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SAN DIEGO REGIONAL ENERGY NETWORK

EXHIBIT 2

PROGRAM CARDS

Exhibit 2: Program Cards

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Commercial Sector

Table 1. Program Card for SMB Energy Coach

Program Name: SMB Energy Coach		
Program ID: SDREN-01-COM-SMB		
New / Existing: Existing		
Expected Program Duration: 2028 - onwards		
Portfolio Segment: Equity	Program Implementer Type: Third Party Implementer	Third-Party Program Implementer (applicable to IOUs only): n/a
Applicable Sector: Commercial		Customer Group(s): Small/Medium Businesses (SMBs)
Sector Challenges: • SMBs may be unaware of energy efficiency technologies and their value. They may lack the bandwidth to research and access resources. • SMBs lack education on how to develop and pursue energy efficiency projects while meeting the varying requirements to access incentives, tax credits, and financing. • SMBs need technical expertise to identify energy efficiency opportunities and to develop the scope of work and technical specifications for energy efficiency projects. • Many small businesses lease their space and do not control investing in/implementing energy efficiency opportunities. ○ Coordination with both tenants and landlords is required. • Without energy program support, up-front capital costs prevent energy efficiency measure implementation.		Sector Opportunities (Expected Outcome(s)): • Focus on small businesses (<20 kW), which make up the majority (77%) of commercial SDG&E customers. • Help SMBs work with local CA Green Business Network to receive recognition for energy efficiency program participation. • Provide energy efficiency education and advisory services to landlords/property management companies and tenants to address split incentive challenges. • Educate SMBs on behavioral, retro-commissioning, and operational measures applicable to their facilities. • Educate SMBs on energy management technologies, in alignment with AB 793.

Brief Program Description: The SMB Energy Coach Program raises awareness and increases the adoption of energy efficiency practices and measures. The program connects a dedicated Energy Coach to each participating SMB to educate them on the value of energy efficiency and IDSM, provide facility benchmarking and energy efficiency opportunity assessments, support access to funding and financing, offer technical assistance, and install energy efficiency measures at no cost to program participants. The program coordinates with SDG&E energy efficiency programs, statewide energy efficiency programs, and the San Diego Green Business Council, the local partner of the Green Business Network, to combine service offerings and compound the programs' value. Through coordination with the Green Business Network, program participants may receive public recognition via Green Business Certification for their energy efficiency upgrades, encouraging continued investment in energy efficiency. The program may leverage partnerships with community-based organizations to provide resources for returning program participants, encourage continuous pursuit of clean energy measures, and provide ongoing education and training for SMB staff.	
Known Equity Concerns in the Selected Markets: There are multiple equity concerns related to SMBs in San Diego County. Many SMBs lack the knowledge, bandwidth, and/or experience to pursue incentive opportunities and financing programs for energy efficiency projects, which may deter them from considering energy upgrades. SMBs commonly perceive energy efficiency measures as expensive investments and they may lack the capital to include energy efficiency measures in their budgets. Given the diversity of business owners in San Diego County, there are often language barriers for SMBs in HTR neighborhoods; current programs might not provide effective in-language outreach or materials to accommodate this need.	Proposed Solutions to Equity Concerns: This program provides a dedicated Energy Coach as a single point of contact and entry point to Commercial sector opportunities. This Energy Coach serves as an extension of the participants' staff, offering education, technical assistance and project management support. The program offers direct installation options for energy efficiency measures, helping participating businesses avoid out-of-pocket costs. The program provides various in-language and culturally-sensitive outreach materials and program documents with messaging that resonates with diverse SMBs and their staff.
Intervention Strategy: Downstream - direct install and technical assistance. Facility energy report and opportunity assessments: the program provides on-site and virtual assessments (particularly important to ensure rural customers receive services) to identify energy efficiency measures at each business and	Delivery Type: Downstream - direct install and technical assistance.

provide an in-language energy report. The reports incorporate: ○ No and low-cost energy efficiency measures available through energy efficiency programs. ○ Incentive and funding opportunities through external mechanisms such as SDG&E and statewide programs. ○ Green Business Certification. ○ IDSM program opportunities, including demand response. ○ Education on reducing energy costs. ○ If applicable, the program assists with benchmarking in Energy Star Portfolio Manager (ESPM) to help businesses understand their facility's energy performance and comply with AB802 for facilities over 50,000 sq. ft. ● Technical assistance: the program provides technical specifications for identified projects to ensure implemented measures realize anticipated energy savings. ● Direct installation: the program offers a menu of direct install measures available at low or no cost for program participants. Sample energy efficiency measures include smart thermostats, LED lighting, controls, economizer controls/repair, duct sealing, appliances, faucet aerators, auto door closers, ice makers, and smart plugs.	
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Funding and financing support: the program connects SMBs to other incentive programs, SDG&E on-bill financing, GoGreen Financing, IRA tax credits (where still available), and other local/state funding and financing programs.	
Measurement and Verification Methods: Deemed (includes site inspections)	Program Total System Benefit (TSB) for 2028-2031: 4 Year TSB: \$3,399,416
Annual Budgets for 2028-2031: 2028: \$3,276,963.33 2029: \$3,405,373.80 2030: \$3,538,840.07 2031: \$3,677,563.23 2028-2031 Total: \$13,898,740.45	Cost Effectiveness (TRC and PAC Test Ratios) for 2028-2031: 4 Year TRC: 0.23
Anticipated directional and scale changes in budget for years 2032-2035: SDREN will maintain program steady-state beyond 2031. For years 2032-2035, budgets will increase at a moderate 3% annually to address inflation and to meet increasing customer demand.	Market Actors necessary for success: - Third-party implementer(s). - Trade professionals. - Local contractors. - Equipment manufacturers. - Community outreach staff. - Property management/landlords, if applicable.
High-level description of delivery workforce including necessary scale and its risks: SDREN's local trusted partners engage with businesses to determine eligibility and interest in program offerings. The program implementer staff and Energy Coaches guide program participants through the SDREN Commercial program and other applicable program offerings and services. Licensed local contractors, electricians, and equipment manufacturers support the direct installation of energy efficiency measures. Engineering consultants provide technical assistance as needed. The program implementer(s) work with community partners, including CBOs and SDREN's regional IDSMM working group, to ensure SMB participants are aware of local resources and opportunities. There are workers in place to support these programs, but an increase in demand may require additional training and recruitment of specialized support. Also, a delay in manufacturing and delivery of equipment (or high demand) can pose a risk to project completion timelines.	

Near-Term Program Output(s) (1-4 years):

- Expand Energy Coach services to more SMBs across diverse sub-sectors and underserved/HTR communities.
- Refine assessment tools, energy reports, and technical assistance offerings based on participant feedback.
- Strengthen coordination with SDG&E, statewide programs, and San Diego Green Business Network to streamline referrals and reduce customer confusion.
- Increase delivery of direct install measures.
- Enhance in-language and culturally-responsive outreach in partnership with CBOs and local business associations to reach more HTR SMBs.
- Develop ongoing engagement pathways (e.g., follow-up visits, check-ins) to support continuous improvement and repeat participation.

Long Term Outcome (5-10 years):

- Project development supports deeper, bundled energy efficiency and IDSM projects that reduce energy burden for HTR and underserved SMBs.
- Continuous engagement with returning and new program participants that creates sustained relationships that normalize energy efficiency and decarbonization practices across SMB sectors.
- SMBs increasingly access stacked incentives and non-ratepayer funding streams, enabling more comprehensive upgrades over time.
- Local contractors trained through SDREN's WE&T programs participate in SMB projects, strengthening the regional clean energy workforce.

Does this program interact with other programs in this PA portfolio? If so, describe:

This program refers and channels identified opportunities to the Market Access Program and Efficient Refrigeration program where applicable. It also collaborates with the Efficient Refrigeration program on outreach to minimize customer confusion and maximize reach. WE&T-trained contractors are introduced and directed to relevant SDREN programs, such as its Commercial offerings, creating a direct pipeline that supports broader market support and equity segment objectives.

Program Metrics and Indicators (KPIs): ● Sum of all equity segment participants' kilowatt hour (kWh) savings in equity segment - lifecycle gross ● Lifecycle ex-ante kW gross ● Sum of all equity segment participants' therm savings in equity segment - lifecycle gross ● Sum of all equity segment participants' TSB in equity segment ● Total lifetime energy bill savings (\$) ● % of customers anticipated to experience lower energy costs as a result of program participation ● Count of equity target participants ● % of equity customers served compared to total customers served ● % of customers channeled to non SDREN programs ● External funding leveraged to support SDREN programs/communities (% of total budget spend)	
Does this program utilize Integrated Demand Side Management (IDSM)? Yes - Other; through the delivery of technical assistance to identify opportunities, educational materials and assistance with applying for IDSM funding and incentives.	Link to Existing Implementation Plan, if existing: Link to IP

Table 2. Program Card for Efficient Refrigeration

Program Name: Efficient Refrigeration		
Program ID: SDREN-02-COM-ERF New / Existing: Existing Expected Program Duration: 2028 - onwards		
Portfolio Segment: Equity	Program Implementer Type: Third Party Implementer	Third-Party Program Implementer (applicable to IOUs only): n/a
Applicable Sector: Commercial		Customer Group(s): Micro, small, and medium businesses, focusing on small local grocery stores, corner stores, and local small businesses that sell food products.
Sector Challenges: • Store owners have limited staff capacity and capital to learn about high-efficiency equipment options and to invest in energy-efficient equipment. • Business priorities and day-to-day operations take precedence over energy efficiency.		Sector Opportunities (Expected Outcome(s)): • A direct install approach alleviates the cost barrier to participation and allows store owners to participate in energy efficiency program offerings. • Leverage other programs to create co-benefits, such as educating store owners about health benefits to providing local access to fresh, perishable food options (fruits, vegetables, nuts). • Installation of high-efficiency refrigeration equipment with low-GWP refrigerants will realize utility bill savings for participants, encouraging future investment in energy efficiency.
Brief Program Description: The Efficient Refrigeration program provides energy efficiency education and no-cost, direct install efficient refrigeration equipment to small corner stores/grocers/small businesses to support energy cost savings and the stocking of healthy, fresh, and affordable food products. This program provides technical assistance to identify refrigerators that are eligible for replacement with high efficiency units. This program also seeks to leverage other programs and resources to provide one-on-one education on sourcing California-grown produce and product placement/promotion to encourage shopper purchases. Additionally, it delivers community outreach events to promote program services, provide education on the benefits of energy efficiency, and encourage the public to shop at participating business locations by highlighting the availability of fresh, healthy foods. This program's target measures include glass and solid door refrigerator and freezer units. This		

program identifies opportunities to integrate strategies from the BayREN Refrigerant Replacement Program to encourage low-GWP refrigerants.	
Known Equity Concerns in the Selected Markets: Past programs offering support with refrigeration equipment have focused on larger customers, leaving smaller customers without any offerings focused on refrigeration. Based on the 2023 SoCalREN Food Desert Energy Efficiency Equity Program EM&V study conducted by SoCalREN, energy burden is a concern for this sub-market. Corner stores in particular feel burdened by high electricity bills associated with refrigeration.¹ Recent inflation and supply chain issues have also impacted small business owners, with 85% of small business owners indicating they are concerned about inflation.² Additionally, there are equity concerns in this sub-market related to food access and the connections between energy and health. Several communities within San Diego County face poverty and food insecurity.³ In 2019, 77 census tracts had a poverty rate of 50% or more. Across San Diego County, the percentage of the population experiencing food insecurity by region is: central: 26.9%, east: 46.6%, north central: 38.5%, north coastal: 39.8%, north inland: 30.9%, and south: 27.7%. These communities lack regular access to fresh, healthy foods. They need personalized in-person, in-language, and culturally-sensitive outreach and program services.	Proposed Solutions to Equity Concerns: This program encourages stores to sell fresh, healthy, and affordable food products by providing high efficiency refrigerators and freezers. This program provides in-language outreach materials to improve the education and communication to staff at participating businesses and in the local community. The program deploys in-person program outreach staff to reach businesses and tell them about program opportunities and objectives. This program leverages local contractors to stimulate the local economy and support local workforce development.

¹ SoCalREN Food Desert Energy Efficiency Equity Program Market Study, p. 14.

² “Special Report on Inflation and Supply Chain Shocks on Small Business,” U.S. Chamber of Commerce, March 3, 2022, <https://www.uschamber.com/small-business/special-report-on-inflation-and-supply-chain-shocks-on-small-business>.

³ <https://www.sandiegocounty.gov/content/dam/sdc/hhsa/programs/phs/CHS/Poverty%20and%20Food%20Insecurity%20Brief.pdf>.

Intervention Strategy: Downstream - direct install, education and outreach. ● In-person and in-language culturally sensitive outreach: given the staff capacity barrier to energy efficiency program participation and that 36% of County residents speak a language other than English at home, the program provides in-person and in-language outreach to target businesses that are underserved by existing programs. ● Direct installation of high efficiency refrigeration equipment: the program provides no-cost installation of refrigeration equipment, generating utility bill savings for program participants at no cost, improving energy affordability. ● Community-level and one-on-one education on energy efficiency and healthy food options: the program educates program participants on the benefits of energy efficiency, low-GWP refrigerant, energy efficiency programs and best practices for stocking healthy, fresh, perishable foods. ● IDSM program participation education: share informational materials and resources to participants on the benefits of participating in DR and other IDSM programs.	Delivery Type: Downstream - direct install, education and outreach.
Measurement and Verification Methods: Deemed (direct install) with site inspections	Program Total System Benefit (TSB) for 2028-2031: 4 Year TSB: \$260,410

Annual Budgets for 2028-2031: 2028: \$2,166,519.93 2029: \$2,232,696.39 2030: \$2,300,905.36 2031: \$2,371,209.74 2028-2031 Total: \$9,071,331.42	Cost Effectiveness (TRC and PAC Test Ratios) for 2028-2031: 4 Year TRC: 0.03
Anticipated directional and scale changes in budget for years 2032-2035: SDREN will maintain program steady-state beyond 2031. For years 2032-2035, budgets will increase at a moderate 3% annually to address inflation and to meet increasing customer demand.	Market Actors necessary for success: ● Third-party implementer(s). ● Multi-lingual local outreach staff. ● Grocery and corner store owners. ● Local refrigerator/freezer installers. ● Refrigerator/freezer manufacturers and distributors.
High-level description of delivery workforce including necessary scale and its risks: This program is reliant on partnership with owners and staff of small grocery and corner stores across San Diego County. The program also requires installer partner(s) to facilitate the purchase and installation of efficient refrigerators and freezers. Implementer staff and outreach partners perform program education and outreach with guidance from SDREN's ISDM working group as needed. There are no known workforce-related risks for successful implementation of the program, though a delay in manufacturing or equipment delivery (or high demand) could pose a risk to project completion timelines.	
Near-term Program Output(s) (1-4 years): ● Expand the number and diversity of participating corner stores, small grocers, and food retailers, with emphasis on equity customers. ● Standardize and optimize in-person, in-language outreach tactics based on best practices and lessons learned. ● Increase the volume of efficient refrigeration replacements and associated technical assistance, integrating low-GWP refrigerant strategies where feasible. ● Deepen partnerships with local health, food access, and economic development initiatives to highlight co-benefits related to healthy, fresh, and affordable food. ● Strengthen contractor networks and installation workflows to minimize downtime for store owners and improve customer experience.	
Long Term Outcome (5-10 years): ● Increased interest in energy efficiency and ISDM in small corner stores/grocers/small businesses with a particular increase in participation among underserved and HTR businesses. ● Continuous engagement with returning and new program participants supports sustained reductions in energy burden and improved food access in communities facing high poverty and food insecurity.	

● Wider adoption of low-GWP refrigeration technologies contributes to the region's decarbonization goals. ● A growing network of local contractors leveraging SDREN's WE&T offerings supports consistent installation quality and long-term market transformation.	
Does this program interact with other programs in this PA portfolio? If so, describe: The program implementers across the Commercial sector coordinate on engagement and outreach strategies to minimize redundancies and reduce customer confusion. The SMB Energy Coach program's dedicated advisor may identify and channel opportunities for a commercial participant to participate in SDREN's Efficient Refrigeration program if refrigeration measure opportunities are identified. Trained contractors through the Workforce Training and Capacity program are introduced to this program's trade ally opportunities.	
Program Metrics and Indicators (KPIs): ● Sum of all equity segment participants' kilowatt hour (kWh) savings in equity segment - lifecycle gross ● Sum of all equity segment participants' therm savings in equity segment - lifecycle gross ● Sum of all equity segment participants' greenhouse gas reductions (in tons of carbon dioxide equivalent) in equity segment - lifecycle gross ● Sum of all equity segment participants' TSB in equity segment ● Sum of equity target participants' expected first-year bill savings in equity segment ● % of equity customers served compared to total customers served ● % of customers anticipated to experience lower energy costs as a result of program participation ● Total lifetime energy bill savings (\$) ● % of customers channeled to non SDREN programs ● External funding leveraged to support SDREN programs/communities (% of total budget spent)	
Does this program utilize Integrated Demand Side Management (IDSM)? Yes - Other; through the delivery of educational materials and assistance with applying for IDSM funding and incentives.	Link to Existing Implementation Plan, if existing: Link to IP

Table 3. Program Card for Market Access Program

Program Name: SDREN Market Access Program		
Program ID: SDREN-03-COM-MAP		
New / Existing: Existing		
Expected Program Duration: 2028 - onwards		
Portfolio Segment: Resource Acquisition	Program Implementer Type: Third Party Implementer	Third-Party Program Implementer (applicable to IOUs only): n/a
Applicable Sector: Commercial Property Owners		Customer Group(s): Small/Medium Businesses (SMBs)
Sector Challenges: - Delivering scalable programs with costs less than delivered TSB. - High administrative and capital cost barriers to business participation in energy efficiency programs. - Limited customized solutions have to serve a wide range of customer types, including HTR and underserved businesses. - Risk of large program investment without the delivery of anticipated TSB. - Customer engagement through a trusted entity.		Sector Opportunities (Expected Outcome(s)): - Capture significant energy savings and peak demand reduction through tailored services offered via aggregators. - Bundle program services with state, local and private funds to improve project cost-effectiveness. - Leverage performance-based aggregator incentive approach to minimize program investment without the delivery of TSB and demand reduction. - Work with local trusted partners, such as chambers of commerce, to reach HTR and underserved businesses.
Brief Program Description: SDREN's Market Access Program provides performance-based incentives to project developers (aggregators) who deliver projects that realize peak demand reductions and verified energy savings. The program utilizes a population NMEC methodology to verify savings while paying incentives based on TSB achieved, encouraging long-life measures that deliver maximum grid benefit. The program offers a suite of tools for aggregators to use to identify high opportunity projects at facilities with significant summer and year-round peak demand reduction potential, estimate energy savings, and secure incentives. Local trusted entities lead customer engagement to high opportunity businesses, with a focus on HTR and underserved businesses. Aggregators develop project opportunities and offer customizable services and financial benefits to participating businesses. This influences businesses to implement identified energy measures. Since incentives are delivered to aggregators based on NMEC-verified benefits to the grid, aggregators are encouraged to ensure projects realize or exceed anticipated energy savings.		

Sample energy efficiency measures include HVAC replacement, HVAC controls, variable frequency drives, lighting replacement, lighting controls, building envelope and refrigeration.	
Known Equity Concerns in the Selected Markets: Barriers to energy efficiency implementation vary from business to business. However, small-to-medium businesses typically have limited staff capacity and resources to pursue energy efficiency projects. High capital costs are also a common barrier. There is often a lack of programs or incentives designed to serve HTR and underserved businesses.	Proposed Solutions to Equity Concerns: To reduce customer administrative burden, the aggregator manages a program compliance process and provides flexible benefits to each customer. Benefits may include price concessions or technical services to motivate the customer to pursue the project. Higher investment and targeted approaches helps engage and serve HTR and underserved businesses.
Intervention Strategy: MAP, incentives, audit, education, outreach. ● Aggregator network: the program maintains a network of qualified aggregators that operate in the marketplace to identify and install energy efficiency projects in exchange for performance-based incentives. ● Performance-based incentives: the program provides performance-based incentives to aggregators based on achieved TSB for their portfolio of projects. ● Education: the program educates aggregators and customers on the value of energy efficiency and IDSM and braiding supplemental funding streams to further project outcomes (e.g. SDG&E on-bill financing and GoGreen Financing). ● Targeted outreach: the program partners with trusted local entities to develop materials and outreach strategies for HTR and underserved businesses.	Delivery Type: Downstream – population-level NMEC.
Measurement and Verification Methods: NMEC – Population	Program Total System Benefit (TSB) for 2028-2031: 4 Year TSB: \$15,577,356

Annual Budgets for 2028-2031: 2028: \$5,099,662.09 2029: \$5,489,331.74 2030: \$5,900,154.16 2031: \$6,333,152.46 2028-2031 Total: \$22,822,300.45	Cost Effectiveness (TRC and PAC Test Ratios) for 2028-2031: 4 Year TRC: 0.57
Anticipated directional and scale changes in budget for years 2032-2035: SDREN will maintain program steady-state beyond 2031. For years 2032-2035, budgets will increase at a moderate 3% annually to address inflation and to meet increasing customer demand.	Market Actors necessary for success: • Third-party implementer(s). • Aggregators and contractors. • Energy efficiency equipment and DR control vendors. • Local trusted organizations for outreach.
High-level description of delivery workforce including necessary scale and its risks: Program success relies on the availability of qualified aggregators. The delivery workforce includes implementer staff, equipment and control vendors, and local trusted entities—such as SDREN’s IDSM working group—for outreach. There are no known workforce-related risks for successful implementation of the program, though a delay in manufacturing or equipment delivery (or high demand) could pose a risk to project completion timelines.	
Near-term Program Output(s) (1-4 years): • Grow and diversify the aggregator network, with targeted outreach to entities capable of serving HTR and underserved businesses. • Use early portfolio performance data to refine incentive structures, savings estimation tools, and NMEC guidance to aggregators. • Expand outreach and customer acquisition through trusted local partners to increase participation from smaller and underserved commercial customers. • Support aggregators in packaging ratepayer incentives with external funding sources to enable deeper, more comprehensive projects. • Streamline data flows and performance reporting to improve transparency, reduce administrative costs, and support continuous program improvement. • Coordinate intentionally with other SDREN programs so that MAP becomes a clear pathway for larger or more complex commercial projects.	
Long Term Outcome (5-10 years): • Year-round peak demand reductions are delivered with increasing participation from HTR and underserved SMBs supported through targeted outreach by trusted partners • Delivered TSB exceeds program costs demonstrating the value of performance-based approaches for long-life and decarbonization-supportive measures.	

Contractors trained through SDREN’s WE&T programs enter the aggregator pipeline, strengthening the regional clean energy workforce.	
Does this program interact with other programs in this PA portfolio? If so, describe: The program implementers across the Commercial sector coordinate on engagement and outreach strategies to minimize redundancies and reduce customer confusion. The SMB Energy Coach Energy Advisor may identify and channel opportunities for a commercial participant to participate in SDREN’s MAP program if eligible. WE&T-trained contractors are introduced and directed to the MAP program to participate as an aggregator.	
Program Metrics and Indicators (KPIs): - Lifecycle ex-ante kWh gross - Lifecycle ex-ante kW gross - Lifecycle ex-ante Therm gross - Count of equity target participants in resource acquisition segment - Total lifetime energy bill savings (\$) - Percent of total projects utilizing Normalized Metered Energy Consumption (NMEC) to estimate savings % of equity customers served compared to total customers served % of customers anticipated to experience lower energy costs as a result of program participation, by sector % of customers channeled to non SDREN programs - External funding leveraged to support SDREN programs/communities (% of total budget spend)	
Does this program utilize Integrated Demand Side Management (IDSMS)? Yes - Other; aggregators and customers are educated on the value of IDSMS strategies.	Link to Existing Implementation Plan, if existing: Link to IP

Public Sector

Table 4. Program Card for Climate Resilience Leadership

Program Name: Climate Resilience Leadership		
Program ID: SDREN-01-PUB-CRL New / Existing: Existing Expected Program Duration: 2028 - onwards		
Portfolio Segment: Market Support	Program Implementer Type: Third Party Implementer	Third-Party Program Implementer (applicable to IOUs only): n/a
Applicable Sector: Public		Customer Group(s): Eligible public agency types. • Cities. • County. • Public education agencies. • Special districts. • Tribal communities.
Sector Challenges: • Limited staff capacity, understanding, and expertise to address energy efficiency, IDSM, and decarbonization opportunities to improve energy resilience. • Lengthy and cumbersome public procurement processes. • Limited access to data for informed decision making. • Limited capital and/or competing priorities for energy efficiency and IDSM projects. • Risk aversion. • Resource constraints as staff and budgets have many competing priorities and energy management is just one of many. • Complex decision-making and political dynamics. • Long-term planning challenges.		Sector Opportunities (Expected Outcome(s)): • Comprehensive yet tailored services to meet public agencies' unique needs, with a focus on agencies serving underserved and HTR communities. • Provision of technical assistance and resources to help public agencies identify and implement clean energy projects and meet regional decarbonization goals. • Increase staff capacity through education, outreach, project management, and technical assistance to integrate energy efficiency and IDSM as standard practices across operations. • Reduced energy burden and increased energy affordability by reducing energy costs and reinvesting energy bill savings into communities. • Provide no or low cost energy efficiency measure installations through a direct install offering.

● Gaps in IOU third party offerings, including school district programming. ● Aging infrastructure, including buildings and utility systems that may require substantial energy efficiency upgrades.	● Offer portfolio energy analyses to help inform decision-making, targeting of clean energy opportunities, and creation of resilience hubs across agency-owned assets. ● Support updating or creating short- and long-term energy resilience plans.
Brief Program Description: The Climate Resilience Leadership program is designed to overcome barriers hindering public agencies from implementing energy efficiency projects. It also promotes IDSM technologies and programs, facilitating deeper decarbonization to help agencies meet their climate goals. Dedicated project managers act as an extension of agency staff to provide customized and unbiased start-to-finish guidance and coordinate delivery of technical services to identify and implement energy efficiency and IDSM projects. The program operates through dedicated project managers who offer tailored guidance throughout the project cycle and coordinate technical service delivery to identify and implement energy efficiency and DER projects. This personalized approach ensures successful project execution. To address common challenges related to funding and procurement and to fill IOU program gaps, the program provides direct installation of energy efficiency measures. This includes providing targeted and specialized direct install services to K-12 schools, recognizing that there is a gap in services available to this market sub-sector. Project managers also coordinate and facilitate access to third-party incentive programs. Moreover, the program monitors emerging funding opportunities for public agencies and provides support for all relevant incentive and financing applications, relieving them of major administrative burdens. In addition to the suite of project delivery services, the program tackles knowledge and capacity barriers by offering educational resources on DERs and DR programs through webinars, peer to peer learning opportunities, and educational collateral. Small grants will also be available to fund public agency staff attendance at decarbonization or DER-related conferences and events. These resources empower agency staff to become champions for decarbonization internally while showcasing climate leadership to the broader community through successful project delivery.	
Known Equity Concerns in the Selected Markets: Public agencies, especially smaller ones, often have constrained budgets and staff resources, making it difficult to allocate funding and staff for clean energy projects or to take advantage of available services and funding. Additionally, a large proportion of public agency accounts are small (<20 kW) and may not qualify for many IOU resource programs due to potential projects	Proposed Solutions to Equity Concerns: The program addresses equity concerns by prioritizing outreach to agencies that have historically been overlooked by energy efficiency programs. The program provides technical assistance, end-to-end project management services, and educational resources to public agencies/facilities of all sizes, acting as an extension of agency staff. Financial assistance services help agencies

not meeting programs' cost effectiveness requirements. This in turn leads to even greater inequity in the long run, as energy and operational costs continue to rise while projects are delayed. These smaller agencies may not have resources to develop climate action plans, create resilience plans, or build internal capacity around DERs. Public agencies will lead their communities by example, but there is limited funding and services to support them in achieving their goals.	identify, apply for, and secure funding for energy efficiency and IDSMS projects. The program also offers: ● Increased incentives and no-cost direct install support of energy efficiency measures for HTR and underserved agencies. ● Education and training resources to help agency staff grow their capacity and awareness of the benefits of energy efficiency, DER technologies, and DR program participation to drive decarbonization and load reduction efforts. ● Assistance for underserved agencies to develop actionable resilience roadmaps.
Intervention Strategy: Technical assistance, incentives via direct install, outreach and education, funding and financing support. Energy efficiency and DER project identification and delivery interventions. ● Agency portfolio energy analysis and resilience roadmap: provides participants with an overview of energy consumption and costs and facilitates project opportunities by identifying energy-intensive infrastructure. Sets foundation for development and delivery of energy resilience roadmap, which identifies DER opportunities to improve community energy resilience and recommends sites to serve as resilience hubs. ● Comprehensive energy audits: identify energy savings, energy efficiency and decarbonization opportunities. ● Financial analysis: utilizes outputs from audit reports to provide business case summary to invest in clean energy projects. ● Project financing and funding assistance: facilitate access to various financing	Delivery Type: Downstream – Direct Install, technical assistance, outreach and education, funding and financing support.

options including cash incentives, low or no interest loans, tax credits and grants to help agencies overcome financial barriers to projects. ● Procurement assistance: provides agencies with documentation to procure installation contractors and receive applicable internal approvals. ● Construction support: review scope and contractor equipment submittals to ensure alignment with anticipated energy savings outcomes and funding eligibility requirements. Engagement, education and outreach interventions. ● Workshops/webinars/training and educational resources to build public agency staff's capacity and awareness of energy efficiency, IDSM, sustainability, decarbonization measures, and resilience initiatives, including DR program participation. ● Small grants to fund public agency participation in educational events (e.g., conferences). Direct installation of energy efficiency measures that help agencies overcome funding, financing, and procurement hurdles and achieve decarbonization and resilience goals. ● Sample direct install measures include: economizer controls/repair, heat pump water heaters, occupancy sensors, outdoor Light Emitting Diode (LED) lighting, and pipe insulation.	
Measurement and Verification Methods: Deemed direct install with site inspections	Program Total System Benefit (TSB) for 2028-2031: 4 Year TSB: \$13,640,490

Annual Budgets for 2028-2031: 2028: \$6,416,413.03 2029: \$6,696,291.39 2030: \$6,988,059.88 2031: \$7,292,218.65 2028-2031 Total: \$27,392,982.95	Cost Effectiveness (TRC and PAC Test Ratios) for 2028-2031: 4 Year TRC: 0.57
Anticipated directional and scale changes in budget for years 2032-2035: SDREN will maintain program steady-state beyond 2031. For years 2032-2035, budgets will increase at a moderate 3% annually to address inflation and to meet increasing customer demand.	Market Actors necessary for success: • Third-party implementer(s). • Local engineering firms and contractors.
High-level description of delivery workforce including necessary scale and its risks: The program delivery workforce includes SDREN staff and third party implementation partners, including subcontracted engineering consultants and other industry experts—such as SDREN’s Regional IDSM Working Group—to provide as needed services to program participants. There are no known workforce related risks for successful implementation of the program, though a delay in manufacturing or equipment delivery (or high demand) could pose a risk to project completion timelines.	
Near-term Program Output(s) (1-4 years): • Expand participation among cities, school districts, Tribal communities, and special districts, with a focus on agencies serving HTR and underserved communities. • Scale delivery of portfolio energy analyses, resilience roadmaps, and comprehensive energy audits to build robust project pipelines. • Increase the number of projects moving from opportunity identification into implementation through enhanced project management, procurement assistance, and construction support. • Strengthen integration of energy efficiency, DERs, and DR opportunities within agency planning, leveraging lessons learned from early pilot projects. • Enhance educational offerings (webinars, peer forums, collateral) based on the most common barriers and needs identified in the first program years. • Optimize collaboration with IOU and third-party public sector programs to align services, reduce duplication, and amplify impacts.	

Long Term Outcome (5-10 years): ● Public agencies look to SDREN as a trusted advisor to help them improve energy resiliency and address energy needs, including pathways for electrification and building decarbonization. ● Energy and cost savings realized, allowing agencies to reinvest savings into community services, with particular benefits for underserved jurisdictions. ● Broader reach and support across underserved communities. ● Agencies demonstrate increased awareness of energy efficiency and IDSM best practices and integrate into operating practices and procedures. ● Enhanced resilience to climate challenges and reliability emergencies, including more resilient energy infrastructure and practices. ● Public agencies increasingly leverage non-ratepayer funding identified through SDREN support, enabling deeper clean energy investments. ● Disparities in energy access and program participation are reduced.	
Does this program interact with other programs in this PA portfolio? If so, describe: Public sector programs refer participants across both the Tribal Engagement and Climate Resilience Leadership programs based on customer needs. The Public sector programs also refer public agency staff to the C&S program. WE&T-trained contractors are introduced and directed to relevant SDREN programs such as its Public sector offerings, creating a direct pipeline that supports broader market support and Equity segment objectives.	
Program Metrics and Indicators (KPIs): ● Lifecycle ex-ante kWh gross ● Lifecycle ex-ante kW gross ● Lifecycle ex-ante Therm gross ● CO2-equivalent of net annual kWh savings ● Count of equity target participants in market support segment. ● Number of partners by type and purposes ● Number of contractors (that serve in the PA service areas) with knowledge and trained by relevant market support programs to provide quality installations that optimize energy efficiency ● Total lifetime energy bill savings (\$) ● % of customers anticipated to experience lower energy costs as a result of program participation, by sector ● % of equity customers served compared to total customers served ● % of customers channeled to non SDREN programs ● External funding leveraged to support SDREN programs/communities (% of total budget spend)	
Does this program utilize Integrated Demand Side Management (IDSM)? Yes - Other; including:	Link to Existing Implementation Plan, if existing: Link to IP

● Coordination with the C&S community to simplify and streamline permitting processes for IDSM and DERs. ● Financial assistance services to identify, apply for, and secure funding for energy efficiency and IDSM projects. ● Promotion of IDSM technologies and programs. ● Technical assistance services integrate energy efficiency and DER audits, performance and design specifications, procurement support, funding, and financing analyses and application support, and construction support. ● Combines energy efficiency education with other IDSM educational opportunities.	
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Table 5. Program Card for Tribal Engagement

Program Name: Tribal Engagement		
Program ID: SDREN-02-PUB-TRE		
New / Existing: Existing		
Expected Program Duration: 2028 - onwards		
Portfolio Segment: Equity	Program Implementer Type: Third Party Implementer	Third-Party Program Implementer (applicable to IOUs only): n/a
Applicable Sector: Public		Customer Group(s): Tribal communities
Sector Challenges: • Tribal cultural sensitivities, distrust in government programs. • PAs must invest significant time and care in cultivating trusted, respectful relationships with Tribal governments; building this trust can be challenging for PAs unfamiliar with Tribal governance structures, cultural protocols, or the historical context of Tribal engagement in energy programs. • Some Tribal governments may lack in-house technical expertise, resources, and staff capacity to plan, implement, and manage energy efficiency initiatives, making it challenging to take advantage of available programs. • Lack of capital to invest in energy efficiency, IDSM, and decarbonization strategies. • Most public sector accounts in SDG&E territory are small (<20kW) and may be passed over by IOU resource programs with cost effectiveness requirements. • Aging infrastructure, including buildings and utility systems that may require substantial energy efficiency upgrades.		Sector Opportunities (Expected Outcome(s)): • Tribal community-led design of initiatives to facilitate energy planning, increase access to energy efficiency programs, reduce energy burdens, and decarbonize assets. • Ongoing access to a technical advisor with energy efficiency, IDSM, and building decarbonization expertise to support successful programming and initiatives; access to industry experts including engineering firms. • Advance climate resiliency on Tribal lands and in Tribal communities. • Tribal communities demonstrate leadership in energy efficiency, IDSM, and/or building decarbonization and share best practices and lessons learned. • Lessons learned from Tribal communities who may have previous energy and/or resilience projects that can optimize SDREN's services.

● Navigating the complex regulatory environment, including compliance with federal and Tribal regulations, can be challenging for Tribal governments.	
Brief Program Description: The Tribal Engagement program creates a pathway for Tribal Communities and Tribal organizations in the San Diego region to develop, propose, and implement energy-related initiatives to address their unique needs and contribute to sustainability, resilience, and economic development within Tribal communities. Through our community-driven program, Tribal communities take ownership of initiatives and exercise self-determination in pursuing decarbonization and sustainable energy practices. Program resources include tailored no-cost technical assistance, including a dedicated technical advisor to support initiative applications and champion their success from idea inception to successful execution. All initiative applications are required to promote sustainable energy practices within Tribal lands and enhance the resilience of Tribal communities by increasing their capacity to withstand energy-related emergencies and challenges. The third party program implementer develops high-level blueprints of program design options for Tribal communities to follow and secure funding to implement. SDREN welcomes and encourages innovative ideas outside of these blueprints, so Tribal communities have the flexibility to propose unique solutions that align with their goals. Initiative applications are evaluated based on their alignment with Tribal needs, sustainability, resilience and economic development goals. Approved initiatives receive customized services and resources to support implementation. These services may include technical expertise, project funding, and partnerships. The Tribal Engagement program bolsters Tribal Community efforts to shape their energy futures. By nurturing local talent, inspiring innovation, and providing the necessary support, SDREN aims to create a vibrant and resilient energy landscape that Tribal communities can proudly call their own. This program coordinates with SDREN’s Climate Resilience Leadership program to ensure that there is no duplication of efforts. Tribal communities are able to access all the technical services available from both programs, including direct install measure installations.	
Known Equity Concerns in the Selected Markets: Tribal participants have long been underserved and underrepresented in energy efficiency programs. This historical underinvestment in outreach to Tribal participants is one of many factors that have significantly eroded Tribal governments’ trust in Public sector programs. This is a barrier for Tribal governments to secure vital funding and resources.	Proposed Solutions to Equity Concerns: The Tribal Engagement program recognizes that addressing equity concerns within Tribal communities is a multifaceted endeavor that requires a tailored, culturally-sensitive, and empathetic approach. To overcome historical underinvestment in Tribal communities, the program provides grant funding and no-cost technical assistance to Tribal participants for community-driven interventions. This support

One of the key equity concerns in Tribal communities is limited access to information about available programs, incentives, and resources. This limited access not only hinders the development of sustainable energy practices within Tribal lands but also reduces the resilience of Tribal communities in the face of energy-related emergencies and challenges.	can incentivize Tribal governments to design and offer energy efficiency programs to their Tribal government and community members. By providing financial resources and technical expertise, we aim to break down the barriers that have historically limited Tribal participation in energy initiatives. Building trust within Tribal communities is a fundamental component of our approach. We understand that trust is built through meaningful relationships, respect for cultural sensitivities, and a genuine understanding of Tribal needs. To achieve this, SDREN has engaged in efforts, and continues to engage in efforts, to nurture partnerships with trusted leaders in Tribal communities. These partners play a pivotal role in ensuring program design and delivery are culturally-sensitive and responsive to the unique needs of each Tribal community, and can integrate tribal best practices from previous energy initiatives if existing. SDREN's approach includes acknowledging and addressing historical disparities in energy access, infrastructure investment, and environmental impacts that may have disproportionately affected Tribal governments. Building trust and engaging Tribal communities takes time; SDREN continues to listen, learn, and adapt their approach to the unique cultural and historical context of each Tribal community.
Intervention Strategy: Downstream – technical assistance, funding support, outreach and education. ● Initiative ideation and application technical services support: technical assistance is provided to help Tribal communities develop ideas and draft applications. ● Direct funding grants: provided to Tribal communities to implement initiatives.	Delivery Type: Technical assistance, outreach and education, grants.

● Initiative application evaluation: includes approval by program implementer. ● Technical assistance: Approved initiatives receive customized services and resources to support delivery, including support to develop Implementation Plans. ● Access to energy experts: to leverage expertise and resources (e.g., engineering firms, financial advisors, local agencies, and relevant stakeholders).	
Measurement and Verification Methods: N/A	Program Total System Benefit (TSB) for 2028-2031: N/A
Annual Budgets for 2028-2031: 2028: \$541,317.53 2029: \$557,557.06 2030: \$574,283.77 2031: \$591,512.28 2028-2031 Total: \$2,264,670.63	Cost Effectiveness (TRC and PAC Test Ratios) for 2028-2031: N/A
Anticipated directional and scale changes in budget for years 2032-2035: SDREN will maintain program steady-state beyond 2031. For years 2032-2035, budgets will increase at a moderate 3% annually to address inflation and to meet increasing customer demand.	Market Actors necessary for success: ● Third-party implementer(s) with expertise and deep understanding of tribal communities. ● Tribal nations and Tribal organizations. ● Others to be determined based on proposed and approved grant initiatives.
High-level description of delivery workforce including necessary scale and its risks: The delivery workforce includes third party implementation partners, including on-call subcontracted engineering consultants, members of SDREN's IDSM working group, and energy leaders from Tribal communities and organizations. Time and resource availability for Tribal energy leaders may be a risk factor.	

Near-term Program Output(s) (1-4 years):

- Deepen relationships with Tribal governments and organizations that engaged in the initial launch period, while inviting additional Tribal communities into the program.
- Support Tribal communities in advancing early-stage initiatives into full implementation, offering continued technical assistance and connections to outside funding.
- Refine initiative blueprints, application processes, and technical support models based on Tribal feedback and first-round implementation experience.
- Expand access to specialized expertise (e.g., engineering, finance, planning) to support more complex or innovative Tribal-led initiatives.
- Strengthen coordination with the Climate Resilience Leadership program to ensure Tribal agencies can seamlessly access all relevant SDREN technical services.
- Document lessons learned and emerging best practices from Tribal initiatives to inform future cycles and support replication where desired.

Long Term Outcome (5-10 years):

Tribal communities gain experience proposing, implementing, and managing initiatives, and communities become more sustainable as a result.

- A large portfolio of initiatives are serving diverse Tribal needs.
- Reduced energy burden and increased revenue generation through clean energy projects.
- Enhanced resilience to climate challenges and emergencies including more resilient energy infrastructure and practices.
- Disparities in energy access and program participation are reduced.
- Supplemental funding sources can be leveraged, including IRA funding earmarked for Tribal governments to administer residential electrification and DER programs.
- As Tribal initiatives increasingly incorporate electrification, DERs, and load-flexibility strategies supported through SDREN's technical assistance, they contribute directly to regional decarbonization goals.
- Over time, Tribal communities that have successfully implemented initiatives may serve as sources of knowledge and best practices for other communities, fostering a culture of shared learning.

Does this program interact with other programs in this PA portfolio? If so, describe:

Public sector programs refer participants across both the Tribal Engagement and Climate Resilience Leadership programs based on customer needs. WE&T-trained contractors are introduced and directed to relevant SDREN programs such as its Public sector offerings, creating a direct pipeline that supports broader market support and equity segment objectives.

Program Metrics and Indicators (KPIs):

- Count of equity target participants in equity targeted segment, by sector
- % of customers anticipated to experience lower energy costs as a result of program participation, by sector
- External funding leveraged to support SDREN programs/ communities as a % of total budget spend
- % of equity customers served compared to total customers served
- Total lifetime energy bill savings
- % of customers channeled to non SDREN programs
- External funding leveraged to support SDREN programs/communities (% of total budget spend)

Additional metrics to be determined as Tribal initiatives are approved.

Does this program utilize Integrated Demand Side Management (IDSM)?

Yes - Other; including provision of IDSM education to Tribal communities alongside energy efficiency as they design initiatives.

Link to Existing Implementation Plan, if existing:

[Link to IP](#)

Cross-cutting: WE&T

Table 6. Program Card for Energy Pathways Program

Program Name: Energy Pathways Program		
Program ID: SDREN-01-WET-EPP		
New / Existing: Existing		
Expected Program Duration: 2028 - onwards		
Portfolio Segment: Market Support	Program Implementer Type: Third Party Implementer	Third-Party Program Implementer (applicable to IOUs only): n/a
Applicable Sector: Cross-Cutting: Workforce, Education, & Training		Customer Group(s): Workforce, Education, & Training - High School Students
Sector Challenges: • High school students often need academic prerequisites or specific skills to pursue energy-related careers. • Costs and the competitive nature of higher education and energy-related training programs that many energy careers require can be a significant barrier to entering the sector. • High school students may not be aware of energy career opportunities and the pathway to an energy career. • The energy industry can be highly competitive with limited job openings. High school students often need extra skills to distinguish themselves and secure job opportunities. • The perceived value of working in construction and other skilled trades is low, reducing the number of individuals interested in entering this field. For those interested, understanding how to access these trades is limited and pathways for entry can be complicated.		Sector Opportunities (Expected Outcome(s)): • Services that inform high school students of energy career pathways and skills to support their interest in entering the energy sector. • Incorporating a standards-aligned curriculum and career technical education with employment opportunities and postsecondary training. • Programs that connect high school students to dual enrollment in college courses and/or other academic offerings to provide industry knowledge and the technical skills (including IDSM education/training opportunities) required to enter the workforce. • Connect high school students directly to employers in their area to provide mentorship, coaching, and career guidance focused on industry skills, terminology, and career pathways.

	● Provide or connect high school students with paid internship opportunities to build skills, create network connections, and increase industry knowledge. Paid placements are essential to ensure equitable access. Students from lower-income households often cannot afford to take unpaid positions that higher-income peers can pursue, perpetuating disparities in access to career-building experiences. ● Inform high school students of industry trends and the value and earning potential of energy careers through networking with professionals to support them in navigating their career paths. ● Create or connect high school students to scholarship opportunities to pursue higher education, industry technical skills certification, or apprenticeships in STEAM or IDSM fields. ● Access to resources such as financial aid through college partners, private scholarships, stipends for opportunity youth, and paid internships. ● Leverage supplemental funding opportunities to enhance or expand STEAM or IDSM program services (as available).
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Brief Program Description:

SDREN's Energy Pathways program increases access to education and training resources to develop students' awareness of clean energy career pathways, helps them learn the skills to enter the workforce, and provides sector-specific information. The Energy Pathways program provides high school students in the San Diego region with a standards-aligned curriculum that focuses on career technical education. Successful program implementation builds a bridge connecting participants to local employers within the energy, electrification, and decarbonization sectors.

Participants have access to a diverse network of mentors and coaches to provide one-on-one guidance and educate them on the value of energy/STEAM career pathways. This personalized mentorship focuses on navigating the job market, building a professional network, developing a strong resume, enhancing interviewing skills, providing financial education, and acquiring industry-specific knowledge tailored to their desired field of employment. Partnerships with local higher education institutions enable eligible students to enroll in college-level courses that boost their

industry knowledge and technical skills, preparing them for the workforce at no cost. Students facing monetary barriers are connected to additional resources such as financial aid through college partners, private scholarships, stipends for opportunity youth, and paid internships.

Known Equity Concerns in the Selected Markets: There is a lack of access to STEAM programs for high school students, especially in disadvantaged and HTR communities. Because access to these skill-building pathways is limited, marginalized communities in the energy and STEAM industries are affected. Representation in the field matters, and high school students may be discouraged from pursuing careers in energy if they do not identify with the current industry makeup.	Proposed Solutions to Equity Concerns: This program focuses on disadvantaged HTR communities and Title I high school students and provides access to STEAM educational opportunities. By connecting high schools to no-cost educational resources, paid internship opportunities, and professional networks, the program gives eligible high school students access to a network of diverse (gender and ethnicity) clean energy professionals to act as coaches and mentors, provide guidance, and encourage them to pursue careers in energy. The program provides one-on-one support to help individuals identify career pathways, navigate course selection and enrollment, and secure paid internships, thereby reducing equity concerns and barriers to participation. Multilingual educational outreach materials and program documents meet HTR high school students where they are and build the skilled worker pipeline for local employers. By focusing on students from disadvantaged and HTR communities, the program not only reduces historical inequities in access to STEAM training, but also broadens and diversifies the future workforce needed to achieve California’s clean energy and resilience goals. Increasing the number of local, skilled workers directly supports the long-term success of SDREN’s portfolio and the region’s ability to implement large-scale energy efficiency, IDSM, and decarbonization initiatives.
Intervention Strategy: Technical assistance, education, training, partnerships. ● Leverage existing needs assessment to inform content development and identify job trends, skills gaps, and barriers to accessing entry-level positions in STEAM careers, including IDSM pathways.	Delivery Type: Downstream – Technical assistance, education, training.

● Deliver no-cost standards-aligned curriculum and career technical education in partnership with local education agencies. ● Support and create placement opportunities for program graduates within full-time high-quality jobs (e.g., fellow to full-time work placement, an electrician at the local utility). ● Leverage existing data resources and tracking to measure and analyze energy career trends and future industry needs. ● Engage key stakeholders (employers, high schools, and colleges) in local communities to support program development and delivery. ● Offer a one-on-one coaching/mentorship network with local employers. ● Build articulation agreements between participating high schools and local colleges to support dual enrollment in STEAM college courses at no cost. ● Provide certification opportunities for high school students to boost their employability and match students to paid internships, trade, school, or apprenticeship opportunities. ● Build a network and career pipeline between high schools, colleges, trade schools, and local employers and offer networking events to make direct connections.	
Measurement and Verification Methods: N/A	Program Total System Benefit (TSB) for 2028-2031: N/A

Annual Budgets for 2028-2031: 2028: \$2,165,384.45 2029: \$2,230,345.98 2030: \$2,297,256.36 2031: \$2,366,174.05 2028-2031 Total: \$9,059,160.85	Cost Effectiveness (TRC and PAC Test Ratios) for 2028-2031: N/A
Anticipated directional and scale changes in budget for years 2032-2035: SDREN will maintain program steady-state beyond 2031. For years 2032-2035, budgets will increase at a moderate 3% annually to address inflation and to meet increasing customer demand.	Market Actors necessary for success: Third party implementer(s), high school administrators, high school teachers, high school career counselors, high school students, local college district partners, and local energy employers/employees as mentors and coaches.
High-level description of delivery workforce including necessary scale and its risks: The delivery workforce includes SDREN’s program implementation staff to lead program participants through offerings and services. Other workforce members include high school educators facilitating program delivery after participating in train-the-trainer exercises, faculty/staff within partner organizations (local colleges, trade schools, and apprenticeships), local employers in our network of mentors/coaches, and members of SDREN’s ISDM working group. No risks were identified regarding the delivery workforce for this program.	
Near-term Program Output(s) (1-4 years): ● Expand program delivery to additional high schools and districts, prioritizing Title I schools and HTR communities. ● Refine curriculum and career exploration content based on student, educator, and employer feedback. ● Increase access to dual-enrollment, certification, and early college credit opportunities in partnership with local higher education institutions. ● Strengthen mentorship and coaching structures to ensure students receive consistent, high-quality guidance and connections to local employers. ● Grow the number and diversity of internship, job shadowing, and pre-apprenticeship opportunities available to program participants. ● Formalize and expand articulation agreements and employer partnerships to create clearer, more visible pathways from high school into clean energy careers.	
Long Term Outcome (5-10 years): ● Increase the pipeline of skilled local workers in clean energy jobs (e.g., STEAM, ISDM). ● Increase the opportunity for youth in HTR and underserved communities to build skills, overcome barriers to high-quality jobs, create a representative workforce, and build the workforce capacity necessary to achieve local and state energy and climate goals.	

● A more diverse and representative energy workforce increases the region’s ability to deliver energy efficiency, IDSM, and electrification projects needed to meet decarbonization goals. ● Graduates increasingly work with SDREN implementers and contractors, supporting workforce continuity across SDREN sectors.	
Does this program interact with other programs in this PA portfolio? If so, describe: SDREN’s WE&T programs build energy workforce technical expertise, increasing their future ability to participate in and meet the demands of other SDREN programs that leverage trade allies to install projects across market support, equity, and resource acquisition segments.	
Program Metrics and Indicators (KPIs): ● Number of unique participants by sector that complete training Number of partners by type and purposes ● Dollar value of non-ratepayer in-kind funds/contributions utilized via partnerships ● Assessed value of the partnership by partners Count of newly educated or credentialed individuals ● External funding leveraged to support SDREN programs/ communities (% of total budget spend) ● Percentage of partners that have taken action supporting energy efficiency by type ● % of customers channeled to non SDREN programs	
Does this program utilize Integrated Demand Side Management (IDSM)? Yes - Other; including: ● Providing IDSM education/training in academic offerings. ● Connecting high school students to opportunities in IDSM fields. ● Leveraging supplemental funding opportunities to enhance or expand STEAM or IDSM program services.	Link to Existing Implementation Plan, if existing: Link to IP

Table 7. Program Card for Workforce Training and Capacity Building

Program Name: Workforce Training and Capacity Building		
Program ID: SDREN-02-WET-BRC New / Existing: Existing Expected Program Duration: 2028 - onwards		
Portfolio Segment: Market Support	Program Implementer Type: Third Party implementer	Third-Party Program Implementer (applicable to IOUs only): n/a
Applicable Sector: Cross-Cutting - Workforce, Education, & Training		Customer Group(s): Workforce, Education, & Training
Sector Challenges: - Most clean energy careers require specialized education or training. Adult workers new to energy and incumbents may need new skills or certifications, which can be time-consuming and costly. - Specialized skills and certifications are expensive for employees, and they may be unable to invest their own money into training due to other pressing financial considerations. - Inexperienced workers may struggle to find entry-level positions in the energy industry if they lack the required experience or education. They may need to start at a lower level than their previous careers, which can be financially challenging. - Workers may not have emerging industry-specific knowledge, training, experience, or the technical skills required to maintain employment.		Sector Opportunities (Expected Outcome(s)): - Provide workers with no or low-cost specialized skill training, certifications, networking, and apprenticeship opportunities to build skills to enter the clean energy workforce. - Offer no-cost employer-led energy efficiency and IDSM training programs for essential and emerging industry skills. Connect employees to external certifications and skill-building opportunities. - Provide entry-level on-the-job training and wraparound services such as career coaching and mentor/mentee support by matching participants with employers to support securing jobs. - Survey local employers to determine the emerging industry careers and necessary skills for incoming professionals to be successful in the industry. - Increase network connections through industry events, professional organizations, networking, or shadowing professionals to build connections and gain insights.

● Lack of disadvantaged and HTR workers with knowledge of energy efficiency, electrification, decarbonization, or clean energy building skills makes it difficult to find local candidates for employment and support SDREN climate and energy goals. Lack of access to external training resources, such as training centers or facilities, can be particularly challenging for employees in remote or less developed areas. ● High regional demand for energy efficiency, electrification, decarbonization, or clean energy building workers in the face of an insufficient supply of skilled workers. ● Employees may struggle to find time for training within regular job duties and personal responsibilities or may not know what training will benefit career growth. ● Workplace culture may not support training and skill development, which can discourage employees from seeking opportunities on their own, especially if they do not see a direct pathway for career advancement or pay increases.	● Directly support career preparedness training focused on resume development, interviewing skills, transferable skills, financial literacy, and networking skills. ● Support high-quality career pathways, labor standards, and job quality within clean economy careers, particularly in the residential sector. ● Develop or change employer policies on training to allocate dedicated time and funds to pursue education and training opportunities that benefit the employees and employers. ● Increase on-the-job training and skill-building opportunities through pre-professional shadowing, expert guest speakers, and industry leaders. ● More accredited training or certification opportunities in accessible locations or online. ● Improve employer outcomes and revenues through a workforce capable of installing measures in alignment with local and state policies and funding streams. ● Create career connections to opportunities within other SDREN programs.
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Brief Program Description:

SDREN's Workforce Training & Capacity Building program enhances the clean energy workforce in our region, focusing on skill development for individuals interested in entering the clean energy workforce and incumbent workers. The program targets individuals and employees/employers, boosting skills and employer capacity to work on electrification, IDSM, and decarbonization projects.

By developing and delivering no-cost energy efficiency and IDSM training and certifications, SDREN bolsters employability, fills gaps for in-demand technical skills, and provides pathways for individuals to enter the clean energy workforce to help the SDREN region meet its decarbonization goals. This program increases skills within the existing workforce, improves employee retention rates, fosters participant career advancement, and provides opportunities for networking through industry events, professional organizations, and shadowing with seasoned professionals in the

field. Participants receive career coaching and mentorship focused on resume development, interviewing skills, transferable skills, financial literacy, and networking.

The program collaborates with stakeholders within clean energy, electrification, and decarbonization workforce sectors, including CBOs, public agencies, SDREN program implementers, contractors, and labor unions. Continued partnerships boost growth opportunities for incumbent workers, increase retention rates for employers, and enhance employer workforce training. SDREN guides participating employers in developing policies to promote employee training, allocate funding for external training, and set aside time for skill development.

Known Equity Concerns in the Selected Markets:

A major known equity concern and barrier to entry is the cost associated with education opportunities, certification, or retraining programs. These costs can be prohibitive, particularly for those from low-income backgrounds.

Workers from minority groups face challenges accessing information, training materials, or job opportunities, which reduces access to quality education and training opportunities in HTR and underserved communities. Additionally, members of marginalized communities disproportionately hold low-wage positions, perpetuating the cycle of poverty. Employer policies regarding training, hiring, promotions, and general career advancement may have biases that prevent minority employees from advancing in their positions. Further, a lack of training opportunities or knowledge of where to access training prevents career growth.

Proposed Solutions to Equity Concerns:

SDREN seeks to bolster internal employee training and skill-building programs within energy-efficiency or IDSM-deploying employers to upskill the existing workforce and enable HTR and underserved participants to access high-quality jobs in the clean energy economy. The program utilizes a network of clean energy professionals from diverse and representative backgrounds as coaches and mentors to improve equitable access to industry-specific guidance and knowledge and support participants' long-term career success. Identifying or creating additional energy efficiency and IDSM accredited training or certification opportunities in accessible formats ensures all program participants benefit.

SDREN helps workers in HTR and underserved communities access no-cost education and certifications. By doing so, SDREN supports businesses by providing on-the-job training and skill development for underserved, entry-level workers. Working directly with the workforce and employers positions SDREN to address equity concerns with multiple stakeholders. SDREN encourages employers to revise their training policies to allocate time and resources to education and training that benefits both the employee and the employer. By creating no-cost, employer-led training programs for essential and emerging industry skills, SDREN provides employees with direct access to external certifications and skill-building opportunities.

	SDREN provides multilingual educational outreach materials and on-the-job training opportunities through pre-professional shadowing, expert guest speakers, and industry leaders. These training opportunities meet participants where they are and expand the skilled worker pipeline for local employers.
Intervention Strategy: Downstream – technical assistance, education, training, and outreach. ● Deploy a survey for local employers to determine the emerging clean energy industry careers and required skills and qualifications for professionals to be successful. ● Provide relevant training and ongoing workforce support aligned with industry needs to build capacity in the region, supporting employers along the way. ● Partner with local agencies to create a network of connection resources. Standardize content and offer energy efficiency and IDSM-focused training. ● Create opportunities for program graduates to seamlessly transition into employment with local employers. Establish partnerships with employers to facilitate job placements. ● Foster connections between the workforce and SDREN’s Residential, Commercial, and Public sector programs. ● Create opportunities for participants to connect with SDREN, IOU, and statewide programs to gain additional skills at no cost. ● Identify worker placement programs that can build workforce capacity while supporting participants skill development.	Delivery Type: Downstream – technical assistance, education, training, and outreach.
Measurement and Verification Methods: N/A	Program Total System Benefit (TSB) for 2028-2031: N/A

Annual Budgets for 2028-2031: 2028: \$3,518,679.82 2029: \$3,624,240.21 2030: \$3,732,967.42 2031: \$3,844,956.44 2028-2031 Total: \$14,720,843.90	Cost Effectiveness (TRC and PAC Test Ratios) for 2028-2031: N/A
Anticipated directional and scale changes in budget for years 2032-2035: SDREN will maintain program steady-state beyond 2031. For years 2032-2035, budgets will increase at a moderate 3% annually to address inflation and to meet increasing customer demand.	Market Actors necessary for success: Third party implementer(s), adult workers interested in entering the energy sector, incumbent workers, local energy employers within the clean energy, electrification, and decarbonization workforce sectors, and training providers.
High-level description of delivery workforce including necessary scale and its risks: The delivery workforce includes SDREN’s program implementation staff to lead participants through program services. Other workforce members include local employers in the network of mentors, coaches for new and incumbent workers, and members of SDREN’s IDSM working group, as needed. No risks were identified regarding the delivery workforce for this program.	
Near-term Program Output(s) (1-4 years): ● Scale training offerings across the region, focusing on skills that support energy efficiency, electrification, and IDSM expertise. ● Refine training curricula and delivery formats based on early participant outcomes, employer feedback, and emerging market needs. ● Expand partnerships with contractors, unions, CBOs, and workforce entities to reach more disadvantaged and HTR workers. ● Strengthen employer-focused services that support internal training policies, structured career ladders, and retention strategies. ● Enhance alignment and cross-referrals between the WE&T portfolio and SDREN sector programs (e.g., residential, commercial, public) to support a coordinated talent pipeline.	
Long Term Outcome (5-10 years): ● Increase the skills of the local workforce and provide pathways for employment in the energy workforce within local communities. ● Substantially increase workforce skills and provide pathways for industry advancement. ● Increase employers’ capacity to take on new work within the clean energy, electrification, and decarbonization workforce sectors. ● A growing network of trained workers improves regional capacity to install energy efficiency electrification, and IDSM technologies needed for SDREN’s long-term decarbonization outcomes.	

Does this program interact with other programs in this PA portfolio? If so, describe: SDREN’s WE&T programs build contractor technical expertise, increasing their ability to participate in and meet the demands of other SDREN programs that leverage trade allies to install projects across commercial, residential, and public sector projects.	
Program Metrics and Indicators (KPIs): ● Count of newly educated or credentialed individuals ● Number of unique participants by sector that complete training Number of partners by type and purposes ● Dollar value of non-ratepayer in-kind funds/contributions utilized via partnerships ● Percentage of partners that have taken action supporting energy efficiency by type ● Assessed value of the partnership by partners ● % of customers channeled to non SDREN programs	
Does this program utilize Integrated Demand Side Management (IDSM)? Yes - Other; including: ● Creation of no-cost employer-led energy efficiency and IDSM training programs for essential and emerging industry skills. ● Encouraging IDSM-deploying employers to upskill the existing workforce and enable HTR and underserved participants to access high-quality jobs in the clean energy economy. ● Support identification or creation of additional energy efficiency and IDSM accredited training or certification opportunities. ● Educate and collaborate with participating contractors on inclusive outreach, customer acquisition, and sustained customer satisfaction with technology and behavioral interventions contributing to IDSM program goals.	Link to Existing Implementation Plan, if existing: Link to IP

Cross-cutting: Codes & Standards

Table 8. Program Card for C&S

Program Name: Codes & Standards		
Program ID: SDREN-01-CS-CSS New / Existing: Existing Expected Program Duration: 2028 - onwards		
Portfolio Segment: Codes & Standards	Program Implementer Type: Third Party Implementer	Third-Party Program Implementer (applicable to IOUs only): n/a
Applicable Sector: Cross-Cutting		Customer Group(s): Cross-Cutting
Sector Challenges: • Energy codes are complex and local government staff lack sufficient capacity and time to understand the codes and implement effective review and enforcement mechanisms. • Energy efficiency is typically not a high priority for building departments, residential and commercial permit applicants, or within the C&S community (e.g., contractors, architects, engineers, and other parties who engage directly in the building permitting process). This results in missed opportunities for significant energy savings. • There is a lack of resources for training, capacity, and technical support to build local government staff expertise, impeding their capacity to meet evolving energy code requirements. • Increasingly stringent energy codes create compliance gaps, hindering the state from reaching decarbonization and greenhouse gas reduction goals.		Sector Opportunities (Expected Outcome(s)): • While limiting, the current Title 24 moratorium allows SDREN to engage in more in-depth work to address the gaps and barriers identified in the existing needs assessment and the CEC's code gap analysis. This provides an avenue for SDREN to ensure regional compliance with current (and future) code requirements. • Ongoing technical assistance, training, tools, peer-to-peer learning, and online resources can help local building department staff and permit applicants understand and comply with current and future energy codes and standards. • An Energy Code Coach can fill gaps in building department code comprehension and capacity. They can serve as a dedicated expert to assist local agencies with effectively implementing energy codes. • Leverage Community Power's Building Housing Stock Analysis to inform strategies (published October 2024 and subsequently expanded by SDREN in 2025 to include all of SDREN territory).

● Future code cycles, following the end of the current moratorium in place on Title 24 updates, will incorporate requirements for building and transportation electrification, demand flexibility, indoor air quality, and grid interactive buildings, which will necessitate education for permitting agencies and their staff. ● Many types of projects (HVAC, water heating, etc.) have low permitting rates. This not only diminishes potential energy savings but also complicates code enforcement efforts, which play a vital role in energy efficiency. ● Most local governments lack the capacity and confidence to lead by example in advanced energy codes and standards for new and existing buildings, which is important for broader compliance. ● There is often a disconnect between the development, adoption, and enforcement of new energy codes. The disconnect can lead to confusion and delays in code implementation. ● Energy code requirements vary by permit scope, climate zone, and building or site attributes. Moreover, energy code interpretation and enforcement varies by jurisdiction. These nuances and variability can lead to confusion and inconsistencies. ● Before Community Power published its Building and Housing Stock Analysis in 2024, no transparent data on local building stock was available. Having this data, including the recently expanded 2026 report to include all of San Diego County, helps inform permitting and code compliance actions and reduce energy use and GHGs in the building sector.	● Data-driven assistance with advanced energy codes, building performance requirements, and benchmarking requirements encourages local leadership in energy efficiency, passive design, and zero net energy construction. ● Energy code comprehension and compliance within the C&S community can be enhanced through technical information, online and in-person education and training, and more effective code compliance assistance. This approach creates a more informed and compliant industry. ● The compilation and evaluation of accurate, digitized, and standardized permitting and compliance data drives better local decision-making and better energy performance in new and existing buildings. ● Given the expected influx of state funding and uncertainty of federal funding for electrification and efficiency retrofits in the coming years, permitting agencies must prepare in advance. This ensures they can efficiently review and approve the significant number of new projects that are coming soon. Preparation mitigates workload impacts and results in more efficient and well-managed building projects.
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Over the next several years, significant state funding is earmarked for electrification and efficiency retrofits to existing buildings (with a major emphasis on income-qualified households), which will create a significant new workload for permitting agencies.	
Brief Program Description: The Codes and Standards (C&S) program complements existing statewide and regional investor-owned utility programs and fills gaps in services for local governments and the C&S community. This program engages and supports local government permitting agencies to help them enhance energy code compliance and embrace advanced energy codes, standards, and policies. By doing so, the program seeks to significantly reduce energy consumption and GHG emissions, accelerating local government leadership in energy efficiency. This program is committed to providing local agencies and the C&S community with data-driven and actionable resources. These resources bolster understanding of energy codes, increase compliance, decrease energy consumption within buildings, and support the state’s energy efficiency and GHG reduction goals. The C&S program helps public agencies collect and use data on the age and condition of building stock, comparative energy usage within building sectors, and permit issuance and enforcement processes. This data informs energy code compliance efforts and helps identify the most promising opportunities for reach codes and policies.	
Known Equity Concerns in the Selected Markets: One pressing equity concern in the market is the issue of low compliance with energy code performance requirements, which leads to increased energy consumption and less healthy, safe, and comfortable living and working environments. This disproportionately affects vulnerable communities, further exacerbating existing disparities in access to energy efficient and comfortable spaces. Low-income building owners and occupants often have significant financial constraints. As a result, they may be more likely to perform unpermitted work within their buildings to reduce immediate costs and bypass code compliance requirements.	Proposed Solutions to Equity Concerns: The program recognizes the potential for substantial improvements in code compliance and building performance through improved, more efficient, and more effective practices by permitting agencies. Permitting agencies can ensure codes are followed by improving their processes, resulting in higher-performing buildings that are more energy efficient and provide healthier, safer, and more comfortable environments for occupants. To address equity concerns, the program places a strong emphasis on implementing building permit services and offering technical assistance designed for underserved, HTR, and disadvantaged communities. This approach helps alleviate customer trepidation often associated with the permit process, which can disproportionately affect these communities. In collaboration with the statewide C&S

	Enhancement team and research institutions, the program develops grid-friendly electrification opportunities that provide building owners and residents with shared economic benefits. In doing so, SDREN expects to significantly reduce the prevalence of unpermitted work in underserved and HTR communities. Increased compliance ultimately enhances energy efficiency, health, and safety. By directly engaging with communities and providing tailored support, the program bridges gaps in access to energy efficient and quality building practices, promoting a more equitable and sustainable future for all of San Diego County.
Intervention Strategy: Technical assistance, education, training, and outreach. ● Provide targeted education, tools, training and resources to local governments and C&S community stakeholders, including access to an Energy Code Coach, to improve energy code compliance and effectiveness. ● Leverage existing data resources and existing tracking mechanisms to measure and analyze code compliance and code development interventions that are supported by the program. This data-driven approach provides insights and feedback for continuous improvement. ● Provide information, analysis, and technical assistance to design, adopt, and implement advanced energy codes, benchmarking and energy audit requirements, buildings emissions performance standards, and other model approaches to lowering energy usage and GHGs (including low-GWP refrigerants) in new and existing buildings.	Delivery Type: Downstream – technical assistance, education, training, and outreach.

● Activate and engage key stakeholder representatives in disadvantaged and HTR communities to aid in the development and delivery of programs. This approach fosters a sense of community ownership and ensures interventions are tailored to the specific needs and concerns of participating communities.	
Measurement and Verification Methods: N/A	Program Total System Benefit (TSB) for 2028-2031: N/A
Annual Budgets for 2028-2031: 2028: \$2,165,384.45 2029: \$2,230,345.98 2030: \$2,297,256.36 2031: \$2,366,174.05 2028-2031 Total: \$9,059,160.85	Cost Effectiveness (TRC and PAC Test Ratios) for 2028-2031: N/A
Anticipated directional and scale changes in budget for years 2032-2035: SDREN will maintain program steady-state beyond 2031. For years 2032-2035, budgets will increase at a moderate 3% annually to address inflation and to meet increasing customer demand.	Market Actors necessary for success: The primary actors for the C&S program are local government departments/divisions that are responsible for building permit issuance and enforcement. Within most agencies this would include building and safety, community development, planning, and any other departments responsible for developing, overseeing, and enforcing statewide and local building standards and ordinances. Practitioners (developers, contractors, architects, engineers, etc.) who apply for permits that trigger energy code requirements and third party implementer(s) are also market actors necessary for the program's success.
High-level description of delivery workforce including necessary scale and its risks: The program implementer staff plays a crucial role in leading participants through the program's offerings and services, acting as guides and facilitators. The program leverages specialized subject-matter practitioners who are engaged by the implementer to provide comprehensive training and energy code coaching. The program also leverages specialists to support data compilation, data analysis, and education and training. SDREN also leverages its IDSM working group as needed.	

Near-term Program Output(s) (1-4 years):

- Build on initial needs assessment findings by delivering targeted technical assistance, training, and energy code coach support to participating jurisdictions.
- Support permitting agencies in implementing process improvements and data practices.
- Expand peer-to-peer learning opportunities among local governments to share model ordinances, policies, and enforcement practices.
- Refine tools, templates, and educational resources for both permitting staff and market practitioners.
- Prepare jurisdictions for upcoming code cycles and the end of the moratorium by introducing advanced topics such as electrification, low-GWP refrigerants, demand flexibility, and building performance standards.
- Increase engagement with jurisdictions serving disadvantaged and HTR communities to ensure they benefit from improved code compliance and building performance.

Long Term Outcome (5-10 years):

- Capacity and competence of local permitting agencies to review, inspect, and enforce energy code compliance will increase. As a result, local communities will experience improved energy efficiency, leading to more sustainable and comfortable buildings.
- Although temporarily impacted by the recent Title 24 moratorium, as new and more stringent energy code requirements spread throughout the state, local permitting agencies will be capable of achieving broad compliance with the new standards, while contributing benefits to the entirety of the energy system. This will result in adherence to energy codes and contribute to the state's energy and climate goals.
- The C&S community will increase understanding of and adherence to energy code requirements. They will actively support more energy efficient and lower GHG construction practices.
- Improved compliance reduces disparities in building performance and health outcomes for disadvantaged and HTR communities.
- Local agencies are better prepared for future code cycles involving electrification, demand flexibility, and grid-interactive buildings, supporting SDREN's long-term decarbonization goals.

Does this program interact with other programs in this PA portfolio? If so, describe:

The Codes & Standards program receives participant referrals from the Public sector programs.

Program Metrics and Indicators (KPIs):

- The number of local government Reach Codes implemented (this is a joint IOU and REN effort)
- Number of training activities (classes, webinars) held, number of market actors participants by segment (e.g. building officials, builders, architects, etc.) and the the total size (number of the target audience) by sector. (M) Number of training activities
- Number of training activities (classes, webinars) held, number of market actors participants by segment (e.g. building officials, builders, architects, etc.) and the the total size (number of the target audience) by sector. (M) Number of participants

● % of customers channeled to non SDREN programs ● Increase in code compliance knowledge pre/post training ● External funding leveraged to support SDREN programs/communities (% of total budget spend)	
Does this program utilize Integrated Demand Side Management (IDSMS)? Yes – Other; Provide IDSMS education and technical support to code officials and participating contractors.	Link to Existing Implementation Plan, if existing: Link to IP

Residential

Table 9. Program Card for Single-Family

Program Name: Single-Family		
Program ID: SDREN-02-RES-SFM		
New / Existing: Existing		
Expected Program Duration: 2028 - onwards		
Portfolio Segment: Equity	Program Implementer Type: Third Party Implementer	Third-Party Program Implementer (applicable to IOUs only): n/a
Applicable Sector: Residential		Customer Group(s): Detached, renter or owner-occupied single-family residences
Sector Challenges: ● Residents often have limited familiarity with and/or are confused by existing energy efficiency and IDSM technologies, programs, and service offerings. ● Capital intensive upgrades resulting from deferred maintenance hinders holistic projects and streamlined program implementation. ● Difficulty establishing trust with HTR customers and within underserved communities. ● HTR and underserved communities have historically faced disparities in access to clean energy programs and resources. ● Split incentives between renters and property owners limit the opportunities to reach renter-occupied homes. ● Many single-family homes have aging infrastructure, which can be a barrier to implementing energy efficient technologies.		Sector Opportunities (Expected Outcome(s)): ● Partner with trusted CBOs and community partners for customer outreach to explain program opportunities. These organizations often have deep community connections and can reach underserved and HTR populations. ● Focus on energy efficiency and IDSM offerings and educational opportunities that result in reduced energy costs and non-energy benefits for residents. ● Support HTR and underserved communities with early decarbonization efforts. These communities often bear a disproportionate burden of environmental and energy-related challenges. Targeted support can improve these customers' living conditions and energy resilience. ● Pair program opportunities with external programs for deeper savings and incentive stacking. ● Provide no-cost installations through a direct install offering.

● Local regulations and permitting requirements can be a major hurdle for homeowners looking to make energy-efficient improvements. Navigating the bureaucracy and securing the necessary approvals can be time-consuming and frustrating. ● Homeowners may be resistant to change, especially if they are unfamiliar with or skeptical of new energy efficient and IDSM technologies.	● Offer rebates for selected energy efficiency measures that can stack with, or meet gaps of, other program rebate offerings.
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Brief Program Description:

SDREN'S Single-Family equity program offers a home Energy Advisor for residents that serves as a personal concierge-style service to connect them to program information and funding and financing opportunities. The Energy Advisor refers and connects residents to all eligible program resources. They act as a closed loop between participants and program service providers by coordinating with SDREN-supported contractors and contractors supporting other external programs. The program provides access to a growing and evolving knowledge base to support participants.

This approach increases program participation for HTR and underserved residents who would otherwise have limited access to these resources. To maximize accessibility for the community, the program provides services through multiple mediums, direct email correspondence to respond to participant questions and requests for information, and call centers.

The program's support services meet homeowner and renter needs. The program meaningfully engages with the renter community, a group historically left out of traditional energy programs, by offering a package of no-cost energy efficiency upgrades (direct install measures) for their homes. These upgrades reduce residents' energy consumption, lower their energy bills, and can complement other existing state programs aimed at reducing income-qualified resident utility bills, such as the Energy Savings Assistance program.

The Energy Advisor supports renters by working directly with property owners to advocate for upgrades at their properties. Rebates for additional energy efficiency measures are also available. Targeted efficiency measures may include attic and wall insulation, LED lighting, duct testing and sealing, low-flow shower heads, and faucet aerators. The program focuses on improving indoor air quality for residents through electrification by offering heat pump water heaters, HVAC heat pumps, induction stoves, and heat pump clothes dryers. The program leverages local contractors for installations to stimulate the local economy and support local workforce development.

The program provides energy efficiency kits and educational opportunities for renters and homeowners to create awareness of the benefits of energy conservation, energy efficiency, electrification, clean and renewable energy, DR program participation, and low-GWP refrigerants. Educational topics may include energy efficiency technologies and why they are eligible for incentives. For example, one educational opportunity might walk through a sample project

scenario with stacked incentives and explanations of energy, financing, and policy-related terms (e.g., kilowatt hour, power purchase agreement, and governmental reach codes). The program provides equitable and inclusive marketing and outreach strategies to promote the Energy Advisor services to both renters and homeowners. It partners with trusted CBOs and community partners for strategic outreach to explain available program opportunities to customers. The program shares specific information and materials for renters to help them advocate to landlords for upgrades in their homes. The Energy Advisor works with property owners directly to educate and advocate for upgrades on behalf of renters.	
Known Equity Concerns in the Selected Markets: Residents of single-family homes in HTR and underserved communities often receive limited outreach from energy efficiency programs. Shortfalls in outreach can impede access to vital resources and accessible funding, limiting program participation. Programs often remain inaccessible to community members due to insufficient consideration of equity and inclusion in outreach and educational materials. The absence of culturally-sensitive, linguistically-appropriate, and inclusive materials exacerbates barriers to participation, especially for non-English speaking residents. Additionally, residents' busy schedules and their need for personalized outreach and program services through multiple mediums further hinders HTR and underserved community participation in energy efficiency programs.	Proposed Solutions to Equity Concerns: To address equity concerns within the residential sector, the program implements a multi-faceted approach that includes an Energy Advisor service. Advisors ensure expanded access to program services through technical guidance, community outreach, and engagement. To make information more accessible to all community members, the program prioritizes marketing materials that are in-person, equitable, and inclusive. These materials are thoughtfully designed, taking into consideration diverse needs such as in-language content, cultural understanding, accommodations for customers with impaired hearing or vision, etc. Recognizing the importance of community trust and engagement, the program partners with trusted CBOs and community partners for outreach. By working alongside organizations deeply rooted in the community, the program leverages partners' existing networks and credibility to foster community trust and engagement.
Intervention Strategy: Technical assistance, incentives (both rebates and direct install), education, training, and outreach. ● Personal support and coaching for customers through an Energy Advisor service that is accessible through multiple mediums.	Delivery Type: Downstream – Deemed & Deemed Direct Install, technical assistance, education, training, and outreach.

● Closed loop design for the customer with a single point of contact to provide guidance and referrals to relevant program contractors. ● Equitable and inclusive outreach and marketing materials. ● Educational materials including an energy efficiency starter kit for customers. ● Direct install of selected energy efficiency measures. ● Rebates for selected energy efficiency measures that can stack with, or meet gaps of, other program rebate offerings.	
Measurement and Verification Methods: Deemed and installation inspections	Program Total System Benefit (TSB) for 2028-2031: 4 Year TSB: \$6,074,197
Annual Budgets for 2028-2031: 2028: \$6,766,510.08 2029: \$7,007,454.84 2030: \$7,257,145.20 2031: \$7,515,905.82 2028-2031 Total: \$28,547,015.93	Cost Effectiveness (TRC and PAC Test Ratios) for 2028-2031: 4 Year TRC: 0.27
Anticipated directional and scale changes in budget for years 2032-2035: SDREN will maintain program steady-state beyond 2031. For years 2032-2035, budgets will increase at a moderate 3% annually to address inflation and to meet increasing customer demand.	Market Actors necessary for success: ● Third party implementer(s). ● Trade professionals. ● Local contractors. ● Equipment manufacturers. ● Homeowners. ● Renters. ● Community-based organizations and community outreach partners.
High-level description of delivery workforce including necessary scale and its risks: SDREN staff, the program implementer staff, and the Energy Advisors guide program participants through the SDREN residential program offerings and services, in partnership with subcontracted engineering consultants, CBOs, SDREN's IDSM working group, and community partners. Licensed local contractors, electricians, and equipment manufacturers support the direct installation of energy efficiency measures, which may also include local workforce members who participated in SDREN's WE&T program. There are no known workforce related risks for successful	

implementation of the program, though a delay in manufacturing or equipment delivery (or high demand) could pose a risk to project completion timelines.

Near-term Program Output(s) (1-4 years):

- Build on early years of concierge and direct-install delivery to serve more single-family customers across SDREN territory, with an emphasis on HTR and underserved households.
- Refine the Energy Advisor model, including customer journeys, communication practices, and referral protocols, based on customer and contractor feedback.
- Expand the mix of energy efficiency and electrification measures offered through direct install and rebates to support deeper decarbonization and comfort improvements.
- Strengthen coordination with ESA, SDG&E programs, and state funding to improve stacked incentives to streamline program navigation, remove capital barriers, and increase project affordability
- Enhance culturally-responsive, in-language outreach in partnership with CBOs to increase trust and awareness in HTR and underserved communities.

Long Term Outcome (5-10 years):

- HTR and underserved customers have fair and equal access to energy efficiency programs.
- HTR and underserved communities leverage program resources and incentives at an equal or greater rate than customer base at large.
- Participants increasingly adopt electrification technologies that improve indoor air quality and reduce reliance on fossil gas.
- Greater access to stacked incentives and financing options reduces long-term energy burden.
- Local contractors trained via WE&T support expanded delivery of home upgrades.

Does this program interact with other programs in this PA portfolio? If so, describe:

WE&T-trained contractors are introduced and directed to relevant SDREN programs such as its residential offerings, creating a direct pipeline of available contractors to help the San Diego region meet its decarbonization goals.

Program Metrics and Indicators (KPIs):

- Sum of all equity segment participants' kilowatt hour (kWh) savings in equity segment - lifecycle gross
- Sum of all equity segment participants' therm savings in equity segment - lifecycle gross
- Sum of all equity segment participants' TSB in equity segment
- Sum of all equity segment participants' greenhouse gas reductions (in tons of carbon dioxide equivalent) in equity segment - lifecycle gross
- Percent of equity target participants in equity segment, by sector
- % of customers anticipated to experience lower energy costs as a result of program participation (public, commercial, residential sectors)
- Total lifetime energy bill savings
- % of customers channeled to non SDREN programs

● External funding leveraged to support SDREN programs/ communities (% of total budget spend) ● % of equity customers served compared to total customers served	
Does this program utilize Integrated Demand Side Management (IDSMD)? Yes - Other; including: ● Focus on energy efficiency and IDSMD offerings and educational opportunities. ● Provide services and resources to help secure external funding and financing for IDSMD opportunities.	Link to Existing Implementation Plan, if existing: Link to IP

Table 10. Program Card for Multifamily

Program Name: Multifamily		
Program ID: SDREN-01-RES-MFM		
New / Existing: Existing		
Expected Program Duration: 2028 - onwards		
Portfolio Segment: Equity	Program Implementer Type: Third Party Implementer	Third-Party Program Implementer (applicable to IOUs only): n/a
Applicable Sector: Residential		Customer Group(s): Multifamily buildings of two or more units
Sector Challenges: ● HTR and underserved residents and property owners often have limited familiarity with existing energy efficiency and IDSM technologies, programs, and service offerings, especially electrification. ● Difficulty establishing trust with HTR customers and within underserved communities. ● Split incentives between renters and property owners limit the opportunities to reach renter-occupied homes. ● There is no existing single-program solution to meet the needs of a multifamily dwelling. ● Local regulations and permitting requirements can be major hurdles. ● Risks of tenant displacement as a result of increased property values and rising rents.		Sector Opportunities (Expected Outcome(s)): ● Pair program opportunities with external existing and emerging programs for incentive stacking to realize deeper savings and decarbonization of multifamily properties. ● Partner with trusted CBOs and community partners for customer outreach to explain program opportunities. ● Focus on energy efficiency and IDSM offerings and educational opportunities that result in reduced energy costs and increased non-energy benefits for residents. ● Reduce property owners' energy and operating costs to support reinvestment into the building and improve quality of life for tenants. ● Provide energy efficiency and IDSM education and advisory services to property owners, property management companies, and tenants to address the split incentive challenge.

	● Provide no-cost installations through a direct install offering, with a focus on electrification measures to help HTR and underserved communities decarbonize. ● Work to protect tenants from potential increased rents that can result from property investments. ● Coordinate directly with PAs and implementers to apply the latest lessons learned from other multifamily programs prior to implementation.
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Brief Program Description:

SDREN's Multifamily program targets multifamily property owners/managers as well as tenants to address facility upgrades that impact both common area measures (CAM) and renter-specific in-unit utility bill savings.

For property owners and property managers, the program provides customizable engagement strategies tailored to the decision-maker for property upgrades. The program promotes benefits such as energy bill savings, operating cost savings, return on investment, and increased property value, as well as non-energy benefits such as health and comfort. The program also offers technical assistance to property owners and managers in the form of unbiased program staff support throughout the project lifecycle. This turnkey service engages decision-makers in energy upgrade decisions, ensuring that projects achieve their intended energy cost savings and benefits.

The program offers a systems tune-up assessment as an outreach strategy that identifies "quick-win" savings with project payback of less than two years. Building upgrades focus on the impacts on CAM areas by providing energy audits to identify opportunities for energy efficiency measures. Recommended upgrades are presented to the property owner or manager alongside corresponding costs, savings, and financial metrics. The program offers rebates that can be stacked with other applicable utility, regional, or state program incentives. It also provides financial resources to help secure external funding and financing, including IDSM opportunities. Property owners and managers receive guidance on state and municipal building code requirements and compliance, including reach codes and, once the moratorium is lifted, any new Title 24 updates, to help guide upgrade decisions. Additionally, the program offers unbiased reviews of contractor quotes to help make a contractor selection.

Specific to renters, the program meaningfully engages with the renter community, a group historically left out of traditional energy programs, by offering a package of no-cost energy efficiency upgrades (direct install measures) for their residences. These upgrades reduce residents' energy consumption and lower their energy bills, and can complement other existing state programs aimed at reducing income-qualified resident utility bills, such as the Energy Assistance Savings program. Rebates for additional energy efficiency measures are also available. Targeted efficiency measures include attic and wall insulation, LED lighting, duct testing and sealing, low-flow shower heads, and faucet aerators. The program also focuses on improving indoor air quality for

residents through electrification, targeting heat pump water heaters, induction stoves, and heat pump clothes dryers. The program leverages local contractors for installations to stimulate the local economy and support local workforce development.

The program provides energy efficiency kits and educational opportunities for renters to create awareness of the benefits of energy conservation, energy efficiency, electrification, clean and renewable energy, DR program participation, and low-GWP refrigerants. Educational topics may include energy efficiency technologies, why the technologies are eligible for incentives, a sample project scenario with stacked incentives, and energy, financing, and policy-related terms.

The program improves multifamily facilities while protecting tenants from potential increased rents that can result from property investments. The program partners with CBOs and trusted community partners with subject matter expertise alongside local municipalities to create awareness of existing and help inform new anti-displacement policies. An informed and community-driven approach to anti-displacement policies fosters a network that involves tenants, property owners, and community partners, where feedback is shared and incorporated, enabling all stakeholders to participate in and prioritize the overall needs and long-term shared vision for the community.

Known Equity Concerns in the Selected Markets: Multifamily residents and property owners in HTR and underserved communities often receive limited outreach from energy efficiency programs, which results in limited awareness and knowledge of available energy program services and potential benefits. Residents and property owners also often hold the perception that energy efficiency and IDSM measures are too capital intensive. They may not fully understand the savings benefits or long-term payback considerations. Programs may also be inaccessible to community members due to insufficient consideration of equity and inclusion in program outreach and educational materials.	Proposed Solutions to Equity Concerns: To make information more accessible to all community members, the program prioritizes marketing materials that are in-person, equitable, and inclusive. These materials are thoughtfully designed, taking into consideration diverse needs such as in-language content, cultural understanding, accommodations for customers with impaired hearing or vision, etc. Recognizing the importance of community trust and engagement, the program partners with trusted CBOs and community partners for strategic outreach. By working alongside organizations deeply rooted in the community, the program can leverage their existing networks and credibility to foster community trust and engagement.
Intervention Strategy: Technical assistance, incentives (both rebates and Direct Install), education, training, and outreach. ● Personal project support for property owners and managers through turnkey technical assistance.	Delivery Type: Downstream – Deemed, Deemed Direct Install, Technical assistance, education, training, and outreach.

● Equitable and inclusive outreach and marketing materials, targeted and customized to property owners, managers, and tenants. ● Educational materials, including an energy efficiency starter kit for customers. ● Direct install of selected energy efficiency measures. ● Rebates for selected energy efficiency measures that can stack with, or meet gaps of, other program rebate offerings.	
Measurement and Verification Methods: Deemed and site inspections	Program Total System Benefit (TSB) for 2028-2031: 4 Year TSB: \$3,394,093
Annual Budgets for 2028-2031: 2028: \$3,607,519.65 2029: \$3,734,647.96 2030: \$3,866,345.86 2031: \$4,002,781.49 2028-2031 Total: \$15,211,294.96	Cost Effectiveness (TRC and PAC Test Ratios) for 2028-2031: 4 Year TRC: 0.27
Anticipated directional and scale changes in budget for years 2032-2035: SDREN will maintain program steady-state beyond 2031. For years 2032-2035, budgets will increase at a moderate 3% annually to address inflation and to meet increasing customer demand.	Market Actors necessary for success: ● Third party implementer(s). ● Trade professionals. ● Local contractors. ● Equipment manufacturers. ● Community-based organizations and community outreach partners. ● Property owners. ● Property managers. ● Tenants.

High-level description of delivery workforce including necessary scale and its risks:

SDREN staff and the program implementer staff guide program participants through the SDREN residential program offerings and services in partnership with subcontracted engineering consultants, CBOs, SDREN's IDSM working group, and other community partners. Licensed local contractors, electricians, and equipment manufacturers support the direct installation of energy efficiency measures. There are no known workforce-related risks to the successful implementation of the program, though a delay in equipment manufacturing or delivery (or high demand) could pose a risk to project completion timelines. Additional partners and stakeholders not under contract may include trade associations, chambers of commerce, and municipalities.

Near-term Program Output(s) (1-4 years):

- Expand support to additional multifamily properties, including deed-restricted affordable housing and smaller, independently owned buildings.
- Increase delivery of turnkey technical assistance, from systems tune-ups to comprehensive retrofit planning, to move more projects into implementation.
- Scale in-unit and common-area direct install offerings while refining electrification and demand-flexibility strategies based on lessons from early projects.
- Deepen partnerships with CBOs, tenant groups, and local jurisdictions to align on anti-displacement strategies and tenant protections.
- Enhance engagement materials and training for property owners, managers, and tenants to build shared understanding of benefits and available protections.
- Improve cross-program and cross-funding coordination so multifamily properties can more easily stack SDREN, IOU, and state resources.

Long Term Outcome (5-10 years):

- HTR and underserved customers, specifically renters, have fair and equal access to programs.
- HTR and underserved communities leverage program resources and incentives at an equal or greater rate than customer base at large.
- Property owners and property managers are aware of program offerings and resources and have the policies to support energy efficiency upgrades.
- Electrification and demand-flexibility upgrades in multifamily housing support the region's decarbonization goals while improving indoor air quality and comfort.
- Tenant protections informed through CBO partnerships help ensure decarbonization does not contribute to displacement.
- Local contractors trained via SDREN's WE&T offerings support consistent, high-quality delivery of upgrades in multifamily buildings.

Does this program interact with other programs in this PA portfolio? If so, describe: WE&T-trained contractors are introduced and directed to relevant SDREN programs such as its residential offerings, creating a direct pipeline of contractors available to support programs and help the San Diego region meet its decarbonization goals.	
Program Metrics and Indicators (KPIs): ● Sum of all equity segment participants' kilowatt hour (kWh) savings in equity segment - lifecycle gross ● Sum of all equity segment participants' therm savings in equity segment - lifecycle gross ● Sum of all equity segment participants' TSB in equity segment ● Sum of all equity segment participants' greenhouse gas reductions (in tons of carbon dioxide equivalent) in equity segment - lifecycle gross ● Percent of equity target participants in equity segment, by sector ● % of customers anticipated to experience lower energy costs as a result of program participation (public, commercial, residential sectors) ● Total lifetime energy bill savings ● % of customers channeled to non SDREN programs ● External funding leveraged to support SDREN programs/ communities (% of total budget spend) ● % of equity customers served compared to total customers served	
Does this program utilize Integrated Demand Side Management (IDSM)? Yes - Other; including: ● Focusing on energy efficiency and IDSM offerings and educational opportunities. ● Providing energy efficiency and IDSM education and advisory services to property owners, property management companies, and tenants to address the split incentive challenge. ● Providing financial resources to help secure external funding and financing, including for IDSM opportunities.	Link to Existing Implementation Plan, if existing: Link to IP