerations throughout the agency's work. One of the action items (Index 1.1.1) from the CPUC's ESJ Action Plan is to incorporate ESJ into systemic processes such as applications. NREN's efforts towards ESJ goals are detailed in this application in Chapter 3, Strategy 7. Another action item (Index 2.1.3) calls for continued support and coordination with the Disadvantaged Communities Advisory Group (DACAG). NREN's efforts align with DACAG and ESJ and are detailed in this application.

The NREN portfolio proposed in this application complies with the criteria for REN activities as most recently updated in D.19-12-021, OP 4, regarding filling gaps, piloting innovative activities, and serving hard-to-reach[4] (HTR) markets.

Chapter 2: Portfolio Summary

Rural Challenges

NREN's service area faces some of the most extreme rural conditions in California, and these conditions fundamentally shape every aspect of program design, delivery, and

[4] D.23-06-055 section 7.3 pp. 52-54

equity outcomes. Unlike urban and suburban regions served by other Portfolio Administrators (PAs), NREN's territory experiences long travel distances, low contractor density, aging housing, heavy reliance on propane and other nonregulated fuels, frequent power outages, and historically low program penetration. These structural conditions are compounded by additional challenges unique to rural buildings and contractors within the region.

In many rural communities, contractors often lack familiarity with the permitting process and requirements, creating a significant demand for hands-on support. Additionally, rural communities have far fewer tradespeople and are often so remote that contractors are unwilling or unable to serve them. Those that will serve only do so with increased cost and wait times. The lack of local contractors is a barrier that directly undermines the feasibility of heat pump installations, multi-measure retrofits, and weatherization. To address this, NREN will prioritize building a locally rooted clean-energy workforce pipeline. NREN's programs coordinate with one another to create a demand for energy efficiency measures and training for the workforce to supply that demand, while prioritizing ease of access for smaller, local contractors to participate.

Specific to rural communities, many manufactured homes or residential homes often need significant repair before electrification or weatherization measures can be installed. Very few buildings meet modern code requirements, meaning EE projects are likely to require more staff time and resources to implement, and therefore require higher incentives per project. Many households frequently retain gas, propane, or wood-burning appliances as backup systems due to wildfire-related Public Safety Power Shutoff (PSPS) events and storm outages[5]. These realities place rural customers at a

[5] TRC, "Propane Utilization in Buildings Across California," Prepared for the California Air Resource Board, December 12, 2025, https://ww2.arb.ca.gov/sites/default/files/2026-01/Research%20Contract%2023STC009%20Final%20Report.pdf

disadvantage under standard EE and decarbonization frameworks that assume stable grid conditions, reasonable contractor access and travel times, and accessible program marketing channels. While these challenges do pose a significant barrier to rural communities, it also presents an opportunity for these buildings to benefit from EE upgrades.

To address these challenges, NREN's portfolio is designed with a delivery structure that begins with equity focused, community-trusted outreach, and extends throughout all NREN's offerings. NREN's programs will provide highly personalized support, including bill analysis, contractor navigation, electrification readiness assessments, and Integrated Demand Side Management (IDSM) linkages for solar, storage, and Demand Response (DR) programs. These local, relationship-driven services are essential in rural communities where broadband gaps, linguistic diversity, mistrust of unfamiliar entities, and limited technical understanding can inhibit participation. NREN also incorporates "exempt measures"[6] such as weatherization and envelope upgrades, to serve customers who cannot electrify due to resilience concerns, technical feasibility limitations, or financial barriers. These measures will reduce therm usage, lower bills, increase comfort, and prepare homes for future electrification.

Rural customers also face disproportionate financial barriers, with many households earning just above the low-income threshold[7] to qualify for programs but still cannot afford energy efficiency upgrades on their own without assistance. NREN will work to

[6] "Exempt measures, for purposes of this policy, would be defined as measures that result in gas savings, but do not burn gas. Examples of these measures include, but are not limited to, building insulation, sealing, smart thermostats, faucet aerators, and building envelope measures such as windows." Energy Division, CPUC, EE Natural Gas Incentive Phase Out Staff Proposal, https://www.cpuc.ca.gov/-/media/cpuc-website/divisions/energy-division/documents/energy-efficiency/rolling-portfolio-program-guidance/ng-staff-prop-81622.pdf

[7] Ross, Lauren, et al. The High Cost of Energy in Rural America. ACEEE, https://www.aceee.org/sites/default/files/publications/researchreports/u1806.pdf

narrow this gap through incentives as well as technical and financing support for both NREN and non-NREN programs to ensure that rural ratepayers are not blocked from participating in decarbonization simply because they lack upfront capital.

Overall, NREN's portfolio meets its overarching goals of: Equity, Energy Savings, and Access to Capital. NREN's upcoming portfolio addresses the structural inequities created by rurality by designing a portfolio centered on trust, accessibility, resilience, local workforce capacity, and financial inclusion. Through these targeted strategies, NREN will ensure that rural communities receive equitable, effective, and sustained support from energy efficiency programs.

Service territory and service territory-related factors

NREN will serve a territory that spans 19 northern California counties: Alpine, Amador, Butte, Calaveras, El Dorado, Humboldt, Lake, Lassen, Mariposa, Mendocino, Nevada, Placer, Plumas, Sierra, Sutter, Trinity, Tuolumne, Yolo, and Yuba. These areas include 37 tribal nations[8], over a third of the total number in California. This rural region covers over 33 thousand square miles, roughly 20% of California's total land area, with an estimated customer count of around 1.6 million, less than 5% of California's total population. The average population density is 55 people per square mile, compared to California's average of 253[9].

This vast region is highly impacted by the effects of climate change as evidenced by more frequent instances of wildfires, flooding, and more damaging storms.[10] These

[8] https://www.ncidc.org/county-list-tribal-nations-california
[9] https://data.census.gov/profile/California?g=040XX00US06
[10] California's fourth climate change assessment regional reports – North Coast and Sierra Nevada, https://www.energy.ca.gov/sites/default/files/2019-11/Reg_Report-SUM-CCCA4-2018-001_NorthCoast_ADA.pdf, https://www.energy.ca.gov/sites/default/files/2019-11/Reg_Report-SUM-CCCA4-2018-004_SierraNevada_ADA.pdf

natural disasters often lead to power outages from PSPS events, fast trip emergency closures, or damage to electrical and natural gas infrastructure that can take longer to repair due to the remoteness of its regions. The grid in Northern California also has some of the most unreliable circuits in Pacific Gas & Electric (PG&E) territory PG&E identified 32 of its worst-performing circuits based on how often and how long customers lose power, using outage data from 2022–2024. These circuits represent about 1% of PG&E's system; 15 of them are located within NREN service territory. Figure 1 below shows the distribution of PG&E's worst performing circuits across NREN service territory.

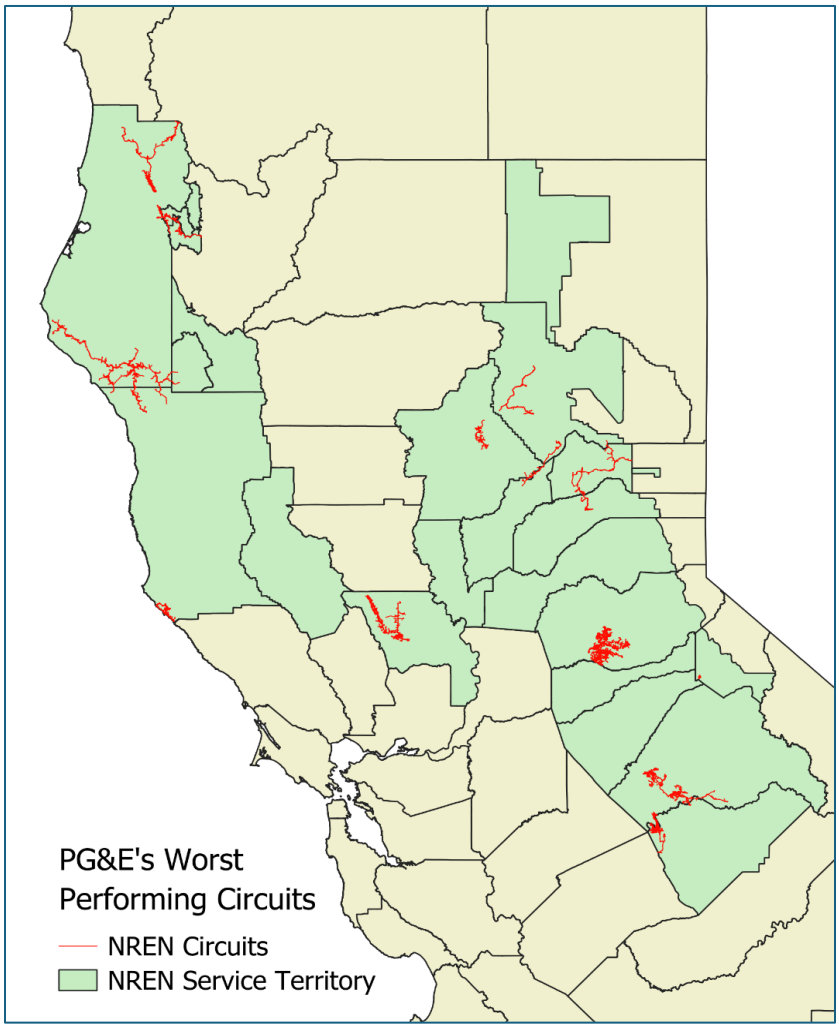

Figure 0-1: Worst performing PG&E circuits in NREN service territory

Additionally, these geographically remote communities have historically low participation in energy efficiency programs.[11] Communities in NREN's service territory are not only rural, but hard to reach, traditionally underserved, economically disadvantaged, and isolated, which makes it difficult to provide energy cost-effective efficiency programs. Energy efficiency programs designed with strict cost effectiveness requirements cannot adequately serve the hardest to reach customers that often also have the greatest need for the efficiency upgrades and other program offerings. Traditionally, third-party implementers are motivated to focus their efforts on more metropolitan regions that can be served more cost effectively.

Many rural communities lie at the end of unreliable transmission lines or where no infrastructure exists. These customers are dependent on delivered fuels such as propane, kerosene, and cordwood, for heating. Homes and commercial buildings throughout the region are older than state averages and often need costly electrical upgrades to accommodate new energy efficient equipment, while incomes are lower and access to capital is limited. Recent federal cuts to tax credits and Department of Energy (DOE) programs for energy efficiency, decarbonization, and weatherization have limited funding opportunities. At the same time, local jurisdictional governments are understaffed and underfunded, and anti-climate-action political stances are commonplace.

Despite these challenges, NREN is particularly well-situated to deliver energy efficiency services to rural Californians. RENs offer an opportunity to regionalize and localize program design and associated delivery while maintaining the economy of scale necessary to maximize the cost-effective delivery of resources. Regional and local

[11] MacDonald, S., Winner, B., Smith, L. *et al.* Bridging the rural efficiency gap: expanding access to energy efficiency upgrades in remote and high energy cost communities. *Energy Efficiency* **13**, 503–521 (2020). https://doi.org/10.1007/s12053-019-09798-8

program designs that integrate various locational variables are critical to successful rural implementation.

NREN Partners

The NREN partners who guide and implement programs in their service regions include:

Lake Area Planning Council (LAPC) is a California Joint Powers Authority (JPA) with member agencies consisting of the Cities of Lakeport and Clearlake and the County of Lake. LAPC is the Regional Transportation Planning Agency created with authority to plan for and suggest solutions to common problems, assist in the preparation of proposals by utilizing planning talents and general plans of the various governmental agencies located within the county, and of planning and technical experts in various other fields. As of 2024, LAPC also serves as an NREN Governing Partner and implementer of NREN programs, primarily leading the Public Energy Services program. Lake County is a growing rural area with a struggling economy dependent on agriculture, tourism, and the geothermal power industry. Although many utility service territory maps do not accurately show this, Lake County does not have access to natural gas, and many customers have to rely on propane for heating and cooking.[12] With the launch of NREN programs in the region, LAPC has shepherded in the delivery of energy

[12] https://data.census.gov/table?q=median+house&g=050XX00US06033$1400000

efficiency services through both NREN and IOU statewide programs to a region largely unaware and unserved in past years.

Mendocino Council of Governments (MCOG) is a California JPA formed in 1972 with member agencies consisting of the Cities of Fort Bragg, Point Arena, Ukiah and Willits, and the County of Mendocino. MCOG's purpose is to assist local governments in planning to address common needs, cooperating for mutual benefit, and coordinating for sound regional, community, and intercommunity development. MCOG is the Regional Transportation Planning Agency for the Mendocino County region. In 2024, MCOG also became an NREN Governing Partner and implementer. Mendocino County's access to energy efficiency services increased with MCOG's implementation of NREN programs. MCOG also coordinates with Sonoma Clean Power, the regional CCA where services can be aligned, as well as the City of Ukiah's Electric Department that provides electricity to the City of Ukiah, Mendocino's largest city. MCOG has taken the lead on the Energy Career Education and Training program, bringing training to the NREN area for contractors, and leveraging connections with local colleges.

The Redwood Coast Energy Authority (RCEA) was founded in 2003 to address the need for local solutions to regional energy challenges. As a JPA whose members include the County of Humboldt, the Cities of Arcata, Blue Lake, Eureka, Ferndale, Fortuna, Rio Dell, Trinidad, the Blue Lake Rancheria Tribe, and Yurok Tribe, RCEA's purpose is to develop and implement sustainable energy initiatives that reduce energy demand, increase energy efficiency, and advance the use of clean, efficient, and renewable resources available in the region. Over the course of the past two decades, RCEA has leveraged partnerships with PG&E, local non-profits and CBOs, and has launched a community choice aggregation (CCA) program to achieve this purpose. Prior to the creation of NREN, RCEA implemented resource acquisition programs in the residential and

commercial sector as an elect-to-administer (ETA) program administrator, while continuing its Local Government Partnership program with PG&E, various grant-funded programs, and other programs self-funded through its CCA. RCEA is an NREN Governing Partner, implementing NREN direct install programs, providing service delivery in Humboldt and Trinity County, and also serves as the Lead Portfolio Administrator for NREN.

Unlike the majority of the state, other than some of the sparsely populated inland areas, there is little cooling load in and the region experiences winter peaks as opposed to the summer peaks.[13]As a result, many statewide programs do not fit the needs of Humboldt County customers. Regional and local program designs that integrate various locational variables are critical to successful rural implementation.

Sierra Business Council (SBC) is a 501(c)(3) non-profit organization whose purpose is to pioneer and demonstrate innovative approaches and solutions to increase community vitality, economic prosperity, environmental quality, and social fairness in the Sierra Nevada. Since the early 2000's, SBC has served as an experienced energy efficiency program implementer, working with PG&E implementing the Sierra Nevada Energy Watch. SBC has also participated in CPUC proceedings bringing a rural equity point of view to the public process.

The region served by SBC is large, ecologically diverse, rural, and faces both challenges and opportunities, proving its resilience in the face of both environmental and economic challenges. Local businesses depend on sustainable tourism, outdoor recreation, forest and stream restoration, land management, and conservation. Challenges that impact

[13]Pacific Energy Center's Guide to California Climate Zones https://bravenewclimate.com/files/includes/docs/pdfs/about/edusafety/training/pec/toolbox/arch/climate/california_climate_zones_01-16.pdf

both the land and the communities include the increased severity of wildfires[14] and other symptoms of climate change, planned power shutoffs, impacts associated with National Forest closures, an escalating need for affordable housing, and a lack of equitable access to reliable internet.[15] SBC is uniquely positioned to serve this region, seeing opportunity in challenges and changes. SBC is a NREN Governing Partner, serving as the lead implementer for the Energy Upgrade Financing and Home Energy Advisors programs, and providing service delivery to 14 Sierra Nevada counties through locally based staff and CBO partnerships.

County of Yolo: Starting in 2028, NREN is proud to partner with County of Yolo's Sustainability Division, as an implementer to deliver services in Yolo County. Yolo County plays a central role in advancing local climate, energy, and resilience initiatives through policy leadership and program implementation guided by its Climate Action and Adaptation Plan. Through the Yolo Energy Partnership (YEP), Yolo County has built a collaborative framework that coordinates energy efficiency, electrification, and resilience programs across rural communities, leveraging trusted relations with CBOs to reach underserved residents. Yolo County includes a mix of agricultural communities and small cities that face increasing risks from extreme heat, energy burden, and climate impacts. Yolo County works closely with Valley Clean Energy (VCE) and local jurisdictions to strengthen program alignment by integrating technical assistance, customer outreach, and incentives. Through these partnerships and its experience administering YEP, Yolo County is well positioned to expand energy efficiency offerings and support effective NREN program implementation across the region.

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[14] https://files.cpuc.ca.gov/safety/fire-threat_map/2021/CPUC%20Fire%20Threat%20Map_v.3_08.19.2021.Letter%20Size.pdf

[15] Hayes, Joseph, et al. Achieving Universal Broadband in California, Public Policy Institute of California https://www.ppic.org/publication/achieving-universal-broadband-in-california/

Application summary tables of expected performance metrics covering the 4-year and 8-year budget request

Table 1: 4-year Portfolio Budget Forecast Summary (2028-2031)

4-year Portfolio Budget Forecast Summary (2028-2031) ($000)					
	2028	2029	2030	2031	Total (4 years)
Total Budget	**$18,692**	**$20,412**	**$23,740**	**$26,792**	**$89,636**
Resource Acquisition Segment Budget	$0	$0	$0	$0	$0
Market Support Segment Budget	$2,477	$2,629	$2,745	$2,870	$10,721
Equity Segment Budget	$15,468	$16,966	$20,045	$22,850	$75,330
Codes and Standards Budget	$0	$0	$0	$0	$0
EM&V	$748	$816	$950	$1,072	$3,585
ED Portfolio Oversight	$0	$0	$0	$0	$0

Table 2: 4-year Portfolio Forecast Summary (2028-2031)

4-year Portfolio Forecast Summary (2028-2031)						
	2028	2029	2030	2031	Resource Acquisition Segment Only (Total 4-year)	Entire Portfolio (Total 4-year)
Total System Benefit (TSB)	$4,459,661	$6,187,013	$9,578,367	$14,406,236	0	$34,631,276
Total Resource Cost (TRC) Ratio	0.32	0.40	0.49	0.63	0	0.47
Program Administrator Cost (PAC) Ratio	0.33	0.40	0.50	0.64	0	0.47
Societal Cost Test (SCT) - Base	0.47	0.57	0.70	0.88	0	0.69
Societal Cost Test (SCT) - High	0.47	0.57	0.70	0.88	0	0.69

4-year Portfolio Forecast Summary (2028-2031)						
Ratepayer Impact Measure Test Ratio (RIM)	0.53	0.61	0.62	0.74	0	0.65
Lifecycle MWh/GWh	-10,245.04 /-10.25	-14,266.92 /-14.27	-9,388.44 /-9.39	-21,272.17 /-21.27	0	-55,172.57 /-55.17
First Year MW	0.25	0.33	0.55	0.76	0	1.88
Lifecycle MMTHERMS	0.21	0.28	0.36	0.54	0	1.39
Lifecycle Net Electric CO2 Metric Tons	-1,964.87	-2,725.17	-1,879.17	-4,196.86	0	-10,594.88
Lifecycle Net Gas CO2 Metric Tons	16,172.73	21,497.80	29,366.68	43,491.75	0	110,528.96

Table 3: 4-year Portfolio Budget Forecast Summary (2032-2035)

4-year Portfolio Budget Forecast Summary (2032-2035) ($000)					
	2032	2033	2034	2035	Total (4-year)
Total Budget	**$29,471**	**$30,945**	**$32,492**	**$34,117**	**$127,024**
Resource Acquisition Segment Budget	$0	$0	$0	$0	$0
Market Support Segment Budget	$3,157	$3,315	$3,480	$3,480	$13,433
Equity Segment Budget	$25,135	$26,392	$27,712	$29,097	$118,673
Codes and Standards Budget	$0	$0	$0	$0	$0
EM&V	$1,179	$1,238	$1,300	$1,365	$5,081
ED Portfolio Oversight	$0	$0	$0	$0	$0

Table 4: 8-year Total System Benefit Forecast (2028-2035)

4-Year and 8-Year Total System Benefit Forecast vs. Goals ($000)	
Year	Total System Benefit Forecast
2028	$4,459,661
2029	$6,187,013
2030	$9,578,367
2031	$14,406,236

4-Year and 8-Year Total System Benefit Forecast vs. Goals ($000)	
Total (4 years)	**$34,631,276**
2032	$16,973,512
2033	$18,824,736
2034	$20,880,733
2035	$23,149,191
Total (4 years)	**$79,828,191**
Cumulative (8 years)	**$114,459,447**

Table 5: 8-year Codes and Standards Forecast

4-Year and 8-Year Codes and Standards Forecast			
Year	**Energy Savings**		
	MWh	**MW**	**MMTherms**
2028	0	0	0
2029	0	0	0
2030	0	0	0
2031	0	0	0
Total (4 years)	**0**	**0**	**0**
2032	0	0	0
2033	0	0	0
2034	0	0	0
2035	0	0	0
Total (4 years)	**0**	**0**	**0**
Cumulative (8 years)	**0**	**0**	**0**

Chapter 3: Portfolio Strategies

Recommended policy changes needed for strategies

Policy changes needed in R.25-04-010 for the strategies to be successful

NREN's approach depends on allowing fuel switching from nonregulated fuels. A significant portion of NREN's service territory relies on propane or other nonregulated fuels as their primary source of space and water heating,[16] particularly among rural, HTR, tribal, and underserved customers. Because current CPUC rules limit fuel substitution benefits only to customers moving from natural gas to electric appliances, many propane-reliant households and businesses cannot access incentives that would help them transition to cleaner, lower-emission technologies. This structural gap prevents some of the region's highest energy burdened customers from benefiting equitably from energy efficiency programs and from participating in California's broader decarbonization efforts. These same customers would also receive significant health benefits from improved indoor air quality by transitioning to cleaner heating sources. In the R.25-04-010 EE OIR, NREN along with the Joint RENs urged the Commission to recognize fuel switching from nonregulated fuels as eligible for EE program support. This request was built on the record previously established to support the requests; the Commission has acknowledged that such transitions can reduce GHG emissions and advance state climate goals (R.13-11-005 and R.19-01-011). Given these realities, NREN is incorporating support for nonregulated fuel customers into the core of each portfolio strategy in order to ensure that fuel switching constraints do not leave rural and propane-dependent households behind in the state's clean energy transition.

[16] https://resstock.nrel.gov/datasets

Policy changes needed in R.19-01-011 for the strategies to be successful

In R.13-11-005, the Joint RENs argued that "non-utility fuels such as propane or fuel oil (termed fuel switching, as distinct from fuel substitution where regulated fuels are substituted for one another) should be included in the three-prong test and eligible for energy efficiency program funding…switching from non-regulated fuels to electricity or natural gas has the potential to reduce GHG emissions and would be in line with California's goals."[17] In response to this, the Commission ruled that consideration of fuel switching was outside the scope of the original ruling and concluded that "[f]uel substitution is permissible within the energy efficiency portfolios of program administrators, regardless of whether both fuels are provided by Commission-regulated entities, whereas fuel switching is not covered in this decision and not funded by utility ratepayer energy efficiency funding."[18] However, the Commission acknowledged the importance of assessing fuel switching, noting that "Commission policy on fuel substitution and fuel switching is likely to evolve in the next few years, and we may reevaluate in the future, either in this proceeding or preferable in the Building Decarbonization rulemaking (R.19-01-011),"[19] and that "[t]hese issues will be addressed more comprehensively in our building decarbonization R.19-01-011."[20] That Decision also acknowledged party comments "that argued that fuel switching (from unregulated to regulated fuels) measures should be included as permissible under the reformulated fuel substitution test," and noted that while the Commission "might be sympathetic to this recommendation on a policy basis" it was outside the scope of the current decision.

[17] D.19-08-009 section 5.1 pp.11
[18] D.19-08-009 section 5.2 – section 6 pp.12-13
[19] D.19-08-099 section 22 pp. 48
[20] D.19-08-009 section 5.2 pp.12

However, because this remains an ongoing concern with no current resolution, it is appropriate to address this issue at this time.

Strategies

1. Advance affordability and mitigate overall rate impacts, consistent with Executive Order N-5-24

Energy affordability is central to NREN's portfolio design and implementation strategy. Executive Order N-5-24 directs state agencies to pursue policies that reduce long-term energy cost burdens while maintaining reliability and advancing decarbonization goals.[21] NREN's proposed portfolio advances these objectives by prioritizing high-impact residential and non-residential energy efficiency and electrification measures that reduce total customer energy expenditures, particularly for rural households and businesses with elevated energy burdens and historically limited access to utility-administered programs.

Rural households in California experience disproportionately high energy burdens relative to urban households, due in part to lower median incomes, older housing stock, climate extremes, and reliance on delivered fuels such as propane.[22] At the same time, rural communities have historically received lower per-capita investment in energy efficiency programs, limiting their access to cost-saving upgrades.[23] NREN's portfolio is

[21] Executive Order N-5-24 (State of California, 2024) (directing state agencies to address energy affordability and long-term cost impacts while advancing reliability and decarbonization).
[22] See, e.g., U.S. Energy Information Administration (EIA), Residential Energy Consumption Survey (RECS) (2020) (demonstrating higher average energy burdens for lower-income and rural households); California Energy Commission (CEC), Building Decarbonization Assessment (2021) (noting rural housing stock and fuel reliance challenges).
[23] California Public Utilities Commission, 2025 Energy Efficiency Potential and Goals Study Final Report (Guidehouse Inc. Final Report), Executive Summary and Background sections (indicating longstanding disparities in program participation and emphasis on hard-to-reach/underserved markets). https://www.cpuc.ca.gov/industries-and-topics/electrical-energy/demand-side-

specifically structured to address these inequities through accessible, locally delivered solutions designed to produce durable bill savings.

For residential customers, NREN will deploy a layered delivery model tailored to customer needs and building conditions. Delivery mechanisms will include downstream rebates, no-cost home energy assessments, direct install offerings delivered by trusted local contractors, and comprehensive retrofit projects with meter-based (NMEC) savings verification where appropriate. This structure reduces participation barriers, ensures that recommended measures are technically feasible within rural building typologies, and maximizes realized savings. Assessments will be conducted by professionals with demonstrated familiarity with rural construction practices, aging housing stock, and dispersed service territories, conditions that materially affect measure suitability and cost-effectiveness. Direct install programs will ensure that high-impact measures are implemented immediately, eliminating upfront cost constraints that disproportionately affect rural customers.

For public customers, NREN will advance affordability and mitigate rate impacts by reducing operating costs for rural local governments. Rural jurisdictions frequently face limited staffing capacity and constrained capital budgets, which can delay or prevent implementation of cost-effective energy projects. Through its Public Energy Services program, NREN will provide benchmarking support, technical assistance, energy audits, project development assistance and NMEC-based performance design services at public buildings. By lowering administrative and technical barriers, NREN will enable public agencies to implement projects that reduce long-term utility expenditures, thereby mitigating fiscal pressure on ratepayers and taxpayers in rural communities.

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management/energy-efficiency/energy-efficiency-potential-and-goals-studies/2025-potential-and-goals-study

NREN will also integrate load management and customer education into measure deployment. Installed technologies will incorporate controls where feasible, and customers will receive education regarding time-of-use and load shifting strategies to help reduce costs and benefit the grid through time-based load control. Demand flexibility and automated load control reduce customer costs and provide system benefits by lowering peak demand and associated procurement costs.[24] Within its Non-Residential Energy Services program, agricultural customers will be offered automation and controls strategies that align operational energy use with lower energy cost periods, supporting both farm profitability and grid reliability.

In addition, NREN's portfolio directly addresses rural energy affordability challenges associated with reliance on propane and other delivered fuels. NREN's territory has a heavy reliance on propane for space heating, water heating, and cooking. Propane is not a CPUC-regulated fuel, yet it constitutes a major portion of total household energy expenditures in rural California.

According to the U.S. Energy Information Administration (EIA), the U.S. average residential propane price in 2024 ranged between approximately $3.80 and $4.50 per gallon during peak heating season.[25] At 91,500 BTU per gallon, this equates to roughly $41–$49 per MMBtu. For a rural household consuming 500 gallons of propane annually, total fuel expenditures at $4.20 per gallon would equal approximately $2,100 per year, exclusive of appliance inefficiencies and seasonal price volatility. In contrast, high-efficiency electric heat pump systems, particularly when paired with building envelope

[24] Sean Murphy, Cesca Miller, Jeff Deason, Diana Dombrowski, and Portia Awuah, The State of Demand Flexibility Programs and Rates, August 2024.
[25] U.S. Energy Information Administration (EIA), Weekly Heating Oil and Propane Prices, California Residential Propane, 2024 Heating Season Data, available at: https://www.eia.gov/petroleum/heatingoilpropane.

improvements and time-of-use optimization, can deliver lower annual operating costs in many California climate zones.[26]

Propane prices are also subject to significant seasonal and year-to-year volatility due to transportation costs, storage constraints, and global hydrocarbon market dynamics.[27] Unlike regulated electric and gas rates, propane pricing does not include comparable regulatory oversight mechanisms that mitigate abrupt price spikes for rural consumers.

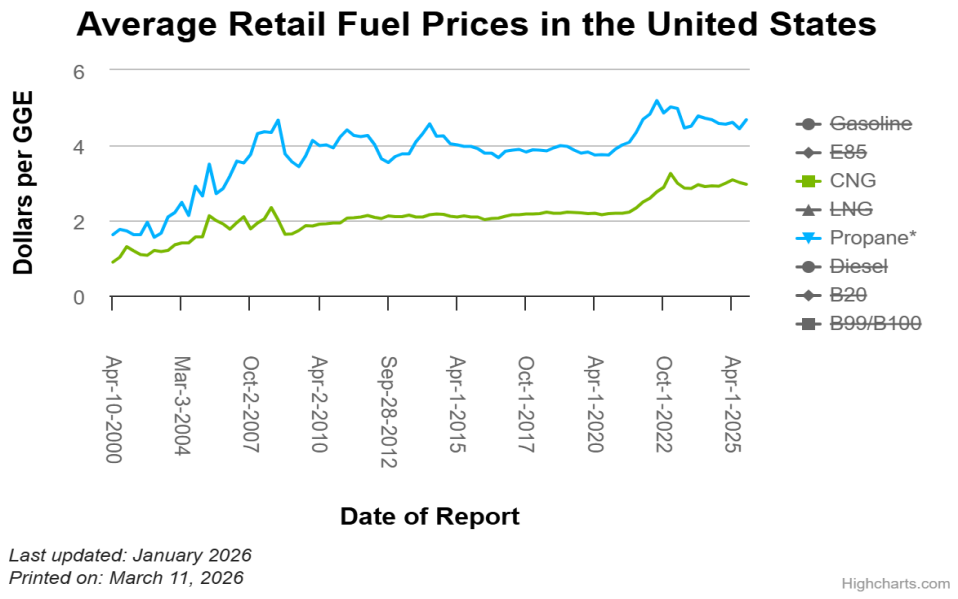

Figure 0-2: Average Retail Fuel Prices[28]

NREN's territory has a heavy reliance on propane, posing an affordability issue as propane in California is over double[29] the cost of natural gas due to transportation and storage costs, and environmental fees. This results in higher annual operating costs than

[26] California Energy Commission (CEC), Cost and Performance of Residential Heat Pump Technologies (2022), evaluating operating cost comparisons in California climate zones.
[27] U.S. Energy Information Administration (EIA), Weekly Heating Oil and Propane Prices, California Residential Propane, 2024 Heating Season Data, available at: https://www.eia.gov/petroleum/heatingoilpropane.
[28] Trend of alternative and traditional motor fuel prices from 2000 to 2025, last update January 2026, https://afdc.energy.gov/data.
[29] https://afdc.energy.gov/fuels/prices.html

efficient electric alternatives. As detailed in Chapter 11, NREN recommends non-regulated fuels be considered by the CPUC to encourage fuel switching, which would decrease costs for propane customers, advance California's electrification goals, and also provide tangible health benefits to those transitioning customers.

2. Optimize TSB achievement and cost effectiveness, as well as TSB achieved per ratepayer dollar spent

NREN's portfolio appropriately focuses on providing non-resource equity services to rural HTR customers within its region. Therefore, NREN's portfolio will not include programs in the resource acquisition segment, however, NREN's equity programs will support achieving TSB benefits by promoting electrification and energy efficiency.

For example, NREN's Public Energy Services program is an equity program that empowers local government and public agencies to implement energy savings and upgrades by using NREN provided technical support; these include benchmarking, assessments, referrals to other energy efficiency programs, state and federal funding opportunities and when appropriate, direct install through the NREN Non-Residential Energy Services program. These services will result in much needed energy retrofits and project implementation that most local governments cannot lead on their own. The TSB for these projects will not be captured in the Public Energy Services program but will be in PA programs through which the project is completed, such as PG&E's GK12 program or NREN's Non-Residential Energy Services program. The Public Energy Services program will also track referrals and indicate which referrals led to completed projects.

For NREN's programs that do achieve energy savings, TSB will be tracked as a metric. The Home Energy Upgrades program will have multiple delivery channels, including downstream rebates for energy efficient electric appliances, a participating contractor direct install program offering deemed measures for heat pumps, HPWH, and building

envelope and utilizing NMEC for a comprehensive multiple measure approach. This program will have TSB goals and will be designed for movement towards increasing TSB through the program cycle. This program will promote the greater adoption of energy efficient electrification technologies by rural households.

Similarly, NREN's Non-Residential Energy Services program will move towards increasing TSB by targeting multiple non-residential sectors, including small HTR businesses[30] such as small groceries and restaurants, public and tribal facilities, and non-profit and CBO buildings. This program will concentrate on outreach to facilities that serve equity populations and promote the greater adoption of electrification and energy efficient technologies by non-residential facilities.

As consistently reaffirmed by the Commission since the establishment of the first RENs, REN PAs do not have a cost effectiveness threshold requirement because their portfolios are subject to different rules, their budgets and portfolios are smaller than IOU PAs, and they are inherently designed to fill gaps and serve HTR customers who are less cost-effective to serve than traditional electricity customers.[31,32,33] Although NREN's programs will report on the TRC as required, NREN does not have a TRC goal. Rather, NREN's aim will be to achieve increasing TRC throughout the program cycle as program design and community reach lead to more cost-effective approaches, in alignment with the Commission's guidance in D.16-08-019 to manage programs with an eye toward long-term cost-effectiveness. While rural communities have been historically underserved due in part to the difficulty in serving them cost effectively, NREN's locally designed and

[30] The small business HTR criteria were updated most recently in D.23-06-055 p.49-54 and Conclusion of Law 33.
[31] D.19-12-021 at 37
[32] D.23-06-055 at 22, 52, and Conclusion of Law 8.
[33] Criteria for REN programs were most recently updated in D.19-12-021 Ordering Paragraph 4, and CPUC declined to change the review criteria for RENs in D.23-06-055 at 52.

implemented approach will ensure they are served in the most cost-efficient manner possible. NREN will track TSB per ratepayer dollar spent; NREN is very aware of the high value of ratepayer dollars and will ensure that these funds are used in the most effective way possible to benefit NREN's HTR and other customers. NREN takes pride and purpose in committing that ratepayer dollars which rural Northern California customers have paid over the years are finally spent in those same communities.

3. Advance building decarbonization activities in your EE portfolios

NREN's decarbonization strategies are rooted in the realities of rural Northern California, where households and businesses face higher energy burdens, have limited access to utility-administered energy efficiency programs, and have a heavy reliance on propane and other delivered fuels for heating and cooking. The low population density of the region means individuals are physically harder to reach for implementers and contractors, making adoption of clean energy technologies more difficult and more expensive than in higher population centers. Propane-reliant homes have potential for some of the largest energy-bill savings when switching to electrification, due to the volatility of propane prices, making decarbonization a priority in NREN's territory.

NREN's Home Energy Advisors program will advance decarbonization activities by increasing energy awareness and supporting energy-saving behaviors through energy efficiency kits, energy assessments and education, technical assistance from energy advisors, connections to IDSM resources, and community-based outreach to increase awareness and reduce participation burdens. All of these efforts support behavior-driven decarbonization.

NREN's Home Energy Upgrades Program will offer downstream direct-to-customer rebates for efficient electric appliances as well as direct install for heat pumps, heat pump water heaters, and building envelope measures, directly advancing building

decarbonization. The program will offer incentives for common home energy upgrades and decarbonization measures including heat pump dryers, HVAC, and water heating, and induction cooktops. Energy efficiency measures will include a variety of "whole home" items like weatherization, HVAC, and plug loads/appliances. Population NMEC projects will result in comprehensive, multiple-measure savings and higher TSB outcomes. This program will promote electrification through fuel substitution and fuel switching, while moving away from propane. Electrification along with affordability are the main goals of this program.

NREN's Non-Residential Energy Services program targets multiple HTR sectors: small businesses, public agencies, non-profit and tribal facilities to advance decarbonization. This direct install program makes it possible for these businesses and buildings to pursue energy efficiency technologies and provide technical and project management assistance. Also included are Energy Advisor services and financial incentives. Region-specific outreach and energy assessments will provide specific, actionable recommendations for improving these businesses' efforts to reduce energy consumption and guide the customer toward available incentives and financing options offered by NREN or PG&E and third-party program implementers. Electrification and energy efficiency measures will include a variety of items such as controls, refrigeration upgrades, lighting, heat pump HVAC and water heaters. NREN staff also work closely with local vendors and retailers to educate them on incentives and encourage them to stock more energy efficient equipment and appliances.

NREN's Public Energy Services program will provide rural public agencies with access to benchmarking, energy assessments, project development, and funding assistance, all of which advance building decarbonization. The program will also advance decarbonization goals by providing local governments with additional tools such as

implementation of IDSM projects that could include renewables, battery storage and electric vehicle charging technologies that will complement their energy efficiency strategies. NREN provides hands-on technical assistance from discovery to implementation, closing a capacity gap common in rural jurisdictions. Addressing this gap will allow communities to pursue energy efficiency projects, which improves resilience and advances decarbonization goals.

NREN's Energy Career Education and Training program will provide training and educational materials to local contractors. This service is necessary as local contractors are often too busy with existing workloads to focus on building-out specialized skills or recruiting and training additional staff. Upskilling the rural workforce is important to increase the implementation of energy efficiency and electrification projects within NREN's region at lower costs.

Alongside upskilling existing contractors, NREN will partner with high schools, colleges, workforce boards, and CBOs to promote and expand career pathways into energy and electrification trades. These entities are often under-resourced to effectively market career opportunities in these skill areas, recruit trainees, and place them in internships and work experience positions. As other NREN programs increase market awareness and demand for decarbonization, activities in NREN's WE&T sector will help to expand the pool of local trained service providers.

4. Focus electric savings at peak times with high avoided cost and TSB

NREN's equity programs in the residential, commercial, public and agricultural sectors all incorporate education around electricity savings at peak time to reduce strain on the grid and energy costs. These programs will incorporate both behavioral and automations elements to ensure installed equipment is used at times that are most beneficial. Specifically, for NMEC programs, higher incentives will be tied to higher TSB

achievement that aligns with the cost benefits to the customer. The residential and public programs will also incorporate IDSM into the program offerings and along with EE support after an assessment, will provide technical assistance incorporating on-site generation and storage that can be used for demand response. The IDSM offerings will also include transportation electrification and, as technologies improve, will encourage and educate users about the value and benefits of vehicle-to-grid integration.

5. Use of meter-based savings measurement

The Home Energy Upgrades program and Non-Residential Energy Services program will utilize meter-based savings in its program offerings. NREN intends to take a holistic approach to buildings, and bundle equipment and facility upgrades with controls, proper commissioning, and education around behavioral change. For the customers who qualify for whole building projects, these savings will be best quantified through a meter-based approach. NREN is currently developing these offerings for its existing resource acquisition program in compliance with D.23-06-055, requiring the use of NMEC methodology for new resource acquisition programs. A technical consultant, kW Engineering, was brought on to assist with program design and implementation and this program design will be continued into the re-segmented Non-Residential Energy Services program in 2028 and beyond.

Use of the NMEC savings approach should also enable NREN to assist its rural equity customers with capturing "stranded savings," as intended by Assembly Bill 802.[34] Because these customers have been underserved or even unserved by energy efficiency programs in the past, they may have missed the opportunity for incentivized upgrades

[34] CA AB 802 Sec. 6: "Those programs shall include energy usage reductions resulting from the adoption of a measure or installation of equipment required for modifications to existing buildings to **bring them into conformity with, or exceed, the requirements of Title 24 of the California Code of Regulations,** as well as operational, behavioral, and retrocommissioning activities reasonably expected to produce multiyear savings. [emphasis added]

to certain equipment that are no longer available through deemed savings-based programs due to deemed workpaper retirement, for example, lighting measures.

6. Promote and deploy "exempt measures"[35] in the equity segment

Rural electricity customers face a barrier around resiliency when it comes to electrification for several reasons. Resilience is a major concern in Northern California counties, as they are particularly hard hit by outages due to winter storms and wildfires, and more prone to prolonged outages and weather-related PSPS events as more remote locations are de-prioritized for repairs and re-activation over population centers,[36]as well as outages resulting from increased use of fast-trip technology. Even customers who are open to electrification often retain grid unreliability. These back-up options are particularly important for customers that must also have power to run wells and provide water to their homes. Rural customers pride themselves on being prepared for weather outages and reduced reliance on grid electricity.

For these customers, NREN can encourage envelope measures that align with the exempt measure definition, that will produce savings for both electric appliances and gas appliances. Exempt measures such as weatherization, insulation, air sealing, and envelope upgrades deliver important energy and non-energy benefits even when full electrification is not feasible. These measures reduce therm usage, improve comfort, and enhance indoor air quality. Additionally, deploying these exempt measures helps support electrification readiness for these customers by preparing their homes and businesses for an HVAC heat pump or HPWH installation when the customer becomes ready or a new customer occupies the space.

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[353] As defined by D.23-04-035

[36] https://www.pge.com/en/outages-and-safety/outage-preparedness-and-support/understanding-electric-outages.html

NREN's territory includes a large number of customers reliant on propane and other non-regulated fuels. Fuel switching from propane is not considered electrification under current fuel substitution guidance in D.19-08-009. In addition, other energy efficiency measures that could benefit these customers are limited by current measure packages, which poses a major barrier in NREN's region for being able to support equity communities. Exempt measures allow these customers to reduce fuel usage, improve comfort and health, and prepare for electrification even when they cannot yet transition away from propane or other fuels. These measures would also contribute to other societal non-energy benefits such as reduced GHG emissions. NREN has provided policy recommendations in Chapter 11 to address these limitations.

To support these customers as well as customers who are not willing or are unable to electrify at this time, NREN's residential and non-residential programs will promote and deploy exempt measure pathways targeted to rural homes and small businesses. NREN will assess and address customer barriers, including resiliency concerns or older home conditions. NREN intends to reach customers through targeted local engagement, education, technical assistance, and workforce training. Outreach will be tailored to customers who do not plan to electrify or who rely on non-regulated fuels and stand to benefits from exempt measures. NREN's Energy Career Education and Training program will also train local contractors on the importance of exempt measures, increasing the local trust in the workforce. NREN's approach will prioritize gas savings and electrification readiness outcomes.

7. Increase progress on CPUC's ESJ Action Plan goals

NREN's EE portfolio is intentionally designed to advance the CPUC's ESJ Action Plan[37], particularly goals 1, 2, 4, 5, and 7. NREN's approach follows the Equity Advisory Committee (EAC) recommendations as a framework for ensuring meaningful and measurable progress towards these goals.

ESJ Goal 1: Consistently integrate equity and access considerations throughout CPUC proceedings and other efforts.

NREN integrates equity and access across all portfolio segments by implementing the EAC's procedural equity guidance for streamlined eligibility. Rural and disadvantaged communities face disproportionate administrative burdens that often limit their ability to participate in energy efficiency programs. NREN will use geographic eligibility models to reduce documentation and income-verification barriers for rural and underserved customers. NREN will also protect participant privacy to ensure vulnerable populations can safely participate without their information being compromised. If populations do not meet every single criteria for a program but are still vulnerable, NREN will use limited implementer discretion to make the program available to these populations. An example of this in action is NREN attending to the needs of customers with nonregulated fuels. Current rules exclude propane customers from fuel switching benefits, which poses a major threat to energy efficiency in NREN's territory. NREN's policy recommendation to allow for fuel switching would integrate equity and access to cleaner energy for customers with nonregulated fuels. These actions will help NREN

[37] Environmental and Social Justice Action Plan, Version 2.0. California Public Utilities Commission. https://www.cpuc.ca.gov/-/media/cpuc-website/divisions/news-and-outreach/documents/news-office/key-issues/esj/esj-action-plan-v2jw.pdf

simplify the process for these communities, which supports ESJ Goal 1 by improving access and reducing friction for underserved groups.

ESJ Goal 2: Increase investment in clean energy resources to benefit ESJ communities, especially to improve local air quality and public health.

NREN targets investment directly into rural and equity communities throughout each of its programs. Electrification leads to decreased GHG emissions associated with natural gas and other fuel combustion, which improves air quality and public health. NREN was an active participant in the Non-Energy Benefits Working Group, which identified relevant NEBs to NREN's programs, including better health at the participant level as well as better health at the societal level. Across NREN's EE portfolio, converted gas measures would lead to health and safety improvements. Additionally, NREN's efforts support the transition from propane to electric for its customers. Replacing propane, which is a high-cost polluting fuel, with energy efficient electric technologies would improve air quality and indoor comfort and safety.

ESJ Goal 4: Increase climate resiliency in ESJ communities.

NREN's territory experiences high wildfire risk, frequent outages from fast-trip settings, PSPS events, and capacity-constrained distribution infrastructure. To combat these risks, NREN's programs promote electrification and weatherization actions to reduce vulnerability. Additionally, NREN's Home Energy Advisors and Public Energy Services programs will employ connections to IDSM resources such as EV charging, solar, battery storage, and demand response. IDSM resources will increase the resiliency of NREN's regions by reducing load. NREN's Public Energy Services benchmarking and technical assistance activities will help public buildings reduce loads and become more resilient community hubs. NREN will focus on reaching communities that have been impacted by

climate-driven natural disasters and recommends the CPUC include natural disaster-impacted communities in its definition of ESJ communities.

ESJ 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.

NREN is committed to decreasing barriers to participation in EE programs. NREN's territory is defined by rural areas that require long travel distances, limited contractor availability, and historically low participation in IOU programs. NREN's portfolio of programs is centered around its communities in the rural region. NREN will engage with trusted community-based partners such as CBOs, tribal governments, and rural nonprofits.

NREN intends to limit the use of third-party implementation from outside the region in order to be more community centered. NREN is committed to implementing its programs locally and hiring individuals from within the community to do so.

ESJ Goal 7: Promote high road career paths and economic opportunity for residents of ESJ communities.

NREN's Energy Career Education and Training program in the WE&T sector is designed to enhance public participation opportunities for individuals within ESJ communities to improve their energy efficiency skills and knowledge. The Energy Career Education and Training program will use targeted outreach to develop the workforce for underrepresented rural populations. This program builds capacity within geographically distant communities and provides local contractors who can implement the measures prescribed by the NREN or other electrification or efficiency programs.

8. Utilize Integrated demand-side management (IDSM) strategies

NREN does intend to pursue IDSM activities in its Public Energy Services and Home Energy Advisors programs in the form of technical support.

The Public Energy Services Program will offer facility assessments that will include recommendations for on-site generation, energy storage, and transportation electrification. The program will also support more in-depth feasibility studies that can be used for funding applications for EE and IDSM projects such as the California Energy Commission's (CEC) Energy Conservation Assistance Act (ECAA) loans or PG&E's On-Bill Financing. For transportation electrification, NREN has the advantage of having two transportation agencies (LAPC and MCOG) and a CCA with existing transportation programs (RCEA) in its partnership makeup. NREN will leverage this existing expertise and these programs in its offerings.

In the Home Energy Advisors Program, similarly, NREN will incorporate solar, battery storage, and electric vehicles into its home assessment report recommendations; NREN's Energy Advisors will offer technical support on questions related to those technologies. In the residential sector, NREN will leverage the programs from its existing three CCAs, Pioneer Community Energy, Sonoma Clean Power, and RCEA, to advance projects that will combine IDSM and EE. Funding support to access Go Green Financing or potential TOB for residential customers can also be provided to ensure capital for projects.

9. Increase workforce education and training to better deliver quality EE installations

NREN's Energy Career Education and Training (ECE&T) efforts are designed to expand the availability of skilled local workers who can deliver high quality energy efficiency and

electrification installations throughout the region. The program increases workforce readiness by first building broad awareness of energy related career pathways and helping future workers understand how energy projects create opportunities for stable, well paid, resilient jobs. By elevating community knowledge of these opportunities, the program strengthens the pipeline of individuals interested in entering the EE and electrification workforce.

A core component of this strategy is direct engagement with workers and jobseekers in NREN communities. Because rural residents often face barriers to accessing existing training—such as travel distance, limited schedules, or lack of region-specific opportunities—the program delivers trainings in ways that are accessible and convenient. This includes working with existing programs to offer remote learning options, hybrid sessions, and in person instruction within local communities, ensuring that prospective workers can participate regardless of geographic constraints. For those opportunities that only exist for in-person participation outside the region, travel stipends can be provided to increase access.

To accomplish an increase in locally available training, the program partners with trusted local agencies—including community colleges, tribal entities, and labor apprenticeship programs—to deliver high-quality training across the NREN region. These partnerships allow NREN to leverage existing educational infrastructure while tailoring content to the needs of a rural energy workforce. Through these collaborations, trainees gain hands-on skills in building science, electrification technologies, weatherization, and EE installation best practices—skills that directly translate into higher quality project delivery in the field and high road jobs for trainees within the communities served.

Finally, the program creates pathways from training to employment by coordinating placement opportunities within other NREN programs and initiatives. By connecting

graduates directly with real project work—whether through direct install programs, contractor networks, or public sector facility projects—the ECE&T program ensures that workers can immediately apply their skills, gain experience, and contribute to improved installation quality across the region. This end-to-end approach—from awareness to training to job placement—strengthens the rural workforce and increases the reliability, quality, and community benefit of NREN's energy efficiency activities.

10. Regularly report demographic energy efficiency program participation information, as required by D.23-06-055 (OP 23)

A joint PA report was filed on reporting demographic information to the CPUC in August of 2025. This report includes the agreed upon demographic data to be reported including: rate code, CARE/FERA/ESA participation, NEM participation, census block group, preferred billing language, dwelling types, service types, and annual usage amounts. For customers participating in NREN programs, this information is already collected through the customer's SAID, data from PG&E, and location data from the address. NREN has developed R code for matching addresses with census tracts to assist with identifying which customers are in DACs or underserved areas. Language information and tribal affiliation are gathered on application forms to identify HTR customers.

11. Overcome sector and segment specific challenges (e.g., market support, equity, residential, multifamily, industrial, etc.)

The overarching challenge for NREN's territory is rurality. Rurality shapes every aspect of how NREN's programs must be designed and delivered to provide equitable access to energy efficiency services for NREN's customers. While there are varying definitions of "rural," NREN first relies on the CPUC's regulatory definition of hard-to-reach (HTR)

customers, which explicitly recognizes geographic isolation as a barrier to participating in EE programs for residential and small business customers. [cite] Under this definition, the majority of NREN's territory qualifies as geographically HTR or underserved, meaning that residents routinely face structural barriers such as long travel distances, limited contractor availability, sparse broadband coverage, and historically low access to EE programs. For NREN, rurality is a defining operational reality that shaped the design of its programs.

On top of geographic isolation, NREN communities also contain disproportionately high concentrations of other CPUC-defined equity populations, including underserved and low-income households.[38] Disadvantaged communities (DAC), when tribal lands are included, also add to the equity populations. Many rural residents qualify for income-based programs, while many others fall just above eligibility thresholds yet still experience high energy burdens and limited access to capital. These overlapping equity characteristics intensify the structural challenges associated with rurality and reinforce the need for a portfolio centered on equity. NREN's strategies prioritize solutions that directly address rural barriers, including direct install services, electrification readiness, trusted partner engagement, and enhanced financing pathways. These solutions ensure that rural customers who have historically been excluded from statewide programs, will have access to and can benefit equitably from energy efficiency and decarbonization opportunities.

The table below describes NREN's strategies for the barriers each of its segment faces:

[38] Definition adopted in D.18-05-041 COL 27

Table 6: Portfolio Segment Barriers and Strategies

Segment	Common Barrier	Strategy
Equity	• HTR customers • Long travel distances • Contractor shortages • Reliance on non-regulated fuels	NREN will partner with trusted local entities such as CBOs, tribal governments, and non-profits to reduce distrust, language barriers, and unfamiliarity with EE. NREN will target customers relying on propane. NREN will conduct local education and outreach activities to connect with local communities.
Market Support	• Contractor shortages • Lack of access to EE information • Supply limitations and installation barriers • Financial barriers to completing EE and electrification projects	NREN will increase the demand for EE and electrification upgrades through education, market awareness, and community-based engagement in rural, tribal, and HTR communities. NREN will upskill the rural workforces through educational partnerships and contractor trainings. NREN will work with local vendors and retailers to encourage stock of energy efficient appliances and equipment.

The table below describes NREN's strategies for the barriers each sector faces:

Table 7: Portfolio Sector Barriers and Strategies

Sector	Common Barrier	Strategy
Commercial	• First costs; limited funds for energy upgrades • Lack of information • Smaller jurisdictions tend to have low capacity to pursue funding	NREN will conduct direct personal engagement with local staff that understand local concerns and needs. NREN will also provide funding support to the non-residential sector.

Sector	Common Barrier	Strategy
	opportunities and programs	
Public	• Lack of funding • Lack of staff capacity • Lack of understanding of available resources	NREN will establish strong relationships with local elected officials and key staff, providing clear and effective communication and education while providing technical support such as benchmarking and assessments. NREN will also provide critical added staff support as well as serve as a conduit to existing third party programs and potential outside funding. NREN will help reduce existing barriers and lead public sector agencies through their journey to address energy efficiency and IDSM opportunities at their facilities.
Residential	• Rural and underserved communities face disproportionate energy burden • Barriers to participation (first costs, further distances to participating vendors, fewer contractors resulting in higher installation costs) • Historic underinvestment in energy efficiency and clean energy resources	NREN will provide flexible, community-based outreach, energy education, and advisor support to reduce participation barriers in rural and underserved communities. NREN will also provide support navigating upgrades or minimizing need for panel upgrades, offering remote downstream service, and a participating contractor model.

Sector	Common Barrier	Strategy
	• Lower than average income	
Finance	• Small businesses are located in low-income, HTR communities • First costs • Low credit scores	NREN will conduct marketing and outreach targeted at equity customers. The program will establish targets that will ensure achieving a high percentage of participation from targeted equity customers.
WE&T	• Lack of access to education and training opportunities to expand job opportunities • High population of HTR customers spread over wide geographic region	NREN will conduct multifaceted outreach activities throughout the region. Targeted campaigns and multilingual outreach will reach underrepresented populations.

12. Promote responsible management and disposal of removed refrigerant and incorporate low-GWP refrigerants/ultra-low GWP refrigerants

NREN will act as a trusted advisor to rural customers to advance the state's GWP refrigerant mitigation policies. As part of NREN's energy efficiency offerings, NREN will train the local workforces in our rural regions to increase awareness of alternate refrigerant solutions to enable rural customers to adopt lower and zero-GWP refrigerant applications for all applicable technologies (e.g., electric heat pump water heaters, HVAC systems, refrigeration systems).

NREN's strategy for incorporating low global warming potential (low-GWP) refrigerants in the portfolio is described in the table below:

Table 8: Portfolio Sector and Strategy for Incorporating low-GWP refrigerants

Portfolio Sector	NREN Strategy
Residential and Commercial	Incorporate LGWP specs for rebated equipment (such as HVAC heat pumps and HPWHs); Low GWP Refrigerant information incorporated into recommendations in assessment reports.
Public	Low GWP Refrigerant information incorporated into recommendations in assessment reports.
Finance	Minimum technical requirements for financed equipment (such as HVAC heat pumps, HPWHs)
WE&T	Provide information to WE&T participants, building code officials, contractors, and designers about CFC phase-out and low GWP refrigerant benefits and code requirements.

13. Spur innovation to advance a technology, marketing strategy, or delivery approach in a manner different from previous efforts in your EE portfolios

As described throughout this BPA, the territory served by NREN has many unique characteristics and challenges that are barriers to energy efficiency adoption and market transformation. NREN approaches these as opportunities for innovation. Strategies incorporate equity principles and needs throughout the portfolio. They are based on years of experience working in rural regions by RCEA, SBC, and County of Yolo, and the needs of the communities that are only recently beginning to receive services in Mendocino and Lake Counties. For example, the third-party implementation that is used throughout California has not been as successful in reaching rural customers' unique needs compared to more urban customers. NREN will rely on boots-on-the-ground delivery of services using CBOs or trusted partners within communities being served in order to expand reach across the large territory.

A non-residential needs assessment was conducted by ERI in 2025 in NREN territory and reported: "The findings reinforce that rural and HTR communities require locally rooted program delivery models that are easy to understand, affordable to participate in, and designed around trusted contractor networks and familiar trade channels. Programs that reduce red tape and "meet customers where they are" are more likely to succeed in these communities."

NREN will focus on relationship and trust building, marketing and outreach with a message centralized around affordability and resilience with reaching climate goals as an added benefit rather than the prime motivator. Using local staff and CBOs based within territories instead of third-party implementers will save cost, leverage understanding of and connection with the community, and build trust. It will also have the additional benefit of building community capacity and workforce development for these secluded, rural areas in the climate and energy fields. NREN will use multiple methods of engagement instead of relying primarily on online approaches, leaning heavily on in-person and over-the-phone interactions.

Partnerships and relationships are key to NREN's programs' success. The Public Energy Services program delivery approach will be very hands-on with considerable time spent with local elected officials and then key staff to develop long-term relationships and access. The under-resourced local public agencies and schools in the region will understand that NREN is their partner in achieving their climate goals, facility improvements, and access to energy efficiency services from statewide or federal opportunities. Although primarily a downstream program provider, NREN will be engaging with equipment vendors to promote new technologies such as heat pumps and heat pump water heaters to a wider segment of contractors and the general public. The Energy Career Education and Training program will partner with community

colleges and local contractors to facilitate opportunities where students get college credit while earning a wage and receive on the job training in a position that can lead to full-time employment.

Additionally, NREN intends to incorporate IDSM into its residential and public programs. The inclusion of IDSM will provide a new and broader energy menu for equity customers that could include renewable energy generation, battery storage, electric vehicles, and electric vehicle charging infrastructure. Oftentimes, the prospect of on-site generation, back-up energy storage or electric vehicles can be more attractive to a rural customer for resilience reasons. NREN's programs will help the customers along a roadmap to those goals with the understanding that energy efficiency is a first step. This strategy has proved successful through the Public Agency Solar Program implemented by RCEA prior to NREN's formation.

NREN plans to use data driven analytics to help target our message and distribution, thus reducing costs by communicating with customers in the most effective manner. This will include having a stronger social media and general media presence and collecting feedback data on interactions with our content. NREN will generate interest by creating and sharing short, entertaining and effective videos about our programs that will include happy customers and NREN staff at recognizable local community events. This content will also include how-to videos related to our services such as showcasing energy efficiency kits, best practices for operating heat pump systems, completing a rebate application, or how to read a utility bill; using approachable and relatable material to reach a rural audience as opposed to highly produced media.

Because we are based within and around the communities we serve, NREN is able to procure immediate feedback on the success of our strategies and be ready to quickly

adapt. NREN intends to use innovation to stay nimble to the changing needs of rural Northern California.

14. Incorporate community-based program design in relevant existing and planned EE programs that promote meaningful community involvement, advances equity, and ESJ Action Plan goals (D.23-06-055, OP 31)

NREN values robust and meaningful community input in the design of its program. Since most of NREN territory has been traditionally underserved across all sectors, gathering this input becomes even more vital to NREN's success in addressing community need. NREN's approach to gather community input has been both formal and informal. While designing programs, NREN worked with outside consultants to conduct comprehensive and unbiased needs assessments. At the time of the preparation of this BPA in the beginning of 2026, needs assessments have been completed across the public and commercial sectors as well as a cross-sector study focusing on financing needs, and are in process for the residential sector.

All of these needs assessments have been multi-modal, utilizing in-person and phone-based interviews, focus groups, and surveys conducted with potential recipients of NREN services, contractors, CBOs, and other stakeholders. A universal finding of these efforts has been that utility customers in NREN territory have had little connection with energy efficiency services, emphasizing the need for strong education and outreach efforts when launching our programs as well as simplified program requirements to minimize barriers to market penetration.

NREN has responded with a suite of services that require minimum initial customer effort, including offering residential energy efficiency kits, phone-based home

assessments, and direct-to-consumer downstream rebates. These services are designed to accompany further education and outreach efforts to engage the customer to explore additional steps in their energy efficiency journey, including behavioral changes, additional electrification, and direct install services. The financing needs assessment is leading to deeper adjustments to that program rollout. Contractors have voiced concern that new, REN-led financing programs might cause confusion in the marketplace rather than support greater adoption, as originally hoped. They stated what is needed is greater education and assistance in accessing existing financing programs and consistency in incentive offerings. This information led NREN to reconsider the best use of its financing program to fill in gaps in a way that will effectively support the energy efficiency marketplace and encourage project adoption.

NREN is comprised of four partners whose agencies are governed by board members representing diverse segments of their communities, as well as community advisory boards directly speaking for the needs of consumers. NREN staff regularly engage with these boards, as well as boards of their member jurisdictions, describing program design and rollout and soliciting feedback on what can be improved.

Furthermore, NREN is structured on a “for rural, by rural” foundation, and NREN staff are leveraging their combined decades of experience delivering services to our rural communities. NREN leadership has served their communities in education, social services, healthcare, environmental restoration, tribal and municipal government, trades, and more. Rural communities function through trusted communicators, and NREN is both staffed by people who have been those communicators and have strong connections to these communities. This informal community engagement can be the most effective and impactful way of learning what works and what can be improved in program design. NREN has first-hand experience that programs designed far away and

primarily for more metropolitan customers have not been effective in reaching rural Californians, which is why NREN's philosophy of locally designed and implemented programs is so essential, providing real opportunities for engagement and influence over program design and delivery. This local experience combined with an equally robust formal survey methodology is NREN's formula for success in equitably serving California's rural hard-to reach communities.

Additionally, one of the most direct ways that we gather input and feedback is through ongoing, in-person interactions with customers. This is achieved by robust education and outreach activities where NREN staff interact with the public at a wide range of community events such as farmers markets, libraries, churches, senior centers, veterans' halls, community festivals, fairs, as well as via our phone based and onsite assessments. NREN also gathers feedback from our partner CBOs, who can provide insightful perspectives on their local communities. This direct and ongoing engagement with the public in diverse settings and locations facilitates valuable community engagement and ensures that NREN staff are in touch with community needs, gathering feedback, and using that information and feedback to inform programs.

With programs operated by local NREN staff, each energy assessment can also act as a needs assessment, gathering data on homes and businesses within the territory and identifying their characteristics. Staff will be establishing ongoing relationships and lines of communication leading to feedback; the data gathered can directly affect program improvements. Program participants also receive follow-up surveys and feedback is gathered, analyzed, and discussed during strategic planning.

Chapter 4: Forecast Methodology and Zero-Based Budgeting

Given the region's large geography with low population density, recent and pending territory expansion, and historical service gap, the request aligns with CPUC guidance that REN budgets be proportional to IOU budgets for customers served and explicitly account for hard-to-reach (HTR) populations. In short, the scale and complexity described justify above-average outreach and implementation costs per customer compared to urban areas, making the funding ask reasonable on both policy and operational grounds. NREN's portfolio uses a mix of delivery types and a variety of measures tailored to the reality of rural load shapes and buildings. Rural delivery is intrinsically more resource-intensive but also captures high value savings.

1. The region is vast and sparsely populated—raising customer delivery costs

NREN's service territory spans some of the most sparsely populated regions in California. Alpine County averages ~1.6 people per square mile, the lowest in California based on the 2020 census; Mendocino is ~26/sq mi and Mariposa ~11/sq mi[39]—all far below urban counties. From the closest metropolitan areas, drive times to those regions range from 3 hours to 5 hours along winding roads prone to closures from rockslides and wildfires. Vast distances requiring long travel times make delivery costs inherently higher than in more populated areas. Operating programs from NREN agencies within the region can shorten travel times, but even within a single NREN county, drive times can be long. Reaching one of the corners of Humboldt County is still a 2-hour mountainous drive from Eureka, where NREN programs are administered. Delivering services requires long travel times, more site visits, and repeated contact, especially for

[39] California 2020 Census Population Density By County Map

tribes, seniors, and digitally disconnected customers. These geographic realities demand higher outreach and implementation costs per customer.

The geographic spread of the customers in the region does not make serving those customers attractive to implementers who are required to focus on cost-effectiveness. CPUC recognizes RENs were created to fill service gaps and reach hard-to-reach households that IOU portfolios have historically been restricted from serving, which is more resource-intensive than serving dense urban loads. NREN uses innovative approaches such as using local staff or partnering with local CBOs in the most remote areas, rather than trying to implement through a third-party based in a metropolitan area.

2. *The portfolio is expanding to new counties and growth of programs—requiring front-loaded investment*

In NREN's first program cycle, reaching into counties that have historically been underserved was a proud accomplishment. In this next program cycle, NREN intends to continue expanding that reach and scaling programs particularly in the Northern Sierra counties. Additionally, NREN will expand into two new counties, Trinity and Yolo, and explore expansion into four beyond that - Colusa, Glenn, Tehama, and Shasta. This expansion requires additional staffing, training, and local partnerships. Start-up and expansion costs such as hiring, training, stakeholder engagement, and tribal outreach have been budgeted above steady-state levels. This growth requires higher implementation costs, especially for HTR and tribal communities.

3. *The region has been historically underserved—necessitating catch-up spending*

CPUC's REN framework was adopted because traditional portfolios under-served HTR and disadvantaged communities; RENs are to address those gaps with tailored, community-based approaches. Many NREN communities have never received consistent

outreach, local contractor engagement, long term energy planning support, or public agency assistance. Rural residents, tribal communities, and residents in manufactured homes are historically underserved for energy efficiency programs. Rural customers also face power outages and wildfire risks that shape behaviors of keeping propane or wood as backup power sources. Catch-up investments including deeper outreach, education, and trust-building are programmatically required. Remedying underinvestment is necessary to bring rural communities to a baseline level of participation compared to urban regions that have benefited from energy efficiency programs.

4. Regulatory guidance supports proportional budgets that reflect HTR service plans

The CPUC gives explicit guidance that REN budgets should be proportional to incumbent IOU budgets for the number of customers served by non-statewide/non-regional programs, while taking into account plans to serve hard-to-reach customers.[40] NREN's current budget request does not exceed the historic EE budgets for the number of customers served. However, ratepayers in NREN regions have contributed funds to develop and implement programs that did not provide a proportional number of services to the rural customers. NREN's role is to ensure that those funds now reach the customers who support their programs and who also tend to be the most in need of services.

5. Cost drivers outside program control have risen

Tariff-driven increases in heat pump and component costs, along with the needs of senior and low-income customers, create a need for NREN to provide higher rebates

[40] CPUC Decision (D.)19-12-021 p.39: "We also give some further guidance on appropriate budget levels dedicated to REN programs. Since RENs are not required to meet a specific cost-effectiveness threshold, this guidance should help RENs gauge the reasonableness of budget proposals. Simply put, the RENs' budgets should be proportional to the incumbent IOU budgets, in the same territory, for the number of customers served by non-statewide and non-regional programs,10 while taking into account plans to serve hard-to-reach customers. "

that make adoption more accessible. By calibrating incentive levels against current market costs each quarter, NREN can stay responsive to real-world conditions and adjust rebates thoughtfully over time.

In addition, rising travel costs, software licensing needs, and cybersecurity insurance premiums must be met for NREN to continue delivering high quality, secure, and compliant programs across large rural regions. As reporting requirements continue to evolve—with new metrics, mapping needs, and census tract-based equity indicators—NREN will focus on streamlining processes and applying efficient solutions to meet these requirements while maintaining strong program performance.

6. Scarcity of EE PAs within NREN's territory

NREN serves a region that has been historically disinvested and has disproportionately low uptake in energy efficiency programs. While some regions in California benefit from multiple PAs with multiple layers of program activity, NREN's territory does not experience the same level of coverage and therefore requires a larger program presence from NREN to ensure communities have equitable access to energy efficiency programs. As a result, NREN's budget proposal reflects its plans to provide robust EE program offerings to those that have previously been unable to participate in statewide and IOU programs. Consistent with D.19-12-021, a REN's plans to serve HTR customers should be considered when evaluating the REN's budget proposals. NREN's focus on reaching underserved and HTR populations is a key and critical component of its program design and funding request. NREN's goal is to address persistent inequities in program participation and ensure that its region receives opportunities to benefit from EE that were previously inaccessible to them.

7. Local implementation improves cost effectiveness

NREN does not primarily use third-party implementers for its programs. Implementers have shown less interest in the region due to the vastness of the region, the additional costs of travel, and lack of trust from customers. Because of this, NREN staff implement the programs from marketing through boots on the ground delivery of services. Both the County of Yolo and Sierra Business Council also engage local CBOs to assist with outreach efforts and some of the service delivery. Compensation is provided to those CBOs. This is proving to be effective during the 2024-2027 program cycle and NREN intends to continue this model while scaling up services. Generally, compared to third-party implementer charge-out rates, NREN staff costs including overhead are relatively low. NREN does hold contracts for technical and regulatory support for administration and engineering support for custom and NMEC projects.

8. Services previously provided under Local Government Partnerships will be included in NREN services

RCEA and SBC have served public agencies within their respective service territories through Energy Watch and Local Government Partnerships with PG&E since 2006 and as of the writing of this Business Plan have extended these programs through 2027. The RCEA Redwood Coast Energy Watch (RCEW) and SBC Sierra Nevada Energy Watch (SNEW) predate the LGP program. While the two partners' programs are not identical, both provide similar services to public agencies including comprehensive assessments, facility benchmarking, referrals to service providers, strategic energy planning, funding acquisition, education, and training for agency staff. The status of these specific partnerships and the LGP program past 2027 is unknown; funding for some partnerships has already been greatly reduced in the most recent contract renewal. Due to this uncertainty, NREN opted to include these activities for the RCEA and SBC service territories within the NREN Public Energy Services program beginning in 2028. This will

allow for greater collaboration on program development and delivery of service offerings across the entire service territory, and ensure that rural government jurisdictions, tribes, and other facilities receive quality, consistent, and uninterrupted support. If the 2028 status of the RCEW and SNEW programs changes, NREN programs and budgets will be adjusted accordingly.

9. Budget is directly tied to increased KPIs and measurable performance improvements

NREN's requested budget is built from the ground up to meet higher portfolio Key Performance Indicators (KPIs) required by the CPUC, including increased equity participation, higher Total System Benefit (TSB), deeper electrification rates, expanded NMEC delivery, and measurable improvements in rural contractor workforce capacity. Unlike urban service territories where KPIs can be achieved at lower marginal cost, hitting these targets in rural regions requires more staff time per project, more contractor training, longer travel distances and time, and more complex project development, all of which directly influence KPI achievement. NREN's budget therefore reflects the investments necessary to deliver these outcomes at-scale. NREN's KPIs ensure that ratepayer dollars are tied to clear, measurable, and reportable performance improvements.

Methodologies to forecast and allocate Resource Acquisition, Equity, Market Support, and Codes and Standards program budget and benefits

To establish the budgets for the equity programs, NREN estimated service levels and set internal Key Performance Indicators (KPIs) across the different regions that are tied to achieving the goals of the portfolio. Those achievements were then tied to the staffing levels and CBO partnerships needed to be able to reach those KPIs in the context of the factors listed in section (i). The cost of education and outreach activities, energy efficiency kits, and technical consultants were also included, using historic contract

values and estimated escalation rates. To maximize adoption, incentives were set to measures low or no-cost, particularly for equity customers, and calculated for the forecasted portfolio of offerings.

Benefits from claimable measures, including TSB and energy savings, are calculated using the CET. Other benefits such as community awareness, customer education, and program reach are measured by number of services delivered such as kits, assessments, and educational events. The location of services and number of equity customers is also tracked to identify gaps that need to be filled.

Market support programs were similarly budgeted around the number and types of training and partnerships. Staff requirements were smaller and funds were allocated towards partnerships with local training organizations including community colleges, tribal training programs, and pre-apprenticeship programs. The benefits were measured through the number of programs developed, trainees, and funds going into the community from these programs.

Methodologies to forecast and allocate program budget and benefits by sector

The methodologies for sector-based program budgets were similar as described above for the equity segment as NREN's equity programs will serve the residential, commercial, agricultural, and public sectors. NREN tied the staffing and costs for each sector to the KPIs to be achieved for the sector. For residential this included in-house staff and CBO partnerships, cost of education and outreach, energy efficiency kits, and incentives. The non-residential programs, which cover the commercial, public, and agricultural sectors by providing direct install services included staffing costs, incentives, and technical consultants to assist with engineering calculations related to custom and NMEC

projects. The Public Energy Services program budget does not include incentives and is primarily the cost of staff.

NREN also intends to leverage existing programs that are available region-wide such as the Energy Savings Assistance Program, Home Energy Score California (BayREN), Energy Code Ace, GoGreen Financing, and On-Bill Financing. The intent is to ensure funds and efforts are being spent by bringing existing services to our region that historically had barriers to delivering in NREN's territory and not duplicating those services unless the program cannot serve the area.

Benefits to the residential and non-residential (commercial, agricultural, and public) customers include TSB and savings calculated using the CET. Additional benefits for the programs will include services delivered - for residential in terms of assessments performed, kits delivered and educational opportunities, and for the commercial program, number of assessments completed and non-energy benefits guided by the NEB study that is currently ongoing.[41] The public program will also measure the benefits provided to the local governments through technical support, funding assistance and project management support.

The Energy Career Education and Training program is the sole market support program and methodologies are described in section (ii) above.

Methodologies and calculations used for fuel type splits

NREN's methodology for portfolio-wide fuel type and IOU splits is consistent with D.19-08-009, which directs that the utility serving the "new fuel" shall be allocated the costs and savings associated with fuel substitution projects. The electric utility (PG&E Electric)

[41] Illume, LLC. Market Rate Equity Segment Non-Energy Benefits Research Plan https://pda.energydataweb.com/api/view/4183/CA%20Market%20Rate%20Equity%20Segment%20NEBs%20Study%20Research%20Plan%20v20250701_clean.pdf

is designated as the new fuel utility for fuel substitution. NREN's portfolio-wide fuel type and IOU splits are as follows:

PG&E Electric: 84%

PG&E Gas: 16%

As reflected in Sheet 3.1 of the BPA Workbook filed concurrently with this Application, cells D18–D21 summarize total portfolio costs for Program Years 2028–2031, and cells D22–D25 provide estimated costs for Program Years 2032–2035. The fuel allocation for the total costs for years 2028-2035 is 100% electric and 0% gas for fuel substitution expenditures. For all other costs excluding fuel substitution, the fuel split is 80% electric and 20% gas.

The revised portfolio-wide fuel split was derived by calculating the proportion of total incentive expenditures attributable to fuel substitution projects relative to total portfolio incentive expenditures. The calculation is as follows:

Fuel Substitution Incentives ÷ Total Portfolio Incentives = Electric Allocation Percentage

This methodology results in an electric allocation of 84% and a gas allocation of 16% across the total portfolio budget. The adjustment from the prior 80%/20% split reflects the increased scale of electrification and propane fuel-switching activities proposed for the 2028–2031 cycle.

Methodologies and calculations used to derive a zero-based budget (D.21-05-031, COL 22, OP 8)

Using regional KPIs divided across NREN's four partner agencies, including the addition of Yolo County, the amount of program staff needed within each region and NREN wide was estimated to achieve those metrics. Because the programs are not changing in

design but primarily in scale, the increase in goals and reach were used to scale up the staffing needs. Existing contracts with consultants were used to estimate future consultant costs. An escalation rate of 5% was used year over year to account for rising costs due to inflation. Additional costs include the operational costs of the Salesforce NREN database, cybersecurity required to access PG&E data, and legal fees.

Program Modifications from 2024-2027 portfolio cycle

NREN's portfolio of six programs remains the same as the 2024-2027 cycle with the following significant changes:

- Starting in 2026, NREN consolidated activities from the Codes and Standards program into the WE&T program, Energy Career Education and Training.[42] Those activities will continue to be offered under the ECE&T program in 2028-2031.
- NREN will continue to offer two resource programs with claimable energy savings: the Home Energy Upgrades program and the Non-Residential Energy Services program. The programs will now be segmented as equity programs instead of resource acquisition to align with the primary functions of the programs.
    - In order to properly demonstrate this re-segmentation starting in 2028, new program IDs were generated in CEDARS.
        - Home Energy Upgrades has the program ID RRN002 for the portfolio cycle ending in 2027. For the portfolio cycle beginning in 2028, Home Energy Upgrades will have the program ID RRN014.
        - Non-Residential Energy Services has the program ID RRN003 for the portfolio cycle ending in 2027. For the portfolio cycle beginning

[42] RuralREN North Advice Letter #005-E/005-G

in 2028, Non-Residential Energy Services will have the program ID RRN015.

- The commercial program will now also serve agricultural and public sector customers and will be re-branded as the Non-Residential Energy Services program.
- The Finance program has shifted towards offering more technical support and shows a budget reduction from the 2024-2027 cycle.
- The WE&T program, now known as the Energy Career Education and Training program, was re-segmented into market support in 2026 and will remain in the market support segment in 2028-2031. The program will be expanded with more locally developed and offered trainings and shows a budget increase.
- The residential and non-residential programs will also scale up the reach of existing services and show increased budgets.

Table 9: Closed Programs from the 2024-2027 Cycle

Closed Programs from the 2024-2027 Cycle						
Name of Closed Program	Segment	Sector	Unspent Budget of the Closed Program	Total EE budget from the 2024-2027 cycle	Rationale for Program Closure	Underperformance and Remediation (If applicable, elaborate on what led to underperformance and why. Describe remediation efforts that were undertaken, results of those efforts, and over which timeframe.)

Closed Programs from the 2024-2027 Cycle						
RRN007 Codes & Standards	Codes & Standards	Codes & Standards	$0	$678,384	As noted in RuralREN North Advice Letter #005-E/005-G, because the NREN C&S program focuses on providing training, many of the activities aligned with the "upskilling of existing workers" are described in the WE&T program. To provide efficiencies in implementation, the activities described for the C&S program can be effectively implemented as a program element of the WE&T program.	No underperformance; remediation not applicable. Activities have been shifted to the WE&T program under the market support segment.

Table 8: New Programs in 2028-2032 Application Cycle

NREN will not be proposing new programs in the 2028-2031 program cycle, however, will make changes as outlined above in the program modifications section.

Table 10: New programs in 2028-2032 4-Year Application Cycle

New Programs in 2028-2032 4-Year Application Cycle			
Name of New Program/Placeholder Program	Segment	Sector	High Level Program Description/Purpose
n/a	n/a	n/a	n/a

Chapter 5: Portfolio Management

Overview for 4-year plan and 8-year plan: Key metrics and outcomes

NREN's overarching goals were established by considering NREN's regional needs. Rural, HTR, tribal, and underserved communities face barriers such as: lack of access to prior energy efficiency and decarbonization programs, distrust of non-local contractors, complicated participation processes, and limited awareness and education resources. NREN's business plan outcomes directly align with NREN's overarching goals of: Equity, Energy Savings, and Access to Funding.

Equity: Ensuring rural, HTR, tribal, and underserved communities receive equitable access to CPUC programs, technical support, and local workforce opportunities.

Energy Savings: Providing measurable, persistent energy and GHG reductions through electrification, energy efficiency, and demand-reduction activities.

Access to Funding: Increasing rural communities' ability to secure rebates, incentives, financing, and capital for energy upgrades.

For the goal of equity, the majority of NREN's programs are in the equity segment. The following two outcomes directly support NREN's equity goal:

- *Outcome 1*: HTR, low income, tribal, and underserved rural customers are provided with equitable levels of services and support from CPUC energy programs.

This outcome supports the equity goal of expanding equitable access to energy efficiency and electrification programs in under-resourced communities. NREN's equity

programs target these audiences and are centered around delivering meaningful participation opportunities across NREN's rural communities.

- *Outcome 2:* Equity customers are provided tools to better manage their energy use and costs through increased awareness, technical support resources, and access to a trained, local workforce to improve their homes and businesses.

This outcome supports equity by directing outreach efforts specifically to communities that are harder to reach and under-resourced. Direct outreach to these customers enables them to understand energy-saving measures, fuel substitution, and electrification, and better their energy consumption options. Additionally, NREN's Energy Career and Training program will produce a skilled local workforce while the residential, non-residential, and public programs produce a customer network sufficient to support widespread adoption of electrification, weatherization, and load-flexibility measures and acceleration building decarbonization.

The following outcome is connected to NREN's goal of Energy Savings:

- *Outcome 3:* Energy consumption, energy cost and GHG emissions are reduced across the region, contributing to California's decarbonization and energy efficiency goals.

This outcome is central to achieving NREN's goal of measurable energy and demand reduction through electrification, weatherization, controls, and NMEC-verified multi-measure upgrades. In the long term, NREN aims to deliver persistent reductions in peak demand, building-sector GHG emissions, propane and delivered-fuel dependence, and energy burdens faced by rural households and small businesses.

The following outcome is directly related to NREN's goal of Access to Funding:

- *Outcome 4:* Increased access to rebates, incentives, and financing to provide the capital needed in rural communities to enable investments in electrification and energy and demand reduction projects with persistent energy savings, GHG emissions reductions, and benefits to the grid.

This outcome is foundational to NREN's goal of removing first-cost barriers, which is a major hurdle for rural residents, microbusinesses, public agencies, and tribal entities. In the short term, NREN will have deployed direct install pathways and incentives for electrification pathways. In the long term, NREN will enable customers to implement multi-measure energy efficiency projects that would otherwise be unattainable.

Table 11: NREN's Goals and Strategies

Goals	**Goal 1: Equity** Ensuring rural, HTR, tribal, and underserved communities receive equitable access to CPUC programs, technical support, and local workforce opportunities.	**Goal 2: Energy Savings** Providing measurable, persistent energy and GHG reductions through electrification, energy efficiency, and demand-reduction activities.	**Goal 3: Access to Funding** Increasing rural communities' ability to secure rebates, incentives, financing, and capital for energy upgrades.
Outcomes	**Outcome 1:** HTR, low income, tribal, and underserved rural customers are provided with equitable levels of services and support from CPUC energy programs. **Outcome 2:** Equity customers are provided tools to take action to better manage their energy use and cost through increased awareness, technical support resources, and access to a trained, local workforce to improve their homes and businesses.	**Outcome 3:** Energy consumption, energy cost and GHG emissions are reduced across the region, contributing to California's decarbonization and energy efficiency goals.	**Outcome 4:** Increased access to rebates, incentives, and financing to provide the capital needed in rural communities to enable investments in electrification and energy and demand reduction projects with persistent energy savings, GHG emissions reductions, and benefits to the grid.

NREN's unique value metrics highlight how the portfolio is moving towards the outcomes shown in the logic model, particularly when it comes to equitably serving the customers of rural Northern California. The UVMs demonstrate how NREN provides value to the customers that are historically underserved, such as customers that are geographically distant or rely on unregulated fuels. The UVMs measure the overall benefits of those customers receiving ratepayer funds in their communities and even show how the programs will help reach California's GHG goals.

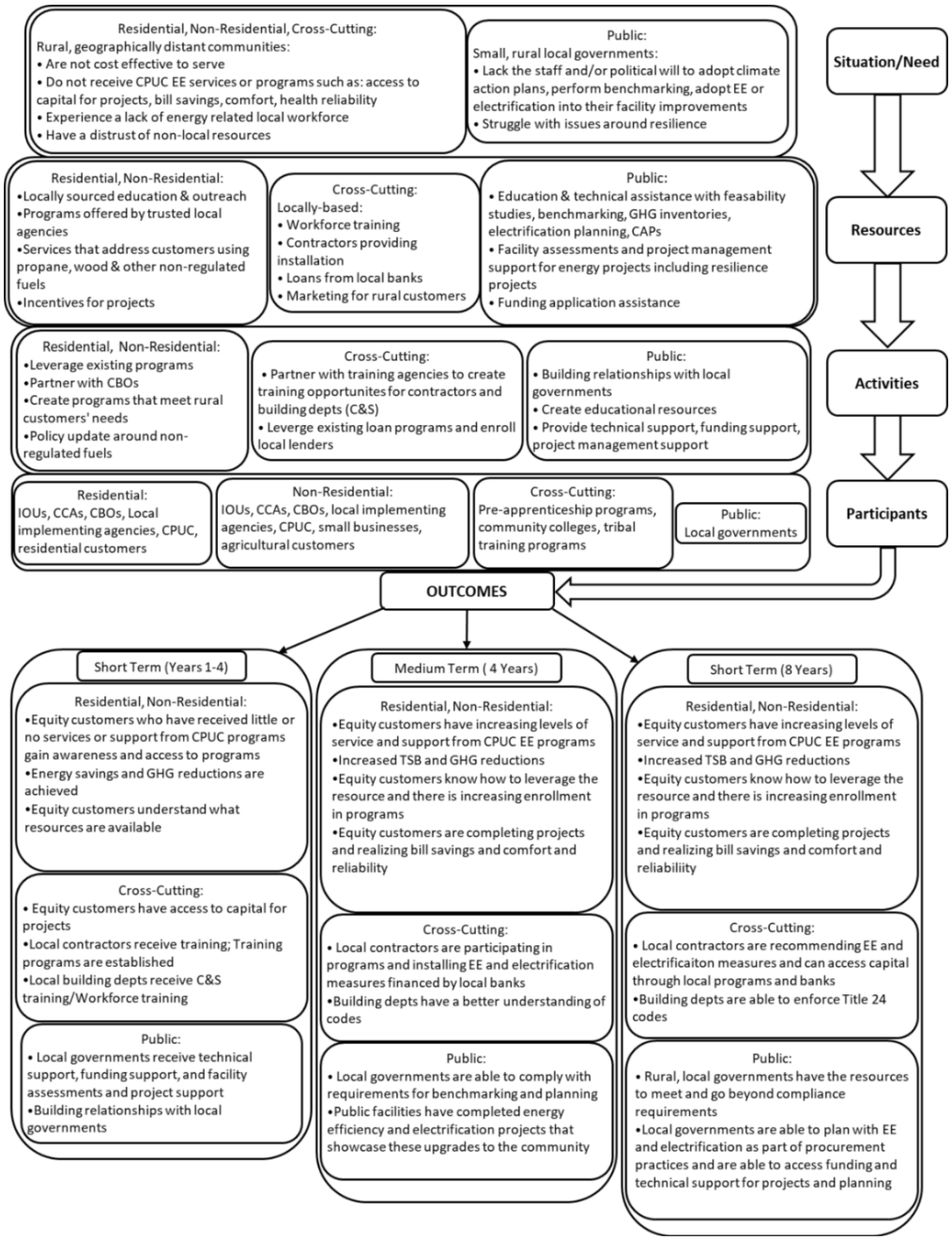

Figure 0-3: Logic Model

NREN's UVMs highlight the additional benefits brought by RENs for filling service gaps and taking innovative approaches to achieving California's EE goals. It is critically important that RENs are not held to the cost effectiveness threshold requirement and caps on equity and market support programs in order to continue serving that purpose. The Commission has repeatedly recognized that REN portfolios have different rules for exactly this reason—because their portfolios are smaller and have a specific purpose in filling gaps and serving HTR customers who are naturally less cost-effective to serve.[43] In the words of the Commission, "we continue to believe that application of an up-front threshold cost-effectiveness requirement for RENs… could thwart their main benefits."[44] One of the important rules that apply to RENs is that they must propose metrics to demonstrate the unique value their portfolios bring.[45] NREN intends to show through the UVMs that customers historically left behind by traditional EE programs can receive services and contribute to GHG reductions and benefits to the grid when extra effort and innovative approaches are used in reaching them. When the additional benefits of the UVMs are combined with the TSB and savings achievements, it is clear that the services that NREN provides are effective and bring great value to the California EE portfolio. Figure 4 and Figure 5 below show a comparison between the distribution of services across NREN territory, comparing an annual average of PG&E services to NREN program services delivered in 2025. Figure 4 shows a higher clustering around higher-population areas like Sacramento, where Figure 5 shows the expansion of services by NREN into areas that have previously had limited access to EE programs, particularly in Lake and Mendocino counties.

[43] D.19-12-021 at 37.
[44] Ibid., at 76.
[45] Ibid., at 23.

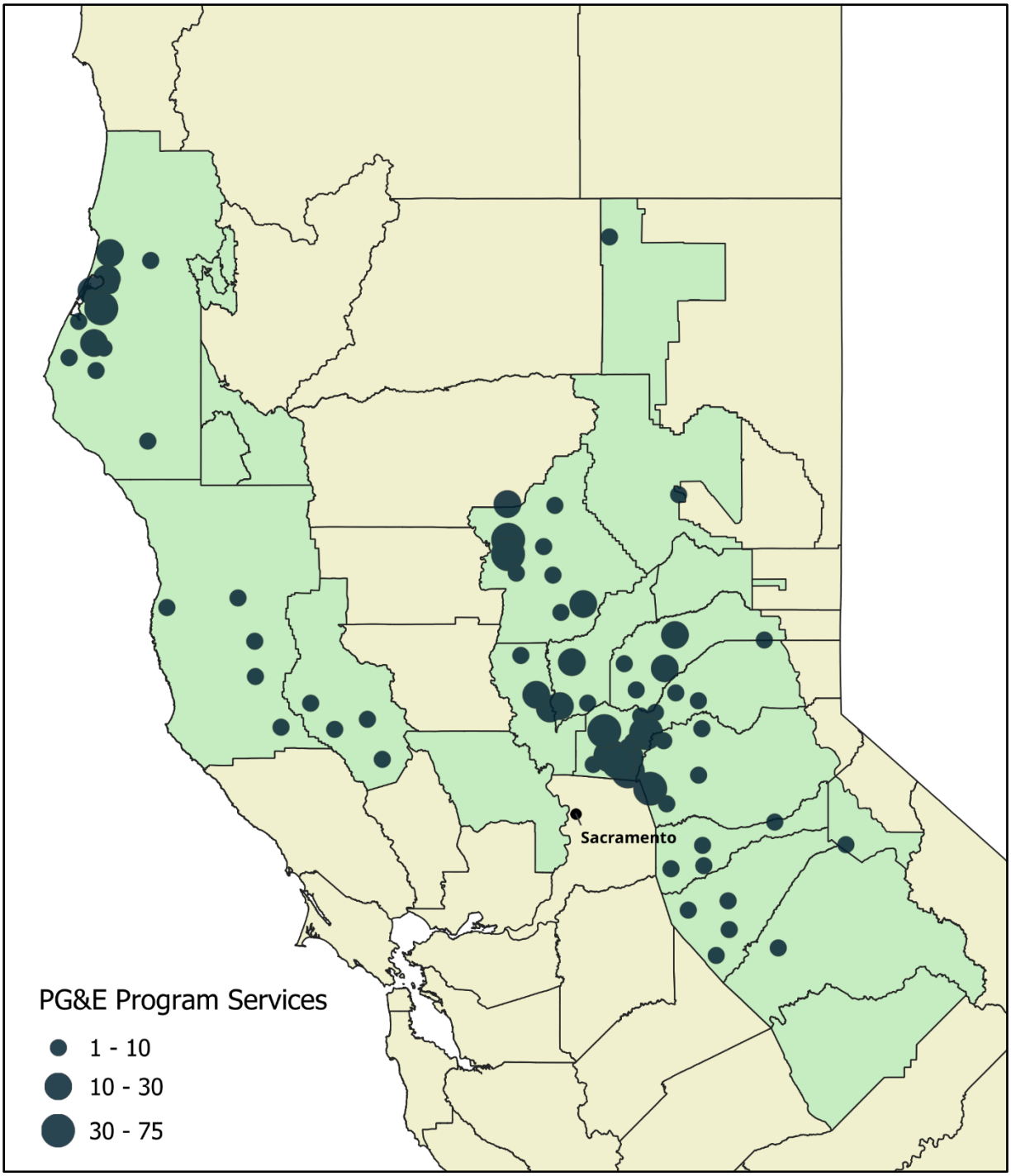

Figure 0-4: Map of one-year average of PG&E services delivered in NREN service territory

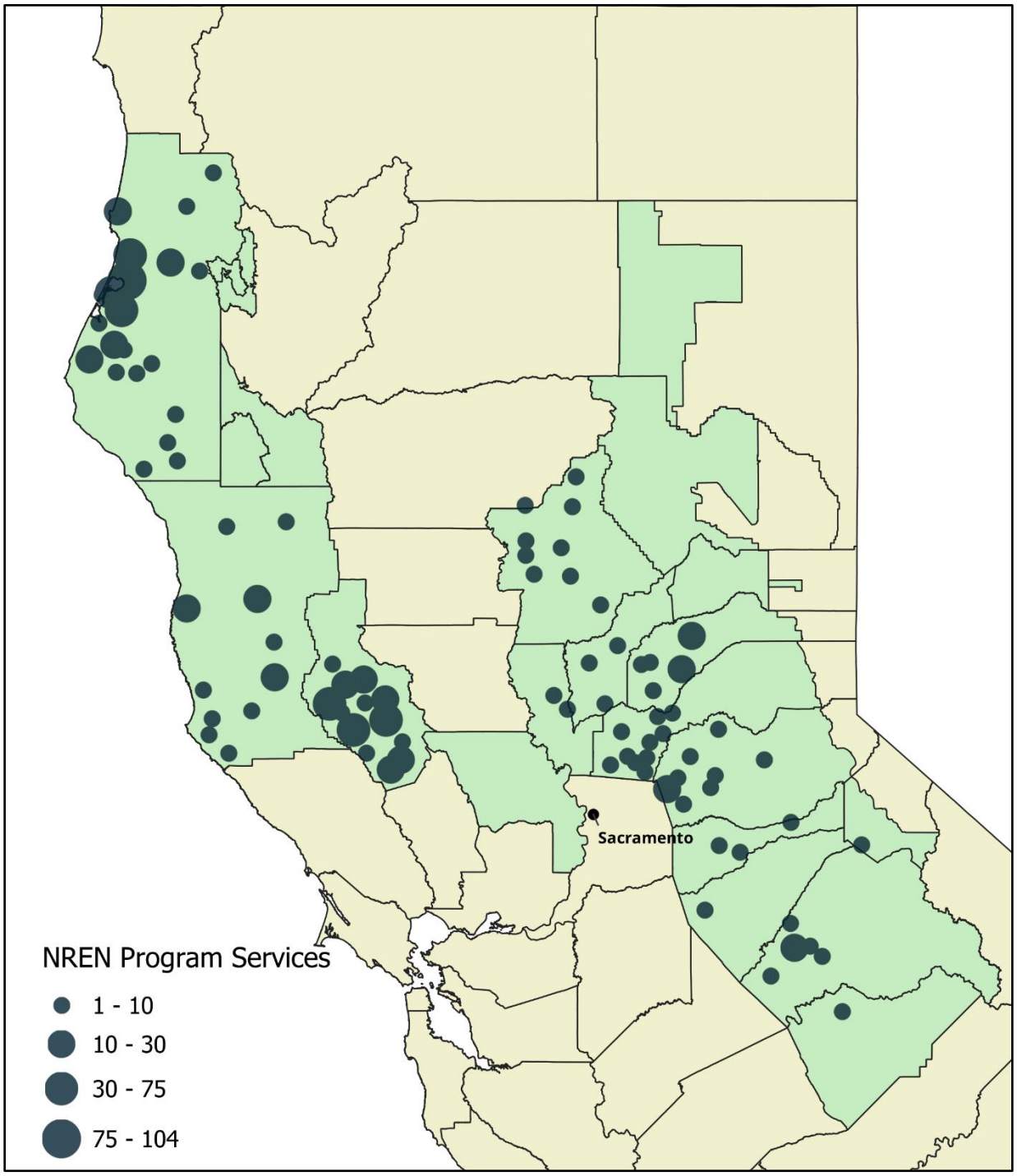

Figure 0-5: Distribution map of NREN program services delivered in 2025.

Table 12: UVM Overview and Reporting Approaches

Unique Value Metric (UVM)	Description of What It Measures	Tracking & Reporting Approach including targets where applicable	Strategic Importance to REN Portfolio
Number of customers within a geographic HTR area that engage with NREN's programs by sector (including but not limited to homes that engage with NREN's program offerings such as assessments, energy efficiency kits, rebates, technical support resources, etc.).	Services provided to customers that are outside of metropolitan areas, in tribal communities, or DACs.	This will be tracked by tagging each customer with the county they are in and whether or not that county is geographically HTR. This metric will be reported annually.	NREN intends to ensure customers are engaging outside of metropolitan areas, in alignment with NREN's overarching focus on rural customers.
Number of customers served by any NREN program that are within a zip code that has not received any EE services in that sector in the past five years.	Services reaching customers who have been historically underserved.	Data is received on historical services for the past five years by zip code and compared to services delivered by NREN. This comparison will be done annually.	NREN wants to ensure services are reaching customers who have not previously received services.
Percentage of residential customers that rely on propane or other unregulated fuel that engage with NREN's programs.	Demonstrates the need of NREN customers using unregulated fuels to receive services from PA programs.	Primary heating fuel will be tracked for cooking, water heating, and HVAC for customers that engage in a phone-based or in-person home energy assessment. Data will be reported annually.	NREN wants to ensure customers with unregulated fuels also receive services.

Unique Value Metric (UVM)	Description of What It Measures	Tracking & Reporting Approach including targets where applicable	Strategic Importance to REN Portfolio
Total avoided emissions (tons of CO2) from unregulated fuels use saved through NREN residential programs.	Shows the additional value of NREN programs to reduce overall emissions in California whether or not the fuels are regulated.	For measures that lead to a reduction in the use of unregulated fuels, the GHG savings will be calculated.	Shows NREN's progress towards California's GHG reduction goals.
Percentage of total census tracts engaged within NREN region in each sector.	Demonstrates how NREN is working to ensure services are equitably offered to customers throughout the territory.	Customers served will be tagged with census tract (this is required for other metrics) and each tract served will be tracked as the numerator. Denominator is total number of census tracts in NREN territory.	NREN wants to ensure that all territories receive engagement and the offer of services.
Total vehicle miles traveled to deliver services in residential sector.	Demonstrates the vastness of the geographic region served by NREN and how NREN overcomes this distance to provide services.	Miles traveled will be tracked through mileage reimbursement requests submitted by staff or CBOs when traveling to provide in-person services to customers.	NREN wants to ensure all customers are reached regardless of distance, and this metric collects data to show how reaching rural customers may require additional time and costs for travel.
Ratepayer funds returned to the	Demonstrates how NREN brings value	Funds associated with incentives, loans,	NREN wants to ensure rural

Unique Value Metric (UVM)	Description of What It Measures	Tracking & Reporting Approach including targets where applicable	Strategic Importance to REN Portfolio
community through incentives, education and training programs, contractor stipends, loans, energy kits.	to customers who have historically paid into the PPP but perhaps may not have seen the benefits invested back in their community.	installed measures, energy efficiency kits, contractor stipends, and workshops delivered in NREN region will be tracked, whether or not the service was paid for by NREN or another PA.	ratepayers receive the benefits of funds paid into the PPP.

Strategies to optimize portfolio and manage risk

Approach to use of goals and metrics for portfolio optimization

For maximizing portfolio performance, the approach described in NREN's December 2024 Updated Business Plan (RuralREN North Advice Letter #003-E/003-G), remains relevant today: the foundation of NREN's management and optimization of its portfolio is based on a comprehensive set of goals and metrics described in this BPA, and grounded in the following principles:

- Visibility and Transparency: Publish metrics and progress to goals regularly and frequently. Ensure all team members have access to reports and dashboards. Report status and forecasts to NREN Governing Partners at regular meetings and discuss possible course corrections.
- Data Analysis to Quickly Identify Trends: Use automated programs and portfolio databases to produce performance summaries. Understand what tactics and

strategies are working and where possible corrections or program design modifications are needed to improve performance.

- Forecasting that Considers Market Trends: Proactively account for changes in market conditions that may affect program performance. Examples of market trends could include economic trends such as inflation and unemployment.
- Flexibility to Use Additional Metrics or Goals as Needed: NREN's proposed set of metrics and goals should be adequate to manage portfolio performance, but other proxies or indicators may be identified during implementation that may improve forecasting accuracy or better describe program performance.

NREN's Lead Portfolio Administrator, RCEA, brings expertise in portfolio management from their Elect to Administer PA experience, and both RCEA and SBC bring experience in program management from their Local Government Partnership work. The County of Yolo has also run sustainability programs for many years. With this prior experience guiding the Governing Partners, NREN is well-positioned to manage its portfolio toward goal achievement.

NREN's approach to managing its portfolio begins with the establishment of goals and outcomes (scope), schedules, and costs. These parameters become the program management triangle used by the management team to inform their segment or sector portfolios. Tracking and reporting systems are used to gather and consolidate program results, costs, and schedules, which in turn will be used to produce dashboards and reports of performance in real-time that will show performance compared to goals.

This approach is being implemented now, as programs continue to ramp up in 2026 following initial launch of NREN activities in 2025. Over the past year, NREN has been developing tools and procedures for its portfolio administration team to better manage

portfolio, segment, sector, and program level performance to achieve targets set for the current 2024-2027 portfolio period.

In parallel, NREN's Governing Partners have collaborated to set targets for the new 2028-2031 portfolio. While REN PAs are not subject to traditional cost-effectiveness requirements,[46] the NREN Governing Partners have taken an intentional approach to goal setting for this BPA to ensure the portfolio will deliver benefits to ratepayers. Community needs are analyzed through the lenses of Commission objectives and strategies as described in Chapter 3 and inform intended outcomes for the portfolio. Key performance indicators are developed to measure progress toward realizing those outcomes, and the program and portfolio design process aligns staffing and planned program expenditures directly with those KPIs.

Tracking progress to stay on target with those KPIs and program outcomes relies on operations procedures, IT systems, program controls, program forms and agreements, and tracking and reporting results and metrics.

Performance Monitoring and Risk Management

NREN mitigates risk of underperformance at the portfolio level by (1) conducting ongoing program performance reviews to identify needs in portfolio realignment, (2) implementing program budgets changes to address program performance, (3) resetting program operations to maintain program delivery, (4) reconfirming existing joint collaboration with other PAs and their Implementers to support ongoing collaboration and (5) coordinating with the CPUC on needed programmatic or policy changes.

NREN is currently developing and deploying a customer relationship management software platform that will be implemented in 2026 by the Lead Portfolio Administrator,

[46] See D.12-11-015 COL 14; D.19-12-021 at 37-38; D.21-05-031 COL 8 and 9.

RCEA, to monitor performance and manage programs. Program reports and dashboards will quickly identify metrics and indicators that are deviating from plan, and program and portfolio managers will be expected to develop a recovery or cure plan to get back on target. Sector, segment, and portfolio management work together to consider corrective actions.

Forecasts are reviewed, and if necessary, updated at least quarterly (depending on the program). As described previously, NREN's portfolio management approach begins with the establishment of goals and outcomes (scope), schedules, and costs, which form the program management triangle parameters to ensure program performance. When performance monitoring indicates changes are needed in any of the three program triangle variables, re-planning of portfolio variables at the sector, segment, and portfolio levels is triggered.

Program changes can also be made for reasons other than underperformance, such as proactive adjustments to optimize portfolio delivery and outcomes. For example, NREN recently consolidated its C&S program activities into the ECE&T program to reduce administrative burden and streamline program delivery in anticipation of program launch. In tandem, the ECE&T program was re-segmented from equity to market support, as the primary purpose of both WE&T and C&S activities is to build a motivated and capable supply chain of market actors to support high-quality and code compliant energy efficiency installations in the region.[47]

Portfolio management procedures, including those addressing course corrections, are described at a high level in the section above. Detailed procedures for program management and controls, including thresholds and delegation of authority are described in the MOA and bylaws of the Governing Partners. The Lead Portfolio

[47] RuralREN North Advice Letter #005-E/005-G

Administrator, RCEA, is in a contractual relationship with each implementer, through which each implementer receives their budgeted funds for implementation and program delivery. Each program is assigned a lead staff member, and their agency (Program Lead) becomes accountable in the task orders for program reporting and performance.

In cases of underperformance of a program, sector, or segment, the related Program Lead would be required to address the performance issues utilizing the course corrections described in the above section. The program changes would be made under the guidance of RCEA as the Lead Portfolio Administrator through the implementation contracts; any changes in strategy or Program Lead agency would require approval of the Governing Partners. A monitoring plan would be put in place and milestones set to check back in with program performance during set intervals aligned with reporting dates. If the program continues to underperform, it would be considered for closure. This decision would be evaluated very carefully by the Governing Partners to ensure that the portfolio's goal to bring services to rural customers can still be met.

Similarly, for sector or segment-wide performance issues, the programs would be evaluated to determine if services can be shifted across programs to increase metrics in that sector or segment. Those programs would then follow the monitoring plan and closure procedures described in the corrective actions for programs.

As previously described in NREN's December 2024 Updated BP, the following key areas of flexibility are needed to ensure overall portfolio goals are achieved:

- *Scope*: By reviewing program performance in the previous portfolio cycle and feedback from customers, NREN can be nimble in its approach to achieving its goals. This requires flexibility when it comes to outreach methods, delivery approach, service levels, and most importantly, incentive levels. NREN will analyze

incoming data to be proactive as well as reactive to customer needs and program pivots needed for success. To ensure programs can be adaptive, there must be flexibility with subcontractors, partners, and measures. NREN will stay on track with its overarching goals but may adjust KPIs across programs, sectors, and segments if they are found to not be aligned with those goals. Program changes will be documented in updated Program Management Plans that are kept internally, and Implementation Plans filed for the public.

- *Service Territory:* NREN intends to study the market and needs of additional Northern California counties (Shasta, Tehama, Glenn, and Colusa) that are not currently part of the service territory. However, should the outcome of the study show the need and ability to provide services, NREN may adjust the service territory to include those counties in some programs.
- *Cost (Budget):* NREN put great effort into ensuring that the budget request for this portfolio cycle will lead to the outcomes proposed. However, this may require shifting funds across programs, sectors, and segments. The results from the Market Characterization and Needs Assessment may lead to changes in emphasis across programs. Changes to the budget will be captured in monthly reporting and updated Implementation Plans.
- *Time (Schedule):* This BPA does not require a detailed implementation schedule and NREN understands that monthly, quarterly, or annual milestones may change within the overall program authorization cycle. NREN will remain flexible with the timing of milestones but will work to keep program development and implementation on track.

Program-specific closures and modifications are detailed in Chapter 4, in the section on Program Modifications from 2024-2027 portfolio cycle. Those program changes are

implemented proactively to streamline portfolio management and reduce administrative burden and are not due to program performance.

Procurement Practices

RCEA, as the Lead Portfolio Administrator for NREN, applies years of experience as a CCA and ETA PA to its responsibility for managing portfolio-wide procurement and contracts and providing oversight of budgets, among other key portfolio administration tasks. NREN portfolio-wide procurement will adhere to RCEA's established procurement processes as a public agency.

As an overall guiding principle, NREN endeavors to build capacity among its Governing Partners and supporting agencies to deliver its portfolio. This means that, to the greatest extent that is practical, NREN performs its own forecasting and implements its own programs. This practice creates family- and community-sustaining career opportunities locally and mitigates procurement-related risks. Program implementation benefits from the commitment of local workforce driving tangible outcomes in their own communities.

To mitigate risks that could arise from relying solely on local workforce and skill availability, NREN balances its self-implementation principles with targeted procurement of other program and portfolio implementation services—especially in early phases of program launch and ramp-up. NREN will, through the processes and tools described earlier in this section, continuously monitor agency staff and third-party provider performance in delivering program outcomes and the costs associated with different approaches, to mitigate risks and implement corrective action where needed.

Statewide Assessment

NREN was an active participant in the OP 2 of D. 23-06-055 Statewide Energy Efficiency Program Assessment Criteria Working Group. The IOUs drafted a proposal in the

summer of 2025, then invited non-IOU PAs to participate in these efforts after a draft proposal was created. PG&E led the working group of participating PAs to refine the IOU developed proposal for evaluating EE programs and to identify issues that the Commission would potentially need to address as part of this process. NREN, along with the other participating PAs, responded to PG&E's survey to explain whether or not it agreed to the draft proposal that resulted from the Working Group efforts.

The resulting assessment process is attached in Exhibit 4.

While NREN appreciates the efforts that went into the proposed assessment process, NREN has qualified support for the proposal. At this time, NREN believes the assessment process was not adequately designed to equitably and efficiently assess the statewide program portfolio. The proposal asks a series of questions to assess a program; however, it is unclear how these questions could be answered objectively and what the source of evidence will be. Additionally, the assessment asks if regional equity programs would be better suited as statewide programs. This dismisses the gap-filling purpose of RENs, and the very reasons RENs were created in the first place. Since many REN territories are HTR, it is unclear how a statewide delivery could provide better consistent access than a regional program.

NREN would like to reiterate the gap-filling purposes of RENs that should be kept in mind when an assessment of a regional or local program is taking place. NREN's programs are equity-focused to address the specific needs of its rural communities. If a regional program were to be expanded to a statewide program, it is possible that NREN's rural, HTR communities would not have the same level of access to the program as they would if the program were regional. Additionally, regional programs differ from each other as they are designed to address unique needs specific to their region.

Upleveling regional programs to statewide programs might mean regional needs are not being met, leaving behind equity communities.

NREN believes this should be kept in mind during the assessment process and not be overlooked.

NREN would also like to note that the Joint Cooperation Memorandum (JCM) process is the Commission-ordered existing mechanism to prevent harmful program overlap and ensure PA coordination and program complementarity. These JCMs and other means of coordination should be taken into account when conducting an assessment. In its disposition letter to the Joint PAs' OP 32 advice letter (SoCalREN Advice Letter 20-E/20-G et al.) the Commission reaffirmed the importance of JCMs and other existing coordination and program documentation processes in avoiding risk to ratepayers from program overlap or duplication.[48]

Chapter 6: Segmentation and Sector Strategy

Portfolio Sector Strategy

Commercial

NREN's commercial sector will be served by the Non-Residential Energy Services program with a focus on small HTR businesses, tribal facilities, and non-profit and CBO buildings. In NREN's rural territory, many commercial properties are comprised of renters who have limited funds for energy upgrades. Renter-occupied buildings limit a tenant's ability to invest in weatherization, electrification, or equipment upgrades. Small businesses and public agencies also operate with limited funds or no dedicated energy

[48] Advice Letter 20-E/20-G et al. Energy Division Disposition Letter dated June 30, 2025, subject "Tier 2 Advice Letter Filed by Southern California Regional Energy Network on Behalf of the Energy Efficiency Portfolio Administrators for Program Overlap Analysis" at 8-9.

staff, particularly in smaller jurisdictions where there is low capacity to pursue energy efficiency projects. These challenges are compounded by the scarcity of qualified contractors, long travel distances from service providers to vendors and customers, and higher project costs associated with serving remote regions. To address these barriers, NREN will target non-residential facilities that serve equity populations, such as tribal community buildings, rural clinics, and nonprofit buildings, to ensure that its commercial portfolio delivers both energy savings and community benefits.

NREN's Non-Residential Energy Services will also serve the agricultural sector by providing controls and automation to allow those customers to take advantage of sector specific rates.

This program will coordinate with NREN's Public Energy Services, Energy Upgrade Financing, and Energy Career Education and Training programs to develop a group of participating contractors who are trained in program requirements to provide services directly to customers as well as provide funding support. NREN will conduct outreach and needs assessments with commercial and public sector customers to help contractors reach customers. In the short term, this will lead to a greater adoption of electrification and EE technologies by small businesses and other non-residential facilities. In the long term, there will be increased opportunities for more energy contractors, and the increase in EE technologies will allow commercial and non-residential facilities to operate at lower costs and provide better service to customers.

Finance

Barriers of first cost, access to capital, and removal of federal tax credits and incentives remain the biggest impediments to higher adoption rates of electrification and energy efficiency measures, especially in low- and moderate-income areas. NREN's Energy

Upgrade Financing program will work to address these needs through the following programming.

NREN intends to work closely with the California Alternative Energy and Advanced Transportation Financing Authority's (CAEAFTA) GoGreen Financing (GGF) team to increase awareness of existing lower-than-average interest rates for energy efficiency retrofits and equipment in the region. Current uptake of GGF in the NREN region is lower than the statewide average in most counties. As GGF requires a GoGreen verified contractor to implement projects, NREN will work to onboard local NREN contractors to be certified. Additionally, NREN is working to recruit local lenders to leverage the state-sponsored loan loss reserve through GGF to provide better-than-average terms to NREN customers via financial institutions local customers know and trust. NREN will provide technical assistance to customers wanting to leverage GGF products across residential, commercial, agricultural, and public sectors. NREN will work with the GGF marketing team to coordinate marketing efforts across the territory and be the trusted messenger to increase awareness and adoption.

In addition to increasing local awareness of GoGreen products, NREN is currently determining eligibility to provide microloans (less than $2,500) to residential customers. These microloans would likely be primarily used to purchase energy-efficient appliances rather than larger installations requiring a contractor or permitting. Target customers would be low-income residents with a need to build personal credit. The loan amounts are expected to be below currently available financing products ($5,000) and would carry low or zero interest and fees. NREN is considering other opportunities to directly fund energy efficiency projects in the public sector through On Bill Financing (OBF) Bridge Loans and public sector grant programs. These concepts require more review to understand feasibility and eligibility of use.

By removing first cost barriers, NREN intends its finance strategy to 1) increase participation in NREN's residential, non-residential, and public programs; 2) reduce turnover from project ideation to completion; 3) increase local resources for financing in NREN's HTR and rural region; 4) increase participation in existing energy efficiency and electrification loans programs; and 5) drive more comprehensive energy projects.

Workforce, Education & Training

NREN's Energy Career Education and Training program will facilitate access to career opportunities in clean energy-related markets for individuals in rural HTR, underserved, and low-income communities. Additionally, at the end of 2025, NREN closed its C&S program and incorporated the activities into the ECE&T program. NREN will leverage existing training programs to upskill the workforce and expand career pathway opportunities to support market demand. NREN will use multifaceted outreach activities throughout the region, including targeted campaigns to work with underrepresented populations and multilingual outreach and training opportunities to expand the workforce.

NREN's Energy Career and Training program targets contractors, building officials, students, job seekers, tribal members, and geographically remote populations. NREN will upskill local contractors in electrification, heat pump technologies, building envelope strategies, and energy code requirements, while also promoting and assisting participation in existing certification opportunities. NREN will work closely with high schools, community colleges, tribes, educational institutions, and CBOs to expand career pathways, develop curriculum, and create pre-apprenticeship, internship, and on-the-job learning opportunities that connect trainees directly to employers. The program will also build a regional network of industry professionals who advise on training design, mentor participants, and host job placements, which will ensure that rural communities

have a reliable, local workforce capable of meeting current and future clean energy labor demands.

Public

The Public Energy Services program is a public agency-focused program to help HTR, disinvested, and underserved public agencies by providing access and information on energy efficiency opportunities. The program will focus on building relationships, data collection, assessments, education, and technical support to bring energy savings to public sector customers. It will also move customers toward accessing external programs and funding opportunities. NREN's jurisdictions tend to not have dedicated sustainability or energy staff, and therefore a low capacity to pursue funding opportunities and programs. To combat this, NREN's Non-Residential Energy Services program will use direct personal engagement with local staff that understand local concerns and needs to provide services to these jurisdictions

NREN's Public Energy Services program will provide support to agencies that have traditionally been underserved by other programs. The delivery approach of serving primarily rural public agencies is innovative because it will result in new customer engagement with local elected officials and staff, ultimately resulting in the implementation of energy efficiency projects at public buildings.

Residential

NREN is proposing two programs in the residential sector, both in the equity segment: The Home Energy Advisors program will cover outreach and education, and the Home Energy Upgrades program will focus on achieving installation of measures for Equity customers.

The Home Energy Advisors program will provide outreach and energy awareness through a community-based approach that builds energy literacy among rural residential customers. NREN supports residents in understanding their own energy behaviors and the building envelopes of their homes through educational opportunities, broad community engagement at events, libraries, farmers' markets, CBO networking gatherings, and the distribution of energy efficiency kits that include basic energy efficiency and weatherization measures along with energy monitoring tools. NREN also offers individualized home energy assessments, currently delivered virtually, which have proven effective in expanding access for HTR and underserved households; future onsite assessments will provide an opportunity for deeper engagement. Together, these activities serve as a pathway to affordable, reliable and decarbonized energy solutions, guiding customers toward equitable access to incentives, financing, and advanced energy upgrades available through NREN and third-party program implementers.

The Home Energy Upgrades Program will focus on addressing the many challenges that rural Californians face, including higher than average energy burdens, aging homes, distance from large vendors participating in midstream programs, and limited availability of contractors.

Due to the wide geographic distribution of NREN equity customers, a user-friendly downstream rebate offering will be available for many homeowner-installed energy efficient appliances. Higher rebate amounts will be available for equity customers and fuel substitution measures. Because equity customers can often incur extra charges when cashing checks, the program will utilize an electronic payment system where customers can choose from multiple payment delivery options that are fast and have no hidden fees.

For more complex and expensive measures, such as HVAC, HPWH, and weatherization, the Home Energy Upgrade program will offer a direct install option. NMEC will be used to capture savings when feasible with data acquisition and other restrictions. The program will support small local contractors with easy-to-navigate requirements and processes. The customer will select from a list of eligible participating contractors, or the contractor can bring the project directly to NREN. Incentives will be paid directly to the contractor with the requirement that savings are passed along to the customer. Contractors will be required to be familiar with programming requirements and will be provided training on administrative needs. Additional contractor training will be provided through NREN's Energy Career and Training offerings. Incentive levels will be set to encourage multiple measures in a project, particularly focusing on pairing HVAC improvements with weatherization to address affordability concerns. NREN staff will work with homeowners to layer incentives with other non-PPP funded federal, state, and local incentive programs.

Table 13: Budget Distribution by Sector

Budget Distribution by Sector ($000)									
	Sector								
Budget	Residential	Commercial	Industrial	Agricultural	Public	Cross-Cutting	EM&V	Portfolio Support	Total Budget
2028	$747,675	$4,330,495	$0	$0	$6,787,098	$3,199,809	$1,330,442	$2,296,352	$18,691,870
2029	$816,462	$4,792,107	$0	$0	$7,567,475	$3,405,404	$1,398,284	$2,431,829	$20,411,562
2030	$949,618	$5,471,585	$0	$0	$9,716,404	$3,565,168	$1,467,302	$2,570,377	$23,740,453
2031	$1,071,679	$6,548,507	$0	$0	$11,191,070	$3,730,081	$1,538,306	$2,712,343	$26,791,987
Total (4-Year)	$3,585,435	$21,142,694	$0	$0	$35,262,047	$13,900,462	$5,734,334	$10,010,901	$89,635,872
2032	$12,310,177	$7,203,358	$0	$0	$2,983,577	$4,103,089	$1,178,847	$1,920,207	$29,699,255
2033	$12,925,685	$7,563,525	$0	$0	$3,132,756	$4,308,244	$1,237,790	$2,004,814	$31,172,815
2034	$13,571,970	$7,941,702	$0	$0	$3,289,394	$4,523,656	$1,299,679	$2,093,651	$32,720,052
2035	$14,250,568	$8,338,787	$0	$0	$3,453,864	$4,749,839	$1,364,663	$2,186,930	$34,344,651
Total	$53,058,400	$31,047,371	$0	$0	$12,859,592	$17,684,828	$5,080,980	$8,205,602	$127,936,772

Budget Distribution by Sector ($000)									
(4-Year)									
Cumulative Total (8-Year)	$56,643,835	$52,190,065	$0	$0	$48,121,638	$31,585,290	$10,815,313	$18,216,503	$217,572,645

Portfolio Segmentation Strategy (RA, MS, E, C&S)

Resource Acquisition

While NREN will not have any programs within the resource acquisition segment for the portfolio cycle 2028-2035, its equity and market support segments will utilize resource acquisition strategies. Because rural communities have historically received minimal participation in IOU EE programs and rely heavily on propane, NREN's RA strategy focuses on electrification pathways that support TSB goals and reduce long-term energy burdens. NREN prioritizes the use of downstream rebates, participating-contractor direct install, and NMEC-verified whole-home and whole-facility upgrades, ensuring customers can implement deeper, multi-measure projects. These strategies are supported by NREN's Energy Career Education and Training program and Energy Upgrade Financing program, which encourage RA-eligible installations such as heat pumps, HPWHs, envelope improvements, and high-efficiency appliances.

Additionally, NREN's residential, non-residential, and public sectors will also support the resource acquisition segment. NREN's residential programs will increase the number of electrification upgrades and NMEC whole-home projects completed in NREN's region. Non-residential and public facilities will receive energy audits and project development assistance, enabling deeper retrofits. To maximize cost-effectiveness and address rural market diversity, NREN deploys a mix of Strategic Energy Management (SEM), NMEC, deemed measures, custom calculations, and direct install across sectors. Through this

integrated approach, NREN is supporting the goals of the resource acquisition segment to deliver robust savings, high TSB, and equitable access to deep decarbonization across NREN's rural territory.

Market Support

NREN's Energy Career Education and Training program is segmented as market support, and NREN's equity programs also utilize market support strategies to meet the MS sub-objectives:

Sub-Objective #1: Demand

NREN increases demand for energy efficiency and electrification upgrades through education, market awareness, and community-based engagement, especially in rural, tribal, and underserved communities that have historically lacked access to energy efficiency information. Key activities for NREN to achieve this sub-objective include:

- Educating contractors on electrification technologies and rural-appropriate energy efficiency measures.
- Energy Advisor services that provide energy usage education and IDSM linkages to customers, including resources for energy storage and solar.
- Community-driven outreach using trusted local organizations, including CBOs, tribal governments, and county agencies.
- Energy efficiency kits and other direct-engagement tools that raise awareness and energy savings opportunities.
- Targeted marketing to propane users, small businesses, and public/tribal facilities to increase awareness of electrification benefits.

Sub-Objective #2: Supply

NREN's strategy for sub-objective 2 is to focus on building and expanding the local rural contractor ecosystem, a significant barrier to energy efficiency adoption within NREN's region. Key activities for NREN to achieve this sub-objective are:

- Upskilling the rural workforce by training contractors on heat pump installation, heat pump water heater and electrification approaches, weatherization and envelope improvement, NMEC protocols and documentation, and energy code requirements.
- Partnering with community colleges, tribal training programs, and WE&T experts to strengthen the supply of skilled labor.
- NREN also works with local vendors to educate them on available incentives to help encourage them to make available more energy efficient appliances and equipment.

Sub-Objective #3: Partnerships

NREN will build partnerships with organizations to provide training to contractors and building professionals, in order to extend trust, reduce costs, and connect customers to opportunities they would not access independently. NREN's goal is to create a customer base that understands the importance of energy efficiency and create a workforce that can meet the needs of the customers and supply energy efficiency activities. Key activities for NREN to achieve this sub-objective are:

- Partnerships with organizations to provide training, including trade schools, community colleges, and statewide WE&T and C&S providers.
- Working with CBOs, counties, tribes, and local governments for community-based outreach.
- Partnering with CBOs and local contractors to provide energy efficiency services.

- Providing workforce development/training resources and stipends for CBO staff and local contractors.

Sub-Objective #4: Innovation and Accessibility

NREN advances innovation by making emerging electrification and EE technologies accessible to rural customers, where supply limitations and installation barriers are prevalent. Key activities for NREN to achieve this sub-objective include:

- Ensuring there are trained contractors to install EE and electrification products, including heat pumps, HPWHs, smart controls, and envelope upgrades.
- Using downstream rebates, direct-install channels, and NMEC to expand access to innovative technologies.
- Providing remote assessment tools, overcoming geographic distance and broadband constraints.
- Supporting compliance with new Title 24 standards, which accelerate adoption of low-carbon technologies.

Sub-Objective #5: Access to Capital

NREN will support rural customers in reducing financial barriers, which is a major factor in preventing the completion of EE and electrification projects. Key activities for NREN to achieve this sub-objective are:

- Trained contractors gaining access to NREN programs that offer incentives and support with loans.
- Helping contractors enroll in non-NREN programs such as GoGreen Financing.

Sectors for MS Segment

NREN's Workforce, Education, & Training sector is categorized in the market support segment, however, all of NREN's programs will support the market support segment

across residential, non-residential, and public sectors. NREN's Energy Career Education and Training program is designed to serve all sectors by training contractors and building professionals in electrification and EE technologies. The Energy Career Education and Training program will develop and expand career pathway opportunities for HVAC contractors, general contractors, plumbers, trade professionals, educators, and trainers to support market demand and increase the skill and availability of the trained workforce. While NREN's market support program will not directly serve customers in single family and manufactured homes, NREN's residential programs support the market support segment by training residents on the importance of energy efficiency, thus increasing the market demand. Altogether, NREN's programs coordinate with one another to create a demand for energy efficiency measures and training the workforce to supply that demand.

Equity

Reaching equity customers is a top priority for NREN. NREN's strategy for the equity segment includes a portfolio that is designed to deliver EE and electrification benefits to HTR, low-income, tribal, underserved, and rural communities in alignment with the Commission's ESJ Action Plan goals to increase equitable access to clean energy, improve affordability, and expand community participation in CPUC programs.

NREN's strategy reflects long-standing evidence showing rural customers face structural barriers, including high travel distances, contractor shortages, limited access to past IOU programs, and disproportionate reliance on non-regulated fuels such as propane. As a REN, NREN fills gaps where IOU programs have historically not reached rural customers. This equity segment strategy ensures that underserved groups not only access services but are able to progress from awareness to participation to deep efficiency upgrades, supporting both equity and resource acquisition outcomes.

To reach customers who have historically been underserved, NREN will partner with a wide range of trusted local entities, including but not limited to CBOs, tribal governments, local nonprofits, public education outreach centers, and faith-based organizations. This targeted outreach will reduce distrust, language barriers, and unfamiliarity with CPUC programs that have stood in the way of successful penetration in the past. When customers learn about programs through trusted entities, they are more likely to take action and complete projects, advancing both equity and resource acquisition goals. NREN's equity strategies explicitly target rural constraints that impede both equity and RA success. NREN will target the high reliance on propane and delivered fuels within its region, as well as the extreme geographic isolation requiring remote assessments and low- or no-cost upgrades. NREN's strategy is to reach customers where they are. This includes a combination of local education and outreach activities focused on in-person events, working with local decision makers, public agency staff and community-based organizations to get the word out about, and increase uptake of, our energy efficiency programs.

Equity Definitions

NREN frequently references the definitions for HTR and feels the requirements are clear. However, there are challenges with using the HTR definition. For example, collecting the information required to categorize a customer can be difficult because of reliance on customer self-reported information. Also, the geographic restrictions of HTR can disqualify communities around the Sacramento area even though they are still very isolated and rural, due to the fact that their entire counties are included in the

metropolitan statistical area.[49] For these reasons, NREN recommends using the underserved geography in addition to the HTR geographic definition.

The definition of DAC does not need further clarification since there is a mapping tool and readily available data at the census tract level. NREN appreciates that the definition for DAC has been expanded to include tribal lands as there are very few Cal-Enviro Screen defined DACs in NREN territory otherwise. NREN recommends that the definition of DACs be extended to not only include the factors in the Cal-Enviro Screen to better address air quality factors. Since air pollution is used to score communities and air quality is generally better in Northern California, communities in the region are still affected by other forms of environmental pollution from resource extraction and wildfires, and they tend to have lower incomes, and poorer health outcomes.[50] Another consideration would be to include communities disproportionately affected by climate-related natural disasters.

The definition of Underserved requires combining different sources of information and would benefit from refinement or clarification, as well as a GIS tool to make it easier to identify by census tract since that will be the geographic data that PAs are collecting. The definition could also include the areas that have not previously received services from CPUC funded energy efficiency programs using CEDARS data by zip code or census tract.

Sectors for Equity Segment

NREN's equity segment will serve the residential, commercial, and public sectors.

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[49] https://censusreporter.org/profiles/31000US40900-sacramento-roseville-folsom-ca-metro-area/

[50] Lewis, Kristin, et al. Well Being in Rural California 2023. NeighborWorks America. https://ssrc-static.s3.amazonaws.com/moa/Rural%20California%202023.pdf

Within the residential sector, NREN's Home Energy Services and Home Energy Upgrades programs serve the equity segment. The Home Energy Advisors program serves rural and underserved households by increasing energy awareness and supporting energy-saving behaviors by providing energy efficiency kits, energy assessments, educational opportunities, and energy advisor–led technical assistance, including bill and energy usage analysis, tool lending, project support, and connections to IDSM resources such as EV charging, solar, battery storage, and demand response. The Home Energy Upgrades program meets customers where they are with multiple delivery channels, including downstream rebates for energy efficient electric appliances, a participating contractor direct install program for heat pumps, HPHW, and building envelope, and an NMEC program for a comprehensive multiple measure approach. Program outreach will be focused on rural HTR customers who have not been able to participate in traditional EE programs.

Within the Commercial sector, NREN's Non-Residential Energy Services program will target multi non-residential sectors, including small HTR businesses, public and tribal facilities, and non-profit and CBO buildings. This program will concentrate on non-commercial outreach to facilities that serve equity populations.

Within the public sector, NREN's Public Energy Services program serves rural public agencies by providing equitable access, expertise, technical assistance including benchmarking, energy assessments, and funding assistance that will facilitate and advance project implementation.

Additionally, NREN's Cross-cutting Energy Upgrade Financing program will equitably support the residential, SMB, and public sectors in NREN communities through low and no cost loans that will encourage and accelerate the implementation of energy efficiency projects.

Codes & Standards

At the end of 2025, NREN closed its Codes & Standards Program and shifted C&S program activities to the WE&T program (Energy Career Education and Training). NREN's WE&T program will coordinate with IOU and statewide C&S programs to facilitate participation in those existing programs. While NREN does not have an active C&S program during this portfolio cycle, its programs continue to be consistent with C&S objectives by preparing rural communities, contractors, and local governments for successful implementation of current and emerging code requirements.

NREN's entire portfolio contributes to C&S outcomes by increasing market readiness for energy efficiency and fuels-reducing technologies, sch as heat pumps, HPWHs, envelope improvements, and load-flexibility technologies that are central to decarbonization. NREN's residential and non-residential programs raise customer awareness of C&S aligned technologies, while the Energy Upgrade Financing program aims to reduce first-cost barriers that often prevent rural residents and small businesses from meeting code-related upgrades. Most importantly, NREN's Energy Career Education and Training program expands the pool of local contractors trained in electrification, Title 24 requirements, and quality installation practices to ensure that qualified contractors are available to carry out the upgrades and installations.

NREN also directly strengthens local government capacity by offering technical assistance, benchmarking, education, and support for plan review and permitting, helping rural jurisdictions stay up to date with evolving building codes. This ensures that rural areas can meet C&S expectations while benefitting from the energy, affordability, and resilience improvements associated with electrification and efficiency efforts.

Sector specific coordination for C&S

As described above, NREN's portfolio will not specifically serve the Codes and Standards segment, however, each of its sectors will support the Codes and Standards objectives. When NREN closed its C&S program at the end of 2025, the C&S activities were shifted to WE&T (Energy Career Education and Training). Consistent with the Commission's Codes & Standards segment objectives, NREN's Energy Careers and Training program will improve compliance with existing codes and standards by providing building officials, contractors, and workforce individuals with energy code trainings and resources to promote code compliance for energy efficiency projects, and by training and upskilling the workforce by implementing assessments, audits, benchmarking, installations, and other energy efficiency and electrification roles.

Chapter 7: Portfolio Coordination

Segment and Sector Specific Coordination

Coordination within the Same PA

1. Sector/segment specific coordination

NREN ensures strong coordination across all its programs, sectors, and segments through an integrated management approach designed to maintain shared equity goals, align market support functions, and deliver consistent customer experience across the entire portfolio. Equity objectives, such as prioritizing HTR rural customers, simplifying participation, and ensuring all communities' access to trusted local support, are embedded in the residential, non-residential, public, workforce, and finance programs. Cross-segment coordination occurs continuously as NREN staff work to align customer pathways. NREN ensures all programs reinforce one another, reduce service

gaps, and collectively contribute to NREN's long-term equity, decarbonization, and savings goals.

2. Program-specific coordination

To support coordination, NREN holds routine team meetings that include the portfolio lead, administrative team, and program leads for each program. These whole-team meetings ensure program updates, cross-sector issues, and customer trends are communicated consistently. Program-specific meetings occur more frequently and often include staff who support multiple programs. Outreach coordination is deliberately interconnected as NREN conducts joint marketing campaigns with other PAs and program partners to ensure residential, commercial, and public customers receive consistent messaging. Through this structured internal coordination, NREN ensures its programs function as a cohesive portfolio, maximizing participation and streamlining the customer experience across all sectors and segments.

Coordination with Other PAs

1. Coordination Participants

NREN coordinates with the following PAs, each of which intersects with NREN either geographically or through overlapping customer segments.

PG&E: NREN's entire service area lies within PG&E territory, and PG&E is the sole IOU in NREN's region. NREN and PG&E have active coordination occurring across all customer groups due to full geographic overlap. Equity and market support segment programs are included in both portfolios, but coordination is in place to minimize overlap, ensure customer needs are prioritized, and further ensure customers receive services from the program best suited to their needs without duplication. NREN intends to facilitate greater enrollment in PG&E programs where applicable.

PG&E (ESA statewide): NREN and the PG&E ESA programs overlap in the entire NREN territory within the equity segment. In accordance with Resolution E-5400, NREN developed an ESA Monitoring Plan (approved with NREN's MCAL submission), which is detailed in the section below. The monitoring plan ensures there is no duplication of services and that customers are referred to the program appropriate for their needs.

BayREN (Statewide): BayREN's statewide Home Energy Score (HES) offerings extend into NREN's territory. BayREN's statewide programs are in the market support segment. The HES program will be leveraged for consistency and to avoid duplicating efforts.

Pioneer Community Energy: Although Pioneer Community Energy does not currently administer EE programs, NREN maintains communication to ensure coordinated messaging to joint customers.

Sonoma Clean Power: Sonoma Clean Power overlaps with NREN's territory in Mendocino County. The residential equity segment overlaps between the two PAs. However, NREN and SCP maintain proactive coordination on energy efficiency kits, electrification readiness, and incentive stacking, ensuring prevention of duplication.

RCEA: RCEA is the Lead Portfolio Administrator of NREN. There is overlap in Humboldt County within the equity segment. NREN and RCEA coordinate program eligibility, messaging, and incentive stacking to ensure complementary support for customers, particularly where RCEA's local programs intersect with NREN's equity and public offerings.

Pacific Power: While there is no direct geographic program overlap between NREN and Pacific Power, NREN maintains coordination to ensure customers near service-boundary lines are routed to the correct PA and to avoid geographic confusion in outreach.

City of Ukiah: NREN collaborates with Ukiah's municipal utility to ensure coordination of incentives and avoid duplicating services within the equity segment.

REN coordination through CivicWell: RENs sought to continue building knowledge and capacity among local governments, community-based organizations, and those who support them, developing a network that currently includes over 4,000 practitioners working to advance local energy efficiency and climate action in coordination with key state goals and agencies. RENs have become key players in delivering equitable energy efficiency benefits to ratepayers. Accordingly, the RENs committed to continue jointly funding CCEC[51[1]] as a venue for local government engagement and received the support of Energy Division.

CCEC, through CivicWell, convenes the Annual California Climate & Energy Forum, bringing together local governments, state agencies, community organizations, utility and CCA PAs, and other key stakeholders to coordinate with each other, share best practices, and support local leadership in climate action. CCEC also provides local governments and other stakeholders with access to resource libraries, technical assistance, and other services.

CalREN was started in 2022 to provide a venue for REN PAs to share information, build on collective successes, and work together to coordinate and streamline activities between RENs to increase their impact and improve the cost-effective use of rate-payer funds. To further streamline efficiencies, in 2025 RENs added their CalREN services to the CivicWell contract to enhance coordination and create additional cost savings.

[51[1]] BayREN's Annual and Bi-Annual Budget Advice Letters, commencing in 2021, as well as the 2024-2031 Business Plan filing all discussed BayREN's support of CCEC. See page 9 of BayREN's 2021 ABAL and pages 31 and 44 of BayREN's Portfolio Plan Testimony for examples.

Starting in 2027 and for the Business Plan period, the CivicWell contract covering both CalREN and CCEC activities will be budgeted consistently by all REN PAs, with costs divided between the Administration (85-100%) and Marketing (0-15%) categories, as applicable.

2. Coordination Structure and Frequency

NREN maintains a mapping of customer segments, sector programs, and PA territories to identify potential overlap of programs. NREN regularly coordinates with PAs to ensure customer needs are being met without duplicating efforts. NREN also coordinates with other PAs via ad hoc meetings. NREN is committed to open and efficient communication in order to coordinate with other PAs.

D.18-05-041 requires PAs to submit a Joint Cooperation Memorandum (JCM) between EE PAs with overlapping service areas. Throughout 2025, NREN and PG&E collaborated to develop its first JCM to coordinate programs, and this JCM was filed on October 27, 2025. NREN's service territory overlaps with PG&E's territory, leading to the JCM between NREN and PG&E.

In developing the JCM, PG&E and NREN established a process for coordinating between their respective programs. Decision trees were developed for each program to describe the process to decide which program is appropriate per customer. NREN and PG&E continue to coordinate together to ensure there is no program duplication. The cooperative efforts ensure that NREN's customers are receiving complementary, but not duplicative, services, enabling NREN to fill gaps in coverage while PG&E continues to administer its statewide and core utility programs.

NREN coordinates with PG&E regularly to ensure efficient coordination is taking place. NREN coordinates with other PAs on an ad hoc basis before program launches to

ensure efficient coordination. NREN remains communicative and responsive to all PAs to ensure customer needs are being met without duplication.

Program leads and portfolio leads on NREN's side are involved in all coordination processes. The counterpart roles at other PAs typically include program leads or program teams whose expertise support coordination.

3. Coordination Practices (Overlap Identification and Mitigation Workflow)

NREN upholds the intent of the advice letter SoCalREN 20-E (required by D.23-06-055, OP 32) to avoid substantially similar or duplicative programs. NREN avoids program overlap with other PAs by mapping customer segments, sector programs, and PA territories to identify potential overlap of programs. "Substantively similar" refers to programs serving the same customers with the same measures in a similar manner. For resource acquisition, substantively similar programs mean the end use and measures are the same. For market support, substantively similar programs have similar demand, supply, partnership, innovation, and accessibility characteristics. For equity programs, substantively similar programs have similar characteristics in addressing disparities in access, promoting resilience, health, safety, affordability and/or energy savings, reducing GHG and pollutant emission, and providing workforce opportunities. "Duplicative" programs are substantively similar programs that do not have meaningful differentiators. To comply with this requirement, NREN applies explicit criteria during program design and ongoing operations to ensure its offerings are gap-filling rather than duplicative.

NREN screens for potential overlap using the following criteria:

- Customer Segment Overlap: If a PA overlaps in the same sector or if the PA already effectively reaches NREN's target audience

- Delivery Mechanism Overlap: If a PA is offering the same delivery mechanism to the same audience
- Measure and Technology Overlap: If measures offered by another PA within the same geography are identical to NREN's

To uphold the intent of OP 32, NREN maintains ongoing coordination with PAs to ensure customer needs are being met without duplicating efforts. Coordination is done through ad hoc meetings or more regular meetings depending on the level of coordination required. All decisions are documented through JCM updates, bilateral memos, or internal coordination logs.

If overlap is confirmed or likely, NREN can use eligibility adjustments to prevent duplication. This may include narrowing NREN eligibility to underserved groups (tribal, rural HTR, propane users, etc), to target customers outside the geographic or market scope of other programs.

4. Coordination with Market Transformation

NREN's approach to Market Transformation (MT) heavily aligns with the Disadvantaged Communities Advisory Group's (DACAG) guidance. DACAG emphasizes that clean energy program benefits must reach disadvantaged, tribal, and rural communities, and that agencies should prioritize equitable distribution of funding and resources. NREN applies these principles by acting as a local resource for rural customers to access MT initiatives. As highlighted in the DACAG framework, it is important for NREN to provide equitable regional access to its territory to ensure that MT initiatives do not inadvertently deepen inequities by being accessible to only urban markets.

Market transformation initiatives most relevant for NREN are heat pumps, heat pump water heaters, and weatherization. TECH Clean California had the goal to accelerate heat pump adoption statewide through incentives, training, market support, and pilots.

However, as of early 2026, TECH incentives have become fully reserved and TECH funding will not be replenished.[52] Aligned with DACAG recommendations, NREN strives to increase access to clean energy technologies for underserved customers by providing access to direct install programs and resources for electrification.

5. Coordination with Energy Savings Assistance (ESA) Programs

Following D.24-09-031, Resolution E-5400 ordered NREN to develop an Energy Savings Assistance Program Overlap Monitoring Plan in its mid-cycle advice letter (filed November 04, 2025, and accepted December 31, 2025). The purpose of the monitoring plan is to ensure there is coordination between NREN's programs and ESA, and limit any overlap that may exist. NREN's ESA monitoring and coordination plan is detailed below:

NREN has established a coordination protocol between its Home Energy Advisors program and PG&E's ESA program in the Joint Cooperation Memo between NREN and PG&E (submitted 10/27/25). This plan is listed below:

NREN program team will initiate regularly scheduled program coordination calls with PG&E programs teams and local ESA implementers. Ad-hoc meetings will also be scheduled to accommodate the need to resolve any urgent issues that might arise. Standing agenda items may include program updates, uptake, challenges, contractor issues, data sharing, double dip prevention processes, and marketing campaign plans. NREN and the ESA team at PG&E have also agreed on a referral and follow-up process for customers. Although residential resource and non-resource programs are listed in separate sections, in the regular coordination calls, the entire residential sector will be discussed holistically to ensure coordination across all customers.

[52] https://techcleanca.com/incentives/ Incentives – Fully Reserved

The key differences between the NREN Home Energy Advisors program and the ESA program include:

Geography: ESA and Energy Smart Homes serve all of PG&E territory while NREN programs only serve the 17 counties within NREN territory.

Customers: The NREN program will primarily target underserved, HTR, and tribal customers, which may include low-income customers. The ESA program serves only income qualified customers. Where a customer qualifies for both programs, the NREN program will only provide services that are not provided by the ESA program. These services will be established through coordination with the ESA program as described in the next section. The NREN Program will then make a referral to the ESA program on behalf of the customer and follow up on services. If the customer cannot be served by ESA, they may refer the customer back to NREN for additional services.

To monitor coordination, NREN will coordinate with PG&E to keep track of the number of customers, and which program each customer is referred to. NREN will request the results of the referrals from PG&E and follow up as needed. NREN will report on this data in its 2025 Annual Report.

6. Coordination with Other Demand Side Programs

NREN will integrate EE and broader IDSM objectives by educating customers and contractors on compatible load-flexible technologies and establishing referral pathways to DR programs where appropriate. Within NREN's programs, NREN will identify DR-ready homes and small businesses receiving EE upgrades and guide them to available DR enrollments to capture additive grid value without duplicating program administration.

Community Choice Aggregators (CCAs) serve a vital role in customer engagement and service. NREN is currently coordinating with the CCAs within NREN territory, including Pioneer Community Energy and Sonoma Clean Power. This coordination includes cross promotion and layering NREN measures with CCA-funded programs when available. Redwood Coast Energy Authority is a Governing Partner and Lead Portfolio Administrator for NREN, so coordination is natural with RCEA's non-NREN programs such as clean transportation initiatives. With the addition of Yolo County, a fourth CCA, Valley Clean Energy will be added to NREN territory.

NREN is currently coordinating with the CEC Equitable Building Decarbonization (EBD) Direct Install program in the northern region of California. NREN staff have had preliminary meetings with the EBD program team to help facilitate CBO, customer, and contractor recruitment. NREN staff are also working to connect the EBD team with tribal communities. As of the development of this business plan, most of the EBD efforts have been in the southern and metropolitan areas of the state. NREN staff's ongoing communications with the EBD team are focused on ensuring that the program reaches the northern rural regions. Once the program begins implementation, NREN will align its participating contractor direct install channel with the CEC EBD program to cross-train and onboard NREN contractors into EBD and refer income-qualified households to eligible census tracts to EBD where EE upgrades are available. NREN will coordinate its outreach efforts and messaging, so customers are made aware of the integrated EE pathway rather than multiple competing offers. Because EBD is regionally administered and prioritizes low-income, disadvantaged, and tribal communities with no-cost electrification retrofits, alignment with NREN's rural programs will expand contractor capacity and accelerate equitable decarbonization without duplicating services.

NREN and EBD are planning on maximizing customer value through cooperation, cross-referrals to each other's programs, and layering of incentives. EBD currently plans on launching in Humboldt County in late 2026 or early 2027 and expanding throughout other NREN regions into the new business plan cycle. EBD preliminary estimates are for up to 300 single family homes and 170 apartment units within NREN territory.

Additionally, NREN is currently in communications with the CEC EBD Tribal (EBD Tribal) Direct Install program. The EBD Tribal program set aside funds for a tribal-focused subprogram of the EBD program and will serve buildings in California owned or managed by California Native American tribes or California tribal organizations, and buildings owned by members of California Native American tribes, with the goals of reducing GHG emissions and advancing energy equity. These goals align directly with NREN's portfolio goals, and NREN intends to connect its network of tribes to this program. This program has not yet launched, but when applications are released (expected Spring 2026), NREN will leverage its tribal network to share the benefits offered by this program.

NREN partners are committed to supporting the unique needs of their rural communities beyond CPUC-funded programs. The need for panel upgrades has been identified as a barrier toward electrification in rural communities, both because of the expense needed to conduct the upgrade and the limited capacity of the utility grid to accommodate service upgrades. Approvals [from whom?] for upgrades can be delayed by many months or not approved at all. RCEA participated with Build-It-Green in the CARB-funded development of a panel optimization and right-sizing tool designed to avoid the need for costly upgrades by more accurately calculating the actual predicted loads. RCEA participated in participant recruitment surveys, and reviews of the tool.

The needs of rural Californians that currently rely on unregulated fuel for heating and other uses have long been underserved in rural California. Because of the difficulties in tracking usage data, electrification programs have often been unable to account for real savings from fuel switching, and as such, these customers have been excluded from incentives available to other Californians seeking to reduce their dependence on fossil fuels. NREN partner agencies participated in a CEC-funded Propane Utilization Study to learn more about how NREN can work hoping to overcome these data gaps with the goal of better tracking propane use. NREN staff led participant recruitment in the Northern California region, helped develop survey tools and reviewed responses and final reports.

Chapter 8: Stakeholder Engagement

Stakeholder engagement is an important part of the BPA development process. As NREN was approved at a later date than the majority of PAs, the primary focus of recent engagement with stakeholders was focused on current program development which then informed the development of the application for the 2028-2031 portfolio cycle. As stated above in the Community Engagement sections, NREN did several needs assessments and as of the time of this filing completed a non-residential needs assessment that covered both the commercial and public sectors, as well as a gap analysis on financing with contractors. The non-residential recommendations included covering at least 50-100% of costs for HTR customers to increase uptake of measures, use delivery approaches that differ from IOUs, and simplify access via local resources. The study also found that public agencies are often reactive rather than proactive. The financing gap analysis found that there is low uptake of existing financing programs within rural, Northern California customers. Additionally, there were adverse impacts from the removal of federal grants, incentives and tax credits as contractors found

customers need incentives to be motivated to take on projects. The study also found that incurring debt for low-income customers is not a good solution for NREN communities.

As with the community engagement, NREN followed both informal and formal processes for gathering feedback. Many informal meetings where the current programs and application were discussed include community events where feedback was gathered on the Energy Career Education and Training program. There were approximately 10 events and the feedback included a desire for more HVAC, heat pump, building science, and energy management training as well as career pathways following training.

For the public programs, NREN was able to gain access to public agency feedback as two NREN partners manage Local Government Partnerships and three NREN Partners are joint powers agencies with boards made up of representatives from local government agencies and tribes. The responses received included favorable feedback and interest in participating in the programs. Lake County elected officials look forward to learning more about what future NREN specific tools and resources will be available for the County, the two incorporated cities and several school districts. The RCEA Community Advisory Committee (CAC) supported the application and encouraged engagement with local agencies, particularly when it came to workforce development.

NREN also engaged with BayREN on its statewide Home Energy Score California program and found that RENs could benefit from working together. NREN could provide marketing and outreach for the program and enroll local contractors, CBOs, and staff into assessment training. BayREN could offer in-person training sessions within NREN territory. NREN could then leverage the trained home assessors to provide Home Energy Score assessments and reports for their customers and utilize the report recommendations as a pipeline into the Home Energy Upgrades program.

NREN also participated in formal stakeholder engagement, including presenting portions of its BPA strategy to CAEECC at the BPA "formal consult" meeting in December 2025 and attending the Energy Advisory Committee in February.

At the CAEECC Formal Consult meeting, NREN presented strategies for this BPA, including its priority for community-based design, as evidenced by its plans for a market characterization study and a non-residential needs assessment. These studies allow NREN to learn directly from its communities about how to improve or expand its programs and services. Additionally, NREN discussed its plans to re-segment its two resource acquisition programs to be equity programs instead, a decision that allows NREN to focus on equity customers and provide equitable access to energy efficiency. While NREN did not receive any questions or comments on its strategies at the CAEECC Formal Consult, NREN remains collaborative and aligned with the efforts of CAEECC.

These efforts also include aligning with the CAEECC Equity Advisory Committee's (EAC) recommendations. NREN remains present and active in EAC's meetings in an effort to promote equity throughout its portfolio. NREN's portfolio strategies, detailed in Chapter 3 of this BPA, are centered around equity and considers the EAC's recommendations from its initial memo (dated 12/19/2025). For example, NREN integrates the recommendation to "streamline eligibility to reduce participant burdens and advance equitable outcomes" throughout its programs by offering program support and referrals. NREN's policy recommendation to include propane customers in fuel switching also advances this recommendation from EAC and would be integral to reaching more equity customers. Since the first memo, NREN has actively participated in following EAC meetings and will continue participation. NREN considers the EAC's recommendations and remains engaged with the committee to more equitably serve its customers.

NREN staff gave a presentation to the City of Blue Lake on February 10, 2026 at an open City Council meeting. The City of Blue Lake is a small, rural community of under 1200 residents. Previously a thriving logging town, the City's population has aged and there are few, if any, economic activities available. The City was also the site of a long-running wood biomass power plant, which contributed to poor air quality and was the subject of significant controversy when the owners attempted to restart it. The City has been exploring avenues to repurpose the facility for positive community impact. Positive feedback was received at the City Council meeting on both NREN's current activities and planned 2028-31 business plan, for which the council provided a letter of support. The City Council asked questions about how NREN would be able to assist with the City's GHG reduction goals and general operating expenses. The public also expressed concerns about rising energy costs and asked how NREN could help. HVAC upgrades and weatherization were prime needs expressed. The public also commented on how difficult it could be to access any programs to assist with energy efficiency and that there were long waits for service, if it ever arrived. This led to a general lack of trust with agencies or contractors from outside the community making promises. These concerns were already at the forefront of NREN's goals, and the fact the NREN staff member presenting to the Council was a known and trusted member of the community helped bridge those gaps. Finally, one community member expressed the need for ease of access to programs. Community members had experienced lengthy and complicated application processes with little support. NREN is incorporating this feedback by streamlining its application process and allowing multiple avenues for rural citizens to benefit from its programs.

On February 23, 2026, NREN staff met with staff from the Blue Lake Rancheria (BLR), a federally recognized Native American tribe that has been a leader in clean energy and resilience efforts. NREN provided a summary of proposed programs and activities and

received feedback. Discussion focused on partnerships to better serve tribal members and communities throughout NREN territory. BLR staff described a need for more contractor training specific to working within tribal communities. Development projects within and around tribal communities have often been associated with negative outcomes, ranging from lack of economic opportunities and growth for tribal governments and members, to a tragic rise in incidences of Missing and Murdered Indigenous Persons (MMIP). As a result of this meeting, NREN has committed to co-sponsoring a *Pathways to Trust* workshop for developers put on by the Alliance for Tribal Clean Energy.[53] Furthermore, NREN's Energy Career Education and Training program will partner with BLR's Tribal Electrician's Pre-Apprenticeship Training Program to provide more pathways for tribal members to participate in clean energy careers. BLR has provided a letter of support for NREN's BPA.

On February 9, 2026, NREN met with Senator Mike McGuire's staff to receive feedback on the business plan. The Senator's staff emphasized the current energy affordability crisis and how difficult it is for community members to focus on energy upgrades when they are struggling to pay their bills. NREN is responding by including higher equity incentive tiers in all its eligible programs. Senator McGuire has provided a letter of support for the NREN BPA.

On January 10, 2026, NREN staff participated in meetings and a volunteer clean up in the community of King Salmon, a small, lower income town on the coast of Humboldt Bay that was heavily impacted by coastal flooding during this year's king tides. In addition to meeting with community members, NREN staff also had the opportunity to meet directly with Assemblymembers Chris Rogers and Damon Connolly. Residents of the community incurred significant damage to their homes and many appliances were

[53] https://tribalcleanenergy.org/preferred-provider-program

lost. NREN staff shared resources for rebates, but many residents replied that the incentives were not high enough and they did not have time to shop for qualifying Energy Star appliances when they had no way to heat water, cook, or store their food. While RENs are not set up as emergency response providers, meeting with community members at such a challenging time and assisting however able is a means to increase trust and build lines of communication. The idea of an appliance lending program was discussed, and NREN will explore if there are possibilities of incorporating it into its existing offerings. This also emphasized the need for higher equity incentives, broadening the definition of equity customers to include those impacted by natural disasters, and streamlining the application and processing of incentives so customers who may be experiencing multiple challenges do not need to wait as long for incentive payment. It also underscored the importance of access to eligible, affordable appliances in the region. Both Assemblymembers Rogers and Connolly are providing letters of support for NREN's BPA.

Addressing stakeholder feedback

NREN values the feedback received from stakeholder engagement. Much of the engagement was done prior to drafting the application, but strategies proposed for the application were adjusted based on insights from stakeholders. Some highlights of the input integrated into the application include:

- The Energy Career and Education Training program will partner with CBO providers such as educational institutions, tribes, and industry associations to deliver skill building curriculum and provide pathways into the workforce.
- The Public Energy Services program will provide technical assistance for climate and electrification planning to help agencies become more proactive and then support accessing funding opportunities to make those plans into reality.

- The Energy Upgrade Financing program will provide technical assistance to support existing financing programs such as OBF and Go Green Financing, enrolling local contractors and credit unions into the programs.
- Across all programs, local trusted resources will be utilized, program enrollment simplified, and costs of entry reduced for participants.

Chapter 9: Evaluation, Measurement & Verification

NREN currently serves 17 rural counties in Northern California, which are divided into two non-contiguous sections, Humboldt, Mendocino, and Lake Counties to the west and 14 Sierra Nevada counties reaching to the eastern border of the state. One of NREN's founding principles was to deliver service to eligible customers in these remote Northern California regions that have been isolated from and underserved by existing statewide and IOU energy efficiency programs. NREN's current service territory does not include all rural Northern California customers, and since its inception, NREN has received interest from some of these still unserved areas to bring NREN programs there, including from areas outside of PG&E service territory such as the northern- and eastern-most portions of the state. NREN believes that bringing services to the most rural HTR areas of the state is an important equity issue, while also being realistic about its own capacity for rapid expansion.

In furtherance of reaching these goals, NREN has decided to include Yolo County in its service territory beginning in the 2028 business plan cycle, to be served by existing staff at the County of Yolo, as well as portions of Trinity County that have been served by RCEA through other programs in the past. NREN plans to conduct a *Market Characterization and Needs Assessment* in the remaining areas of Northern California eligible to receive services under CPUC administered energy efficiency funds. Figure 6 shows the planned *Market Characterization and Needs Assessment* area. This assessment

will analyze access to existing services, identify and coordinate with community-based organizations, local governments, and tribes; determine the sectors with the greatest needs and how they might be best served; and develop a road map to either serving them through NREN-delivered programs or facilitate other service providers that might be able to more effectively offer programs. If there is sufficient interest from customers and local representatives, NREN may begin to offer some of its remote services such as downstream rebates and phone-based assessments to these customers if the results of the *Market Characterization and Needs Assessment* determine that to be a viable option. *The Market Characterization and Needs Assessment* will be funded through NREN's EM&V budget.

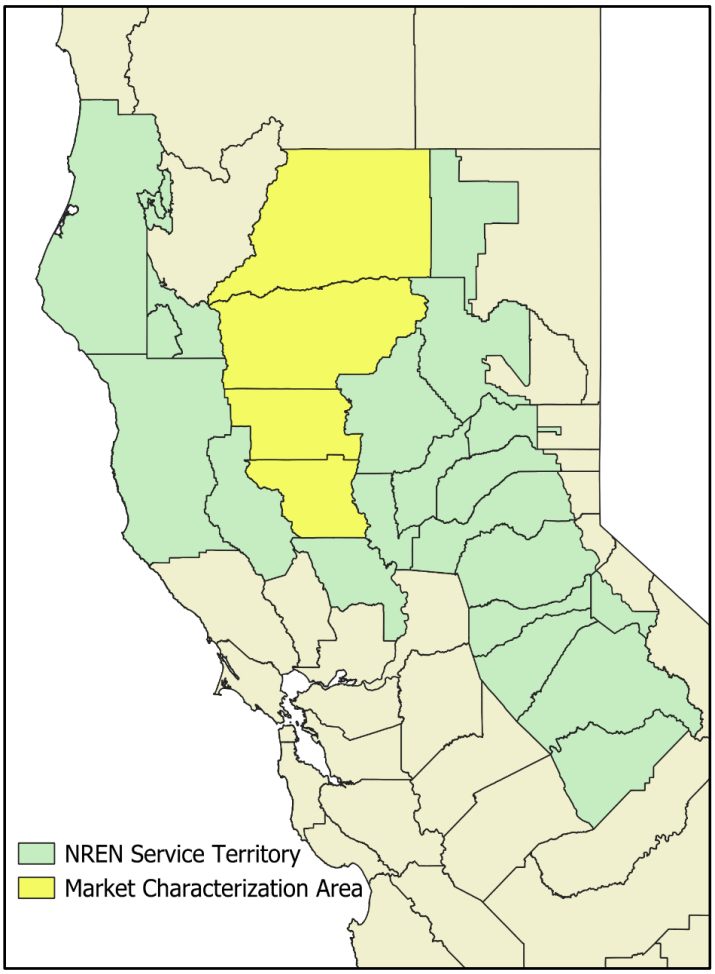


Figure 0-6: NREN Service Territory and Market Characterization Area

Furthermore, NREN has had preliminary conversations with Pacific Power and Liberty Utilities on strategies to best align services to ensure all rural Northern California communities are equitably served. Customers in Pacific Power and Liberty Utilities territory are served by ratepayer funds administered by the CPUC, but in a different proceeding than those in PG&E territory. While *The Market Characterization and Needs Assessment* will focus on customers in PG&E territory that could be eligible for NREN services, NREN will continue exploring options with the CPUC and other IOUs to determine how best to use ratepayer funds across all of Northern California.

Because of the recent formation of NREN, many EM&V studies are forward-looking to inform how to shape programs to best fit the region. In the 2028-2031 program cycle, NREN will also evaluate its programs by sector. PA EM&V funds will be used for a follow up residential, commercial and public sector study to complement the studies at the beginning of the program launches. NREN is developing a robust database in the existing program cycle to assist with data collection and analytics for these studies. This also allows NREN internal staff to evaluate programs on a rolling basis. NREN is requesting $985,994.60 over the four-year cycle for PA EM&V and the remaining EM&V allocation of $2,599,440.31 will be held by NREN's fiscal agent to fund CPUC evaluation.

Chapter 10: Cost & Cost Recovery (IOUs only)

Not Applicable.

Chapter 11: Recommendations for New or Modified EE Policy

Allow Fuel Switching in Energy Efficiency Programs

Policy Recommendation

NREN respectfully recommends that the Commission modify existing Energy Efficiency (EE) policy to expressly permit fuel switching from unregulated fuels (including propane, butane, and fuel oil) to regulated electric service where such switching is cost-effective, reduces greenhouse gas (GHG) emissions, and advances equity and affordability objectives.

Background and Need

NREN's service territory includes a disproportionately high percentage of customers who rely on unregulated fuels—primarily propane—for space heating, water heating, and cooking. As a result, a significant segment of NREN's eligible customer base is effectively precluded from participating in electrification-focused energy efficiency programs under current policy constraints. As demonstrated in Figure 0-1: Prevalence of Bottled and Task Gas Fuel Usage in NREN Counties, NREN counties show materially higher concentrations of bottled and tank gas usage compared to statewide averages, underscoring the structural inequity created by current fuel-switching limitations.

Under current program rules and measure package guidance, customers using propane or other unregulated fuels are generally ineligible for incentives when replacing those systems with electric alternatives, whereas customers switching from regulated natural gas to electricity may qualify. This distinction creates an unintended and inequitable barrier for rural households. This limitation is particularly consequential for NREN's HTR

customers, many of whom rely exclusively on propane for heating and cooking. In practice, these households face higher fuel price volatility, limited supplier competition, and higher per-unit energy costs than customers served by regulated utilities. Allowing fuel switching from propane to high-efficiency electric technologies can provide measurable GHG reductions, improve indoor air quality, and reduce long-term household energy burden when paired with appropriate rate design and incentives.

Accordingly, NREN recommends that the Commission authorize fuel switching for customers using unregulated fuels, subject to existing cost-effectiveness screening and emissions accounting requirements. Doing so would expand equitable access to EE funding, better align programs with state decarbonization goals, and eliminate a structural disparity affecting rural Californians.

Procedural History and Commission Record

In R.25-04-010 NREN, BayREN, 3C-REN, CCR REN, SDREN, and I-REN (collectively, the Joint RENs) filed joint comments affirmatively requesting that the Commission consider fuel switching from unregulated fuels within the scope of the proceeding. In the July 23, 2025 Scoping Ruling, the Commission expressly stated that it expects to evaluate whether EE funding should be available to encourage fuel switching from unregulated fuels to regulated fuels as part of the Natural Gas Measure Policy and Definition of Viable Electric Alternatives policy issue. This acknowledgment establishes clear procedural footing for resolving this issue in the current rulemaking.

In R.13-11-005, parties previously requested that non-utility fuels such as propane and fuel oil be incorporated into the Commission's fuel-switching framework and evaluated under the three-prong test, noting the potential for GHG reductions and alignment with

California's climate objectives.[54] In D.19-08-009, the Commission recognized the importance of fuel switching policy but deferred comprehensive resolution to subsequent proceedings, including the Building Decarbonization rulemaking (R.19-01-011).[55] The present rulemaking provides the appropriate venue to resolve this longstanding policy gap.

Implementation Barriers Under Current Measure Guidance

NREN's portfolio relies in part on deemed measure packages to deliver cost-effective and administratively streamlined programs. Under prior guidance, NREN could apply a "normal replacement" measure application type in cases where existing equipment did not match the electric base case or where no comparable equipment existed. In such cases, programs conservatively claimed only the incremental electric savings relative to a standard practice electric baseline, without claiming avoided propane consumption. Recent updates to measure package rules have eliminated this pathway by requiring "like-for-like" replacements or by disallowing electric-only savings claims when replacing gas-fueled equipment. As applied, these restrictions also preclude replacements of propane systems, even when only electric savings are claimed. Additionally, several exempt measures, including building envelope improvements, exclude properties with propane HVAC systems, notwithstanding the fact that such projects generate verifiable electric savings independent of the displaced propane load. NREN has evaluated the use of Normalized Metered Energy Consumption (NMEC) methodologies; however, existing NMEC rules do not provide a framework for quantifying avoided propane consumption, and no Technical Support Document (TSB) currently exists to support such savings

[54] D.19-08-009 at 11.
[55] Ibid., at 12.

claims. The absence of a methodology effectively renders these customers ineligible, irrespective of actual electric savings.

Equity, Affordability, and Policy Alignment

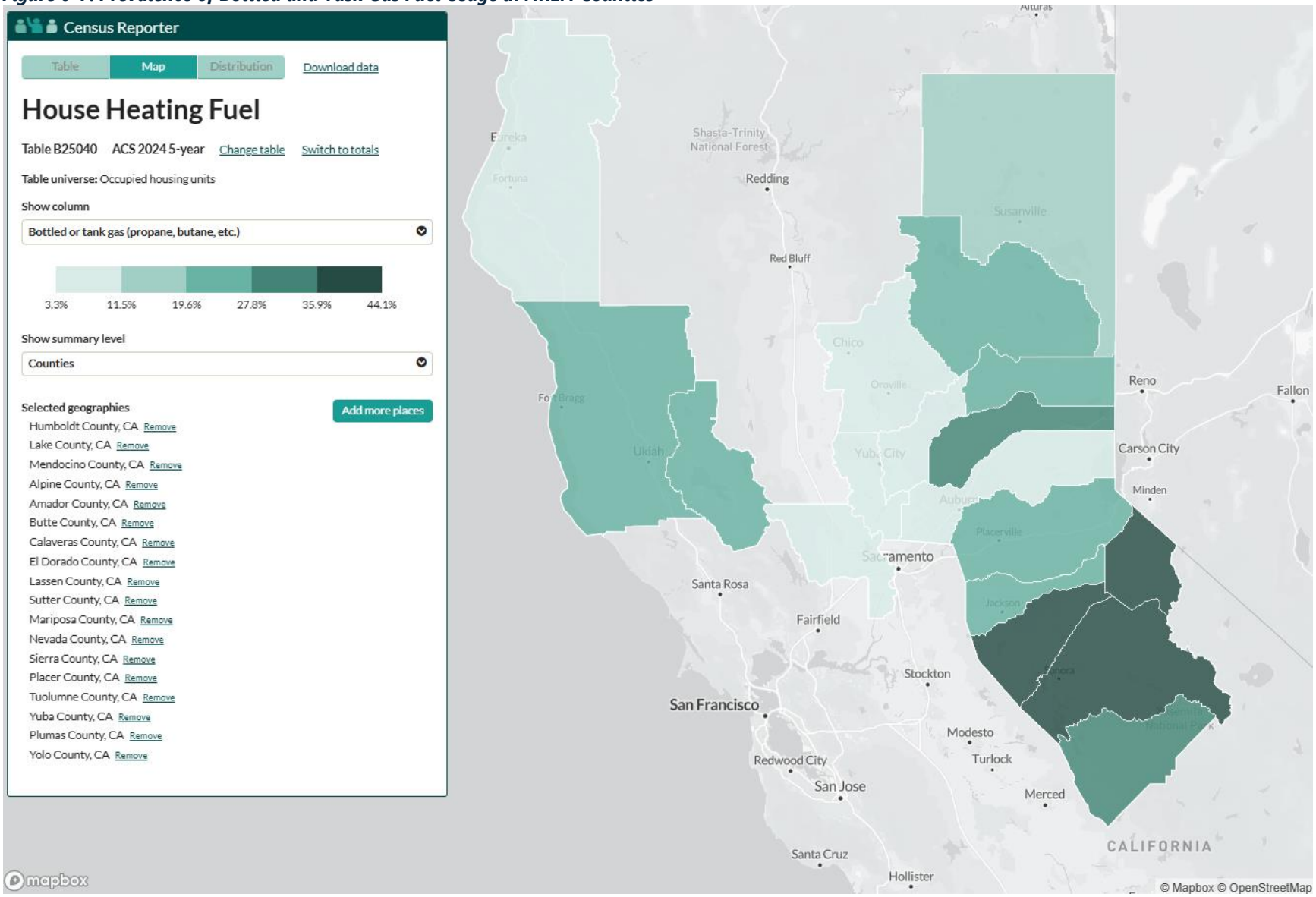
In comments on R.25-04-010, the Joint RENs urged "the Commission to address the issue of unregulated fuel switching in this proceeding and specifically address how utility ratepayer funded EE programs can offer services to customers with a mix of regulated and unregulated fuels."[56] Failing to permit unregulated fuel switching creates a disparate outcome: rural propane customers, who often face higher energy burdens, are excluded from the very electrification incentives designed to reduce emissions and long-term energy costs. This outcome is inconsistent with the Commission's equity directives, the State's climate mandates, and the objective of advancing affordability.

Given the Commission's prior acknowledgment of the importance of fuel switching policy, and the clear record demonstrating need, NREN respectfully recommends that the Commission adopt explicit guidance allowing EE incentives for cost-effective fuel switching from unregulated fuels to regulated electric service. Such action would:

- Eliminate inequitable treatment of rural and propane-dependent households;
- Advance GHG reduction and building decarbonization objectives;
- Support long-term energy affordability by enabling high-efficiency electric technologies; and
- Provide clear implementation guidance to Program Administrators and RENs.

[56] Joint REN Comments on R.25-04-010 Energy Efficiency Order Instituting Rulemaking at 8.

Figure 0-7: Prevalence of Bottled and Task Gas Fuel Usage in NREN Counties



Address Equity Gaps in Deemed Measures

Policy Recommendation

NREN respectfully recommends that the Commission modify the deemed measure framework to:

- Permit RENs to use expired or prior versions of deemed measure packages for equity-focused programs where appropriate;
- Direct prioritization of measure development that incorporates equity, fuel substitution, and non-energy benefits ("NEBs") alongside cost-effectiveness; and
- Ensure that the DEER update process evaluates equity and decarbonization impacts before measures are expired or discontinued.

Background on the Deemed Measure Framework

The California Electronic Technical Reference Manual (eTRM) contains approximately 180 deemed measures, developed and updated by Lead Program Administrators (Lead PAs) and approved by the Commission. Approved measure packages form the basis for reporting installations through the California Energy Data and Reporting System (CEDARS) and are used to substantiate monthly, quarterly, and annual portfolio performance reports to the Commission. Measures periodically expire or are not renewed when they no longer meet IOUs cost-effectiveness thresholds or portfolio optimization criteria. As IOU portfolios are subject to strict cost-effectiveness requirements, measure development and renewal decisions are primarily driven by total resource cost performance and portfolio savings maximization.

Structural Equity Gap for RENs

RENs by contrast, are not subject to the same portfolio-level cost-effectiveness requirements and are instead evaluated on broader statutory and Commission-directed

objectives, including equity advancement, non-energy benefits, market transformation, and fuel substitution. Because RENs pursue objectives beyond first-order cost-effectiveness, equity-focused programs would materially benefit from the ability to use expired or prior versions of measure packages where such measures remain technically valid and aligned with community needs. In addition, the Commission should prioritize development of new or revised measure packages that optimize not only energy savings and cost-effectiveness, but also fuel substitution impacts, health and safety improvements, and other equity indicators. Currently, CEDARS reporting captures only deemed savings metrics tied to active measure packages. As a result, important equity achievements, particularly in DACs, HTR, underserved, low-income households, and rural territories, are not fully reflected in claims reporting, and some participant groups remain unserved when their needed measures are no longer available within the deemed framework.

Addressing these equity gaps is increasingly urgent as the Commission advances efforts to track and potentially incorporate NEBs and other equity indicators into portfolio performance metrics and goal-setting. Without structural adjustments, the deemed framework may unintentionally undermine the Commission's evolving equity objectives.[57]

Illustrative Example: Clothes Dryer Measure Packages (SWAP014-04)

A concrete example is the clothes dryer measure package (SWAP014-04). At present, there is no approved deemed pathway for replacing a gas clothes dryer with a standard electric resistance dryer (i.e., non–heat pump). In NREN's rural territory, where panel capacity, housing stock, and cost constraints may limit immediate adoption of heat pump dryers, the absence of a gas-to-electric resistance pathway prevents incremental

[57] D.23-06-055 Ordering Paragraph 19.

electrification progress. Allowing this substitution would demonstrate measurable movement away from direct combustion appliances and toward electrified end uses. Such substitutions would also generate non-energy benefits, including improved indoor air quality, reduced combustion-related safety risks, and increased alignment with California's long-term building decarbonization goals. The Commission's EM&V Group A Regional Energy Networks, Program Year 2022 Evaluation Study recognizes the unique role RENs play in advancing equitable decarbonization outcomes:

> RENs are in the unique position of being able to support more effective CPUC policies and California's larger decarbonization goals through innovative solutions and scalable activities. For this reason, RENs should consider increasing efforts to create a pathway to electrification such as higher incentives and rebates, varying levels of incentives, and equity-focused multipliers that target low-income participants, DACs, and environmental justice areas.[58]

The current deemed structure, however, does not consistently provide the necessary measure pathways to operationalize these findings.

Policy Alignment and DEER Process Recommendation

While certain equity-oriented measures may not yield the highest deemed savings values or meet strict cost-effectiveness prioritization criteria, they remain aligned with Commission directives related to equity, decarbonization, and market support in underserved communities. Before measures are expired, deprioritized, or materially modified, their value should be evaluated not only on energy savings metrics, but also

[58] EM&V GROUP A Regional Energy Networks, Program Year 2022 California Public Utilities Commission CALMAC ID: CPU0372.01 at page 106.

on their contribution to fuel substitution, electrification pathways, NEBs, and service to DACs, rural, and environmental justice communities. NREN recommends that the Commission direct staff and Lead PAs to incorporate this equity-focused review into the next Database for Energy Efficiency Resources (DEER) update cycle (DEER2028, E-5152), including explicit consideration of equity and fuel substitution impacts when measures are updated or proposed for expiration.

Absent targeted reforms, the deemed measure framework, while administratively efficient for IOUs, risks reinforcing inequities by limiting REN access to measures necessary to serve rural, low-income, and propane-dependent households. Modifying the framework to account for equity, NEBs, and fuel substitution impacts will better align reporting structures with the Commission's stated policy objectives and ensure that all Californians can equitably participate in the clean energy transition.

Allow Rebates Higher Than Incremental Costs Gaps

NREN is finding programs designed for HTR participation require higher incentives to overcome market barriers across many implemented energy efficiency measures. Rebating only the cost to get higher efficiency equipment above code is not the reality of many HTR participants. They typically have equipment below current code and the full cost to complete the work is higher than only incremental costs. Previous guidance in Decision D.06-06-0632 Energy Division (ED) recognized only "limited instances for program design purposes where the cash rebate to the customer exceeds the measure installation cost". However, exceptions have only been allowed on a per measure basis to-date for fuel substitution programs per the May 16, 2024 memorandum with the subject "Revised CPUC Guidance Requiring Addendum to Measure Package Documenting Rebate Greater than Incremental Measure Costs". NREN proposes approval of a more overarching exception for programs that target HTR participants as

this would reduce administrative burden and allow for increased program participation and increased program results.

Equity Definition

The Commission has long acknowledged both the need and the priority of serving ratepayers that are HTR and are underserved by programs. The current HTR definition, however, excludes large swaths of populations that face significant barriers to program participation, including but not limited to individuals with Access and Functional Needs (AFN), communities impacted by climate-related natural disasters, and counties included in metropolitan statistical areas that meet the underserved definition.

In D.23-06-055, the Commission explained that the purpose of the equity segment within the Energy Efficiency portfolio segmentation framework is to provide programs to hard-to-reach or underserved customers and disadvantaged communities in advancement of the ESJ Action Plan. The objectives of the equity segment rely on three distinct, but related, customer criteria:

- Hard-to-Reach (HTR) – a barrier-based test incorporating a geographic criterion and additional criteria such as income qualification (CARE, ESA, or FERA), housing type (multi-family and mobile home tenants), language, and split incentive conditions.[59]
- Disadvantaged communities (DACs) – a subset criteria of HTR geographically identified pursuant to Health and Safety Code Section 39711. (D.23-06-055 at 50.)
- Underserved customers – defined by statute as members of an underserved community pursuant to Public Utilities Code Section 1601(e).[60]

[59] D.23-06-055 Conclusions of Law 33

[60] D.23-06-055 at pp 45–48

While the current geographic HTR criteria also overlaps with DACs, it does not include underserved customers as defined above.

As described in the equity segment strategies in Chapter 6, the geographic restrictions of HTR can disqualify communities around the Sacramento area even though they are still very isolated and rural, due to the fact that their entire counties are included in the metropolitan statistical area. For these reasons, NREN recommends using the underserved geography in addition to the HTR geographic definition.

Also excluded are AFN individuals. The Commission identified collaboration with and understanding the needs of this group to be a critical topic for consideration in Version 2.0 of the CPUC Environmental & Social Justice Action Plan (ESJ Action Plan).[61] The addition of this group into the HTR definition would be a natural expansion of the definition as there is significant overlap between the two definitions. Adding AFN to the HTR definition would break down an existing regulatory silo and would likely result in more targeted programming to this population who fall within the primary purpose of equity segment programs.

NREN additionally requests that the commission consider adding communities that are impacted by natural disasters be included in the geographic definition for HTR. Increased natural disasters, such as wildfires, severe storms, and coastal flooding, are some of the most visible catastrophic results of the climate crisis caused by our reliance on fossil fuels. Entire communities can be devastated for years or generations. Just as negative impacts to communities experiencing poor air quality from local emissions need to be addressed through ESJ and equity considerations, so do communities experiencing negative impacts from global GHG emissions.

[61] CPUC Environmental & Social Justice Action Plan, Version 2.0, p.4.

REN Total Benefit Metric

NREN supports SoCalREN's development of an accountability framework that utilizes a non-energy benefits calculator to establish a standardized metric for setting annual portfolio goals and tracking REN performance.

While the current TSB metric captures essential grid impacts, it does not account for the extensive participant, partner, and community benefits that are central to the mission of the RENs as well as alignment with CPUC Equity mandates. To ensure a comprehensive evaluation of portfolio performance, SoCalREN has developed a *proposed* specialized benefits calculator (REN Benefits Calculator Tool) to output a REN Total Benefit (RTB) metric providing a more comprehensive picture of ratepayer value.

NREN recommends the Commission direct SoCalREN to initiate a stakeholder working group for feedback. NREN requests the Commission include other RENs in the testing and development process for this calculator.

Funding Cliff

NREN would like to bring up the concern about funding cliffs if this becomes necessary. Extending the timing of the BPA approval further into 2027 than previously anticipated would result in a funding decrease for NREN if the current guidance from D.21-05-031 is applied. The Commission has clearly recognized that "[f]unding cliffs created by regulatory delays are detrimental to the energy efficiency market and can potentially thwart long-term gains in energy efficiency."[62] For that reason, the Commission adopted an approach to avoid those cliffs in D.21-05-031, in which PAs may "continue budgets at the four-year average from the previous approved four-year energy efficiency portfolio,

[62] D.21-05-031 Finding of Fact 13.

until such time as the Commission approves a new portfolio and budgets."[63] The Commission's recognition of the detrimental effects of funding cliffs and the idea of providing guidance to avoid funding cliffs is very important and appreciated. However, NREN has a unique situation with regard to its current four-year portfolio funding.

In September 2024, the Commission modified the existing structure for the Rural Regional Energy Network (Rural REN) approved in D.23-06-055 into two separate rural RENs. D.24-09-031 approved the program budget for NREN and the Central California Rural Regional Energy Network, which modified the overall program budget approved for Rural REN in D.23-06-055. As a result, NREN's approved funding did not cover four full years, and therefore, NREN respectfully requests that the CPUC provide updated guidance for recently approved RENs in order to prevent funding drop offs.

NREN suggests using the Year 4 funding level at the conclusion of the program cycle and beginning of the new program cycle to allow for adequate funding in the event of a delay in approvals for 2028-2035 applications. An average of the 2024-2027 four-year funding cycle would not be adequate as ramp up was included in NREN's funding to account for the timing of NREN program launches. The beginning years of NREN's program cycle, when averaged across the four-year period, do not reflect a feasible amount to be used for continued funding in 2028 and beyond, and instead, NREN's Year 4 budget should be used.

[63] Ibid., Conclusion of Law 23.