Southern California Regional Energy Network

SoCalREN Agriculture Retrofit Program (Ag-Retrofit) Program Implementation Plan

Prepared in accordance with guidance provided by:

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Program Overview

The CEDARS platform generates summary views of the following information, based on application tables that the PAs upload to CEDARS. The information is organized at the program level and, if applicable, sub-program level to enable multiple cross-tabulations and outputs for stakeholders' review and consideration. Programs with subprograms will be displayed at subprogram level and will roll up to a program summary page.

Program Budget and Savings Information

The budget and savings information for the Program are presented in the tables below.

Table 1. Program Budget and Savings Information

1	Program Name		SoCalREN Agriculture Retrofit Program (Ag-Retrofit)	
2	Program ID number		SCR-AGR-G3	
3	Program Implementer		SoCalREN + Third-Party (ICF)	
4	Portfolio Administrator		County of Los Angeles/SoCalREN	
5	Program Implementer Type		REN, Third-Party	
6	Portfolio Segment		Resource Acquisition	
7	Total Program Budget		$5,875,288	
8	Program Budget by Year	**2025**	**2026**	**2027**
		$2,550,794	$2,094,363	$2,613,391
9	Program Duration (Start Date–End Date)	October 2025–December 2027		
10	Total System Benefit (TSB)	**2025**	**2026**	**2027**
		$5,499,552	$7,843,405	$9,998,079
11	CO2	**2025**	**2026**	**2027**
	Lifecycle Gross	N/A		
	First-Year Gross			
	First-Year Net			
12	KW	**2025**	**2026**	**2027**
	First-Year Gross	15,001.32	2,175.07	2,640.33
	First-Year Net	9,000.79	1,097.30	1,330.98
13	kWh	**2025**	**2026**	**2027**
	Lifecycle Gross	173,512,739.65	46,638,756.73	55,998,365.89
	First-Year Gross	13,709,065.62	8,795,169.39	10,565,395.29
	First-Year Net	8,225,439.37	4,536,757.67	5,436,825.41
14	Therms	**2025**	**2026**	**2027**
	Lifecycle Gross	N/A	7,071,240.90	8,619,197.78
	First-Year Gross	N/A	290,711.72	354,351.08

	First-Year Net	N/A	174,427.03	212,610.65
15	Program Cost Effectiveness TRC	**2025**	**2026**	**2027**
	TRC by Year	.89	1.71	1.77
16	Program Cost Effectiveness PAC	**2025**	**2026**	**2027**
	PAC by Year	**3.22**	3.88	3.96
17	Market Sector	Agriculture		
18	Program Type	Resource		
19	Delivery Type	Downstream		
20	Intervention Strategies		Retrofit - Incentive	
21	M&V Methods		Deemed	

Implementation Plan Narrative

1. Program Description

The Ag-Retrofit Program drives installation of cost-effective solutions primarily through a combination of strategic measures and provides relevant technical assistance (AG-Ag-Retrofit) to drive customer awareness of both energy efficiency (EE) and non-EE measure benefits. In some cases, measures with high cost-effectiveness are relatively unknown to the target customers and face significant adoption barriers. For these measures, additional emphasis will be placed on creating compelling marketing collateral, case studies, and training curriculum (through the Agriculture WE&T program (Ag-WE&T)) for Ag customers and equipment vendors. This effort will be supplemented by current and anticipated non-EE funding (e.g., USDA grants). These grants (through the Rural-HTR Agriculture Finance Assistance Program) will provide significant additional resources to promote measures and overcome trust barriers, and specific funding will be pursued to achieve savings cost effectively for underserved communities. Additionally, the Ag-Retrofit Program recognizes the importance of water savings within California's agricultural sector and will identify new partnerships and funding opportunities targeting the water-energy nexus. The program will work collaboratively with SoCalREN's Public Agencies Programs to evaluate and qualify opportunities to pursue grants to drive customer awareness and adoption of new and underutilized technologies that simultaneously achieve energy and water savings.

The Ag-Retrofit Program identifies and works with SCE & SoCalGas Ag industry customers to help them understand the benefits of implementing energy saving projects and measures; provides technical and project development assistance as needed; offers financial incentives and financing options; and for small/medium Disadvantaged Communities ("DAC") and Hard-to-Reach ("HTR") customers, installation of certain energy saving measures. The following activities will be conducted in support of achieving Program goals:

- Offer the Ag-Retrofit program focusing mainly on small and medium Ag customers that are engaged in growing, producing and processing various on-farm crops and animal products with a special emphasis on rural and underserved communities.
- Employ a multi-level outreach strategy that leverages the Program's account management team, local contractors, equipment vendors, key industry associations including universities, and other types of trade allies and service providers that engage the agricultural community.
- Utilize analytics-based customer targeting to identify and engage HTR customers and DAC regions to assist them in saving energy.
- Provide in-language sales and promotion materials (including Spanish and Hmong) and establish strategy partnerships aligned with unique Ag customer segments.
- Provide Ag customers with energy engineering support to identifying deemed, custom and NMEC measures.
- Provide Ag customers with access to a program information via a program website.
- Offer a variety of incentive payments suitable for the customer size, project size, HTR or DAC classification, and project complexity/scale and measure type (e.g., deemed, custom, or NMEC).
- Identify and evaluate partnership and funding opportunities to increase adoption of new and underutilized technologies that achieve both water and energy savings and develop full funding applications for any such opportunities that SoCalREN approves pursuing.

Geographic Location of Offering

Agriculture customers are primarily located in the heavily concentrated agricultural regions of the San Joaquin Valley (CTZ 13) and the Central Coast (CTZ 5) and will be targeted with a combination of direct customer outreach with additional support from trade allies such as agricultural engineering firms and farm equipment suppliers.

Although agricultural regions are concentrated in climate zones 13 and 5, customers outside of these climate zones are eligible to receive Ag-Retrofit Program services.

Eligible Customers

All agricultural (Ag) customers who have a valid Southern California Edison (SCE) Southern California Gas Company (SoCalGas) service account are eligible to participate in SoCalREN Ag Programs. Ag customers are defined by two-digit North American Industry Classification System (NAICS) Code 11. Post-harvest production (e.g., wine production, nut drying, etc.) is eligible when performed directly on-farm as defined by NAICS Code 11. Agriculture sub-segments further defined by four- digit NAICS Codes 1111, 1112, 1113, 1114 (including cannabis production which does not have a specific NAICS Code), 1119, 1121, 1122, 1123, 1124, 1125, 1129, 1131, 1132, 1133, 1141,1142, 1151, 1152 and 1153.

The Ag-Retrofit Program offers energy efficiency services to over ~30,000[1] eligible Agriculture customers in the Southern California Edison (SCE) and Southern California Gas (SoCalGas) service territories – including field & seed crops, fruit & nut crops, vegetables & melons, livestock & poultry, wineries, floriculture, and dairies - to help these customers reduce energy and maintenance costs at their facilities. The AG-Retrofit Program will focus on rural & underserved communities.

Measures

Ag-Retrofit Measures: Barn ventilation, Booster pump overhaul, Booster pump VSD, Evapotranspiration monitoring and optimization, Greenhouse air distribution, Green houses condensing boilers, Greenhouse heating envelope measures, Process optimization, Well pump overhaul, Well pump VSD, Greenhouse heat curtains, Pipe insulation, Greenhouse infrared film.

Rationale

SoCalREN believes that the small and medium Ag customers in rural, disadvantaged communities will not be the primary focus of SCE and SoCalGas' 3rd party programs due to TRC constraints of greater than 1.0 and cost to serve. Due to the reduced avoided costs in 2024, SCE's and SoCalGas' third-party program will have difficulty achieving their required TRC of 1.0 which will make it even harder for them to serve small and medium, rural, disadvantaged communities.

[1] Total AG customers = 30,000, Mid-Size AG customers (>=50kW, <250kW) make up of 16% of all AG SAs (or 4,800 SA) & Small AG customers (<50kW) make up of 82% of all AG SAs (or 24,600 SA)

2. Performance Tracking

Program Performance Metrics

Metrics the program intends to track are summarized below.

Table 2. Program Performance Metrics

No.	Metric	Method	Frequency
1	Customer Enrollment	Number of customers enrolled in SoCalREN Ag-Retrofit Number of HTR, underserved, and/or DAC customers	Monthly
2	Project Count	Number of Projects	Monthly
3	Program Savings Contribution to Market Share	Overall contributions of energy savings to IOU programs as measured by percentage of overall Ag Sector savings	Monthly
4	Job Creation	Number of new construction jobs as measured by construction costs	Monthly
5	Industry Focus	Projects by agricultural facility type	Monthly
			Annually
			Annually
6	Customer Satisfaction	Enrolled customer and contractor satisfaction rating as reported in annual program survey	Annually
7	Completed Projects in Disadvantaged Communities	Percent of projects completed in disadvantaged communities	Annually
8	Regional Environmental Benefits	Metric tons of greenhouse gas (GHG) emissions reduced regionally as measured by lifetime gross energy savings of completed EE projects	Annually

The necessary project information will be gathered through a series of discussions and verification checks with each customer. The Ag-Retrofit CRM database system will be used to track information about the customer, project, energy savings claimed and other details that will help show the impact of this program. This will be done on a quarterly basis and more frequently as needed. Once the information is gathered, it will be entered in the database and then used to generate reports.

Unique Value Metrics

Unique Value Metrics (UVMs) are the quantifiable measurements of activities that demonstrate SoCalREN's impacts. Each metric speaks directly to the value that SoCalREN provides to the State and the communities it serves. The SoCalREN Ag-Retrofit provides contributions to the following SoCalREN UVMs:

- Increased demand for energy-efficient products or services among SoCalREN targeted groups
- Access to capital for green energy and energy-saving projects

Quantitative Program Targets

SoCalREN Ag-PDP has established the following quantitative targets for the 2025–2027 program cycle.

Table 3. Quantitative Program Targets

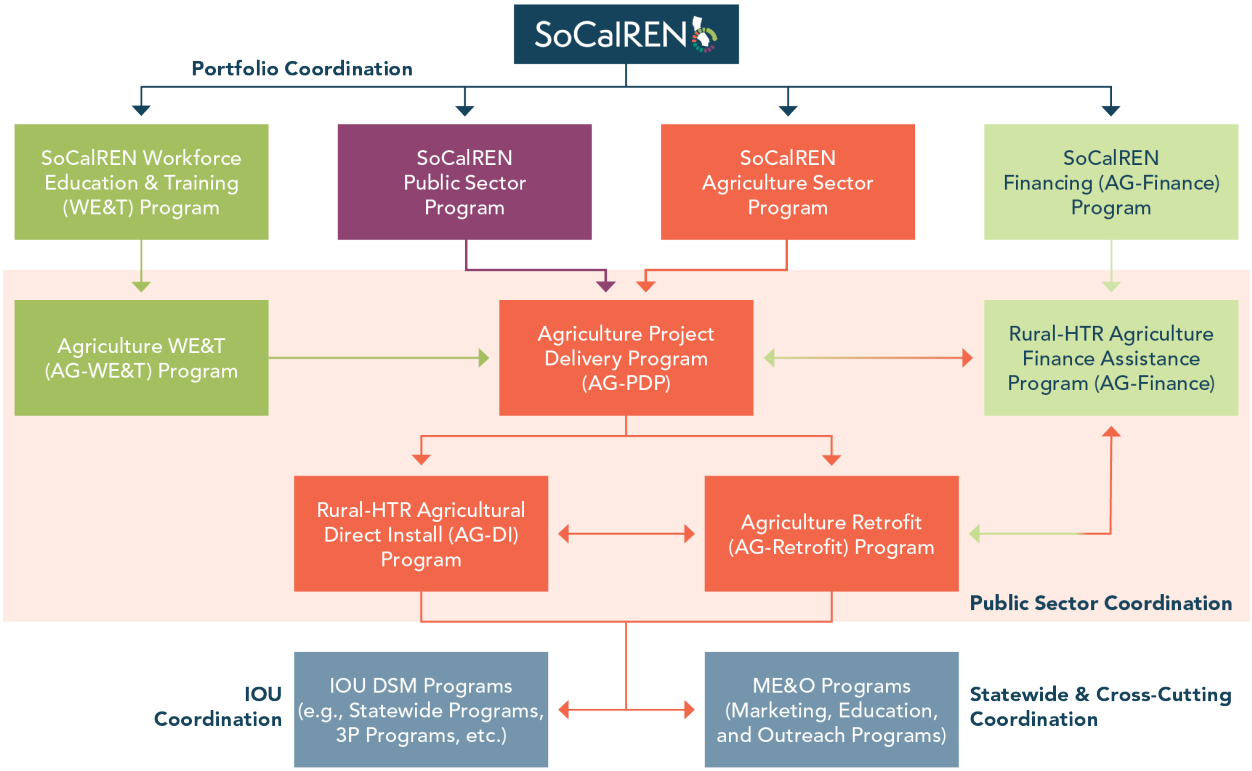
Category	Quantitative Targets	Details
Energy Savings	0.00 Therms	First year ex ante annualized gas savings gross
Energy Savings	0.00 Therms	Lifecycle ex ante annualized gas savings gross
Energy Savings	0.00 Therms	First year ex ante annualized gas savings net
Energy Savings	0.00 Therms	Lifecycle ex ante annualized gas savings net
Energy Savings	13,709,065.62 kWh	First year ex ante annualized electric savings gross
Energy Savings	173,512,739.65 kWh	Lifecycle ex ante annualized electric savings gross
Energy Savings	8,225,439.37 kWh	First year ex ante annualized electric savings net
Energy Savings	104,107,643.79	Lifecycle ex ante annualized electric savings net
Energy Savings	15,001.32 kW	First year ex ante annualized electric demand savings gross
Energy Savings	N/A	Lifecycle ex ante annualized electric demand savings gross
Energy Savings	9,000.79 kW	First year ex ante annualized electric demand savings net
Energy Savings	N/A	Lifecycle ex ante annualized electric demand savings net
GHG Emissions Avoided		GHG (MT CO2eq) Net kWh savings, reported annually
Penetration of EE and Diversity of Participants		Percent of participation relative to eligible population for small and medium Ag customers broken out by DAC and non-DAC customers
Cost Per Unit Saved		Levelized cost of energy efficiency per therm (TRC)
Cost Per Unit Saved		Levelized cost of energy efficiency per therm (PAC)
Cost Per Unit Saved		Levelized cost of energy efficiency per kWh (TRC)
Cost Per Unit Saved		Levelized cost of energy efficiency per kWh (PAC)
Cost Per Unit Saved		Levelized cost of energy efficiency per kW (TRC)
Cost Per Unit Saved		Levelized cost of energy efficiency per kW (PAC)

3. Program Delivery and Customer Services

The Ag-Retrofit Program delivers savings by offering Agriculture customers with comprehensive and customized project management and technical engineering services through a third-party implementer to implement cost-effective and streamlined energy efficiency projects. The Ag-Retrofit Program actively works to capture missed opportunities from other IOU offerings, such as the upstream, midstream, and feeds customers into the other Ag SoCalREN Programs (e.g., Ag-WE&T, Rural-HTR Ag-DI, Ag-PDP,

and Rural-HTR Ag Finance Assistance). After enrollment into the Ag-PDP, each Ag customer is assigned a dedicated project delivery team comprised of project management staff and an assigned engineering firm. Throughout project identification and implementation, the project delivery team works with the customer to address project challenges and proactively identify solutions.

Figure 1. SoCalREN Ag Program Diagram



Program Delivery Steps

Enrollment and Project Identification (Ag-PDP): A customer is considered enrolled in the Ag-PDP once it signs a non-binding enrollment form that acknowledges Ag-PDP participation, responsibilities, and services. The enrollment process begins with an initial engagement presentation to introduce SoCalREN Ag Programs in coordination with SoCalREN's Public Program and other applicable program partners. The enrollment form is presented to the customer during this meeting; program services are not offered until the form is signed and returned. Enrollment in the Ag-PDP also gives customers access to other available SoCalREN Programs. Once enrolled, an Ag-PDP project manager is assigned to the customer to begin the project development process.

Education (Ag-WE&T): Promotion of the benefits of EE upgrades beyond utility cost savings considering crop/product quality improvement and building long-term relationships with the Ag customer as part of the education process. This includes general Ag training for Ag customers, Pump contractor training, Ag energy management, Ag water management, GHG reduction strategies, Ag emerging technologies, etc.

This will be coordinated with the SoCalREN WE&T program which provides the following training:

- LA County SoCalREN Introduction
- Climate Policy

- Sustainable Green Buildings Technologies
- How to Do Business with SoCalREN, SCE & SoCalGas
- Title 24 Codes and Regulations
- Estimating Energy Savings
- Project Estimating & Incentives
- Virtual Walk-Through
- Bonding Insurance/Access to Capital
- Estimating
- Project Scheduling
- Principles of Project Management

Benchmarking (Ag-PDP): After enrollment, a customer-wide benchmark/energy analysis is prepared for the customer. The benchmark/analysis provides a portfolio-wide snapshot of energy consumption and cost by sector and estimates the potential energy and financial impacts of potential retrofits. The analysis is used as a tool to help identify and develop energy efficiency project opportunities. When possible, the benchmarking phase is completed in coordination with applicable program partners, such as SoCalREN's Public Sector Program and other SoCalREN Ag Programs (Rural-HTR Ag-DI and Ag-Retrofit). Coordination among partners ensures that a robust array of service offerings are provided to the customer, while also improving cost-effectiveness across programs and avoiding duplication of efforts. Other SoCalREN Ag Program offerings are also integrated during this phase if applicable.

Audit (Ag-PDP): Once a project is identified, the Ag customer is asked to sign a project commitment form that communicates program services and records the customer's commitment to pursue a viable project prior to the investment of limited program resources. The Ag-PDP project manager will complete a detailed facility or site visit and identify a preliminary list of recommended energy efficiency measures to present to the customer. After the customer selects which energy efficiency measures to implement, the Ag-PDP Engineer prepares the audit calculations and a project proposal that recommends operational and maintenance improvements and/or upgrades to equipment and controls. The Project Feasibility Study (PFS) details the recommended measures and creates a business case for the implementation of recommended energy measures by providing estimated project costs, energy bill savings, available incentives, and financing solutions for the package of measures.

The Ag-PDP team will present the PFS to the customer for their approval. Upon approval the Ag-PDP team prepares the incentive application, the on-bill financing (OBF) application (if requested by the customer), and/or 3P financing options (see Rural-HTR Ag Finance Assistance Program) available to the customer (if applicable). Other financing options (e.g., grants, etc.) may also be applied for and pursued at this time.

Project Application Review (Ag-Retrofit and Rural-HTR Ag-DI): The Rural-HTR Ag-DI and Ag-Retrofit team review the PFS, associated audit calculations, and the OBF application. Upon their approval of the application package and the OBF application, the Rural-HTR AG-DI and Ag-Retrofit team reserves the incentives and the OBF loan, for that customer and the team inform the customer of their notice-to-proceed.

Design and Procurement (Ag-PDP): The assigned Ag-PDP engineer completes technical performance specifications for the selected measures. If the customer releases a bid for project construction services, the Ag-PDP can provide procurement support in the form of supplementary bid package materials and sample language as required. If the customer is utilizing the Ag-PDP's simplified procurement method, a joint scope walk is scheduled at the site with the selected pre-qualified contractor, customer representative, and Ag-PDP project team. The contractor provides feedback on the draft technical

specifications and, if necessary, revises and finalizes them before a cost proposal is presented to the customer.

Customer Approval (Ag-Retrofit): The Ag-PDP project manager prepares a detailed project proposal package to assist the customer's staff with obtaining the necessary approvals for the project, which may include a staff report and draft resolution, scope of work, cost proposal, and any identified utility incentives and/or financing documents. The customer's relevant approval authority approves the project, submits the necessary signed documentation, and issues a purchase order to the contractor for construction services.

Construction (Ag-PDP): During the construction phase, the customer is the "project owner of record" responsible for all construction contracts and costs, as well as designating a construction manager. The customer may choose to manage the construction on its own, or access simplified construction management services through the program partners. The Ag-PDP project management team provides construction management support throughout the process, including review of contractor submittals and verification that the work is performed in accordance with the design specifications to ensure the expected energy savings are achieved and incentives are captured.

Commissioning Plan (Ag-PDP): Documented project intent provides the guide for contractors of a design intent that will guide the design of proposed Energy Conservation Measures (ECM), as well as define the Commissioning Plan for the testing of the installed systems and how they integrate with and affect the operation of existing building equipment. The Commissioning Plan will define how the proposed ECM should operate, guide the design and installation review and resulting requirements, and identify how the installed equipment/systems will be functionally tested. Tests include measurement of ECM performance to document energy savings potential (supporting M&V of energy savings) and demonstrate its improvement in or discover operating deficiencies to be corrected in the ECM equipment with which it interfaces.

Commissioning (Ag-PDP): Post installation, Ag-PDP will ensure that the energy efficiency measure has been properly commissioned. Commissioning of new equipment can be defined as "the process of ensuring that the systems are designed, installed, functionally tested and capable of being operated and maintained to perform in conformity with the project intent. This will be conducted per the Commissioning Plan.

Completion (Ag-Retrofit): Once the project is installed and verified, the Ag-Retrofit team will work with the customer and contractor to collect the information required to submit the appropriate project close-out information to the applicable resource program so the customer can receive incentives and the savings can be accrued for the project. The contractor is responsible for the transfer of all appropriate documentation, knowledge, and training to the customer and the facility management personnel for new installed equipment and/or operational changes. After project completion, the customer receives a survey to provide feedback on the impact of program services utilized to complete the energy efficiency project and how the program can improve.

Project Installation Report Review (Ag-Retrofit and Rural-HTR Ag-DI): For the Rural-HTR Ag-DI program, a sampling of the installations will be inspected in order to assure that the project was installed. For the Ag-Retrofit, there will also be a post installation inspection. The IR is then reviewed and approved by the Rural-HTR Ag-DI and Ag-Retrofit Program team allowing the Rural-HTR Ag-DI team to claim the savings, and the Ag-Retrofit pays out the incentive to the customer and claims its savings.

After project completion, the customer receives a survey to provide feedback on the impact of program services utilized to complete the energy efficiency project and how the program can improve.

Capacity Building (Ag-PDP): Outside of the project development services, enrolled customers are able to access expertise, resources, shared procurement strategies, best practices, and lessons learned in order to leverage the collective knowledge and expertise of the SoCalREN to better reduce costs and address common barriers. The Ag-PDP provides access to resources including project managers, technical advisors, engineering firms, contractors, financial advisory services, utilities, and other industry participants.

Regular peer-to-peer sharing is also offered through workshops, newsletters, and other outreach methods.

Program Delivery Timeline

Table 4. Program Delivery Timeline

2025 Q4	2026	2027
• Execute contracts with delivery subcontractors • Finalize financing structure and Financial Mapping Tool setup • Initiate contractor training • Initiate marketing • Begin outreach & enrollment	• Continue outreach & enrollment • Annual reporting and savings claims	• Continue outreach & enrollment • Shutdown Plan • Inform Stakeholders • Resolve open items • Final Program Report

4. Program Design and Best Practices

Program Design

The Ag-Retrofit program engages both downstream and midstream market channels. The primary channel is the end-use (downstream) customer, but the local vendor community (midstream) will be leveraged as an outreach channel to connect with their existing customer base. Customers are provided technical expertise devoted to identifying efficiency solutions that maintain current production at a lower operating cost. Incentives and financing are then used to facilitate project implementation by reducing first-cost barriers. The agricultural sector is relationship-driven and requires the proven tactic of direct, one-on-one interactions. Agriculture programs often fail because they underestimate the level of support needed by customers and assume they operate like commercial or industrial programs. Agriculture customers approach efficiency very cautiously and are reluctant to adopt unfamiliar technologies. The Program's role is to work closely with the customer to overcome this reluctance. The level of support provided is the primary tactic used to drive higher levels of participation.

SCE and SoCalGas support services provided to the Program prior to launch to facilitate outreach and promotion include:

- List of all eligible agriculture customers with contact information (business name, contact name, phone, email if available), annual gas usage, and NAICS code/market segment
- Knowledge of past EE program participation and facility equipment for Ag customers
- Quarterly updates of customer target list to identify new accounts

Due to the relationship-driven nature of the Ag customer base, the Program will collaborate with SoCalREN's Public sector and the IOUs' Account Executives (AEs) to make customer introductions, identify known project plans, identify current projects that need follow-up to move forward, etc. In addition, Ag-Retrofit will collaborate with the SoCalREN's Public sector to gain introductions to other Program stakeholders, such as vendors, trade allies, and manufacturers. SoCalREN will be provided marketing collateral, while the IOU AEs will provide contact information for SoCalREN's outreach staff.

After an initial Program overview meeting, a more focused meeting will be held with key account representatives of Ag customers to identify known projects, identify potential projects that need follow-up to move forward, etc.

Market Barriers

The fragmented way in which the energy industry currently delivers services and incentives makes it challenging to achieve deep energy retrofits. This results in multiple barriers to whole building retrofits and a "project delivery gap" for the customer. A key barrier for customers is understanding the benefits of implementing energy projects on a comprehensive scale. Further, agencies often lack sufficient in-house expertise and necessary financial resources. These are important challenges to solve because Ag customers are significant players in the energy field, both as consumers and as leaders of their communities. The SoCalREN Ag Program addresses these barriers by providing services to streamline energy efficiency project implementation with sustained technical assistance, and support in accessing project funding.

Best Practices

To help fill the "project delivery gap" and better enable customers to meet key challenges, the Ag-Retrofit has identified several best practices that are integrated into the project delivery process to ensure continued success. The Ag-Retrofit addresses the unique needs of the Ag customer and mitigates the need for customers to acquire their own in-house expertise and resources. Through a "one stop" approach, the SoCalREN Ag Program delivers comprehensive energy retrofit services, customizable to the customer's needs. Participating customers can take advantage of the full suite of offerings or select only the services that fit their needs.

The SoCalREN Ag Program aims for continuous improvement of implementation practices and systems to further improve and enhance the services received by Ag customers. Since the SoCalREN's Public PDP's inception, it has been modified and streamlined to incorporate lessons learned from on the ground experience to design more effective systems for project delivery and implement more efficient tools and techniques and those lessons learned are incorporated into this SoCalREN's Ag-Retrofit Program. In addition to continuous improvement, there has been significant efforts to improve upon cost-effectiveness. Program strategies are evaluated and developed to control costs and ensure that the most efficient methods are deployed for project implementation.

Examples of cost-effective program strategies include:

- A Project Budget Tool that ensures appropriate allocation of program resources based on project and customer characteristics
- Development of a streamlined direct install pathway for engineers to enter project budgets for approval to ensure alignment on project scope and deliverables

- Project Commitment forms integrated into the program process to confirm customer's buy-in more frequently as a project progresses and to ensure that PDP resources are carefully managed and delivered

The Ag-Retrofit Program has incorporated the following best practices into the program design:

Regional Partner Agency Engagement: Through regional partners, agencies and their customers will be engaged by the Ag-PDP and the Ag-Retrofit Program across diverse climate zones, population sizes, population densities, and other demographic characteristics are targeted for engagement in order to ensure comprehensive service to the Southern California region, including services to disadvantaged communities.

In 2019, SoCalREN partners began partnering with regional community based organizations and Council of Governments (COGs) to provide on-the-ground outreach and engagement to promote and enhance program services. Many of these organizations have established relationships with agencies working on energy efficiency efforts and have or continue to support agencies as were previous implementers of IOU Local Government Partnerships. The regional partner approach brings SoCalREN to increased enrollment opportunities, peer-to-peer sharing, and an increased number of energy projects, while customizing services to meet regional needs. Regional partners enhance SoCalREN's expertise and reach by leveraging their local knowledge, existing relationships with member agencies, and professional relationships that often extend beyond energy efficiency. This effort will continue through the SoCalREN Public sector and the Ag-PDP to drive customers to the Ag-Retrofit and other SoCalREN Ag Programs (e.g., Ag-WE&T, Rural-HTR Ag-DI, and Rural-HTR Ag Finance Assistance Programs).

Utility Coordination and Stakeholder Collaboration: The Ag-Retrofit promotes early and ongoing cooperation and collaboration with utility partners and stakeholders based on an agreed upon protocol. Coordination among partners ensures that a robust array of service offerings are provided to the customer, while also improving cost-effectiveness across programs and avoiding duplication of efforts. A collaborative approach also improves the customer's experience and helps avoid confusion between programs.

Financing Support: To overcome the significant hurdle of project funding, the project team helps identify and secure grant funding and project financing (see Rural-HTR Agriculture Finance Assistance Program). The PDP helps agencies access and apply for a variety of funding and financing sources that include, but are not limited to, Energy Lease Financing (ELF), IOU on-bill financing (OBF), OBF bridge funding, the California Energy Commission (CEC) low interest loan program, local self-funded financing opportunities, and the SoCalREN's Revolving Loan Fund (RLF) Please see the Rural-HTR Ag Finance Assistance Program for more information. Enrolled customers also have access to a financial advisor for additional expertise on an as needed basis.

Evaluation and Reporting: The Ag-Retrofit completes ongoing evaluation to ensure the goals and targets are met while keeping stakeholders fully informed of Ag-Retrofit operations and outcomes.

Peer-to-Peer Learning: The Ag-Retrofit Program seeks to build customer and contractor capacity and expertise in energy efficiency by providing customers and contractors with customized tools and resources that they would otherwise have to develop on their own, thereby saving time, money, and staff resources. The Ag-Retrofit Program also shares the strategies and best practices used by its customers to

overcome common barriers with other enrolled customers by hosting webinars and presenting at conferences and workshops (see Ag-WE&T Program).

Collaboration with Trusted Industry Partners: Agricultural customers are known to approach energy efficiency improvement projects cautiously even when there is a compelling value proposition. To overcome this barrier, it is critical to work through trusted industry partners and communication channels. Ag-PDP leverages trade associations, agricultural cooperatives, university extension offices, equipment vendors, manufacturers, and other relevant stakeholders to connect with customers on a more personal level.

For additional Best Practices, please see the **Ag-PDP** implementation plan.

5. Innovation

Program	Innovation: Strategy
Ag-Retrofit Program	The Ag-Retrofit Program leverages several innovative program elements to achieve higher customer penetration rates and deliver a higher level of savings per customer. These innovative elements include: **Segment-oriented solutions.** The Program emphasizes market strategies that resonate with Ag customers such as a focus on measure benefits related to crop performance, yield, and water consumption reductions. **Developing the adoption of new technologies in the market.** Ag-Retrofit will drive customer awareness and adoption of innovative technologies advanced technologies that utilize infrared, microwave, ultraviolet, and radio wave frequencies to simultaneously achieve energy and water savings in food processing and sanitizing processes. **Leveraging additional funding sources.** The Ag-Retrofit Program plans to pursue external grant opportunities through USDA programs enabling the introduction of an additional, non-IOU funding source to Ag-Retrofit customers. This effort will include identifying, evaluating, and presenting funding opportunities to drive adoption of water saving technologies, including the development of full funding proposals to secure such funds. **Connecting the Dots.** The SoCalREN Ag Sector provides a turnkey solution through the various programs. The Ag programs are as follows: • Ag-WE&T – Provides Workforce, Education and Training to Ag contractors and Ag customers • Ag-PDP – Provides ME&O for enrollment into the PDP program. PDP services include benchmarking, financing support, commissioning support, and project closeout. • Rural-HTR Ag-DI – Provides no-cost, low-cost installations of EE deemed measures • Ag-Retrofit – Provides EE custom measures support • Rural-HTR Ag Finance Assistance – Provides OBF support, OBF bridge funding, 3P funding, grants, etc.

6. Pilots

This section is not applicable.

7. Workforce Standards

HVAC Measures

The standards pursuant to Decision 18-10-008[2] are applicable. The program includes the installation, modification, and maintenance of incentivized HVAC measures (potentially greater than $3,000) in commercial buildings by program, subcontractor, and Trade Pro staff, triggering the applicable workforce standards. When required, the program verifies that the installation team has completed and/or is enrolled

[2] D.18-10-008, Attachment B, Section D, page B-9

in a federally accredited or California-accredited HVAC apprenticeship, completed at least five years of work at the journey level, passed an HVAC system installation competency test, received training specific to the equipment being installed, and obtained a C-20 HVAC contractor license from California's Licensing Board.

To enhance quality and deliver deep, durable energy savings, the program:

- Establishes workforce standards with respect to apprenticeship, journey-level experience, and licensing
- Requires and provides training that improves overall quality of installers, including subcontractors and Trade Pros
- Requires and provides training targeted at specific measures
- Tracks technicians for measures installed and maps measures to applicable trainings, providing valuable WE&T metrics, and
- Performs comprehensive QA/QC, ties outcomes to specific technicians, and requires targeted remedial training based on those outcomes.

Compliance is demonstrated and enforced throughout the program lifecycle by:

- Establishing workforce standards requirements in customer applications and/or project agreements that are tied to incentive eligibility
- Collecting and verifying proper worker documentation ("qualified documents"), and
- Retaining "qualified documents" for reporting and periodic inspection by SoCalREN.

Advanced Lighting Control Measures

The program includes the installation, modification, and maintenance of incentivized lighting control measures (potentially greater than $2,000) in commercial buildings by program staff, subcontractor staff, and Trade Pros, triggering the applicable workforce standards.
The program:

- Establishes workforce standards for lighting controls installations requiring California Advanced Lighting Controls Training Program certification, where applicable
- Requires and provides training that improves the overall quality of implementation workers across program staff, subcontractors, and Trade Pros
- Requires and provides training targeted at specific measures proposed and implemented
- Tracks installation technicians for measures installed and maps measures to applicable trainings, providing meaningful WE&T metrics, and Performs comprehensive QA/QC, ties outcomes to specific technicians, and requires targeted remedial training based on those outcomes.
- Compliance is demonstrated and enforced throughout the program lifecycle by:
- Establishing workforce standards requirements in customer applications and/or project agreements that are tied to incentive eligibility
- Collecting proper worker documentation ("qualified documents"); for lighting controls projects, installer certification is obtained directly from the California Advanced Lighting Controls Training Program, and
- Retaining qualified documents for reporting and periodic inspection by SoCalREN.

8. Disadvantaged Worker Plan[3]

The Ag-Retrofit program will provide Disadvantaged Workers with improved access to career opportunities in the energy efficiency industry by supporting outreach initiatives (training, mentorship,

[3] D.18-10-008, Attachment B, Section D, page B-9.

and/or apprenticeships) in collaboration with a combination of our subcontractor partners. Using an optional survey, the Ag-Retrofit will track and report Disadvantaged Worker participation in outreach programs, as well as program hiring, including the following metrics:

Disadvantage Worker Engagement Metrics
• Percentage of projects completed in Disadvantaged Communities • Percentage of job opportunities made available to Disadvantaged Workers

Additionally, the turnover and attrition are tracked by designated classification of Disadvantaged Worker, subject to appropriate privacy considerations. For Subcontractor performance scorecards and KPIs are tracked on an individual firm basis, with Disadvantaged Worker participation as a key element

9. Additional Information

This section is not applicable.

Supporting Documents

1. Program Manual and Program Rules

All information required in the table below is detailed in the SoCalREN Ag-Retrofit Program Manual.

Table 5. Program Manual Required Information Summary

#	Information Required	Short Description
1	**Eligible Measures or Measure Eligibility**	*A list of eligible measures, or measure eligibility requirements* Eligible measures pursued by Ag Customers through the program will adhere to the rules set forth by SoCalREN regarding measure eligibility. All savings will be transparent in supporting calculations as submitted to the SoCalREN Ag-Retrofit program.
2	**Customer Eligibility Requirements**	*Requirements for program participation (for example, annual energy use or peak kW demand)* The Ag-Retrofit will work with eligible customers in the Ag sector. This includes Field & Seed Crops, Fruit & Nut Crops, Vegetables & Melons, Livestock & Poultry, Wineries, Floriculture and Dairies Customers served by SCE and/or SoCalGas that pay PPP charges.
3	**Contractor Eligibility Requirements**	*List of any contractor (and/or developer, manufacturer, retailer or other "participant") eligibility requirements. (For example: specific IOU-required trainings, specific contractor accreditations, and/or specific technician certifications.)* The Ag-Retrofit Program will work with the selected contractor to ensure all incentive eligibility requirements are addressed and met.
4	**Participating Contractors, Manufacturers, Retailers, Distributors**	*Information as to whether:* • *Program or sub-program delivery channel is downstream, midstream, or upstream, and* • *Program is an incentive and/or buy-down type program.* This is a downstream program offering project development and project implementation services as well as post-installation incentives.
5	**Additional Services**	*Descriptions of any additional sub-program delivery, measure installation, marketing and outreach, training, and/or other services provided, if not yet described above.* The Ag-Retrofit will offer education outreach to Ag customers in SCE and SoCalGas territories. This educational outreach will include information on the benefits associated with utility-based energy saving measures.

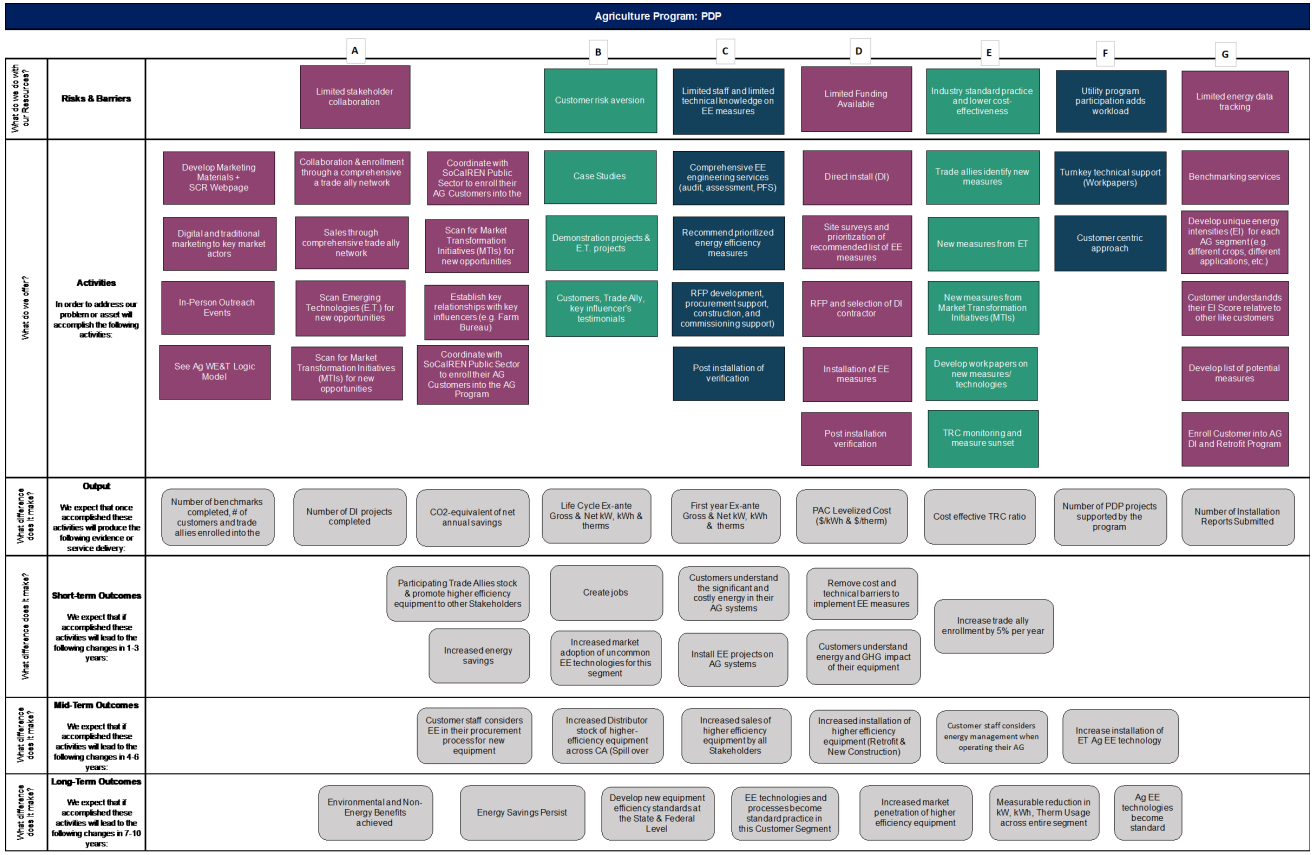
#	Information Required	Short Description
6	**Audits**	*Information as to whether:* • *Pre- and post-audits are required* • *Funding or incentive levels have been set for audits, and* • *The eligibility requirements for audit incentives.* Pre and post installation audits will be conducted in a manner that aligns with SoCalREN's incentive eligibility requirements by the Ag-Retrofit Program.
7	**Sub-Program Quality Assurance Provisions**	*List of quality assurance and quality control requirements, including accreditations and/or certifications or other credentials of individuals or organizations performing this work.* Quality assurance checks will be implemented throughout the process at various milestones to maintain data accuracy and customer satisfaction.
8	**Other Program Metrics**	*List all documentation and data used to calculate Program Metrics.* See table below

All EE measures will funnel through existing EE resource programs. The table below describes other tools leveraged to support turnkey project delivery services.

#	Tool	Short Description
1	PipeDrive	Customer Relationship Management (CRM), used to track projects and generate customer reports.
2	Compass	Platform used to collect and synthesize energy consumption data and deliver customer energy use analyses
3	ENERGY STAR® Portfolio Manager	Online tool used to track energy consumption and greenhouse gas emissions. Allows user to benchmark the performance of one building or a whole portfolio of buildings.
4	GIS	Geographic Information System (GIS) tool allows users to pinpoint exact locations of facilities and tie usage characteristics to those facilities.
5	ezIQC	Provides access to competitively awarded contractors through cooperative purchasing networks, expediting project delivery through a simplified procurement process.

2. Program Theory[4] and Program Logic Model[5]

Figure 2. Program Theory Visualization (Logic Model)

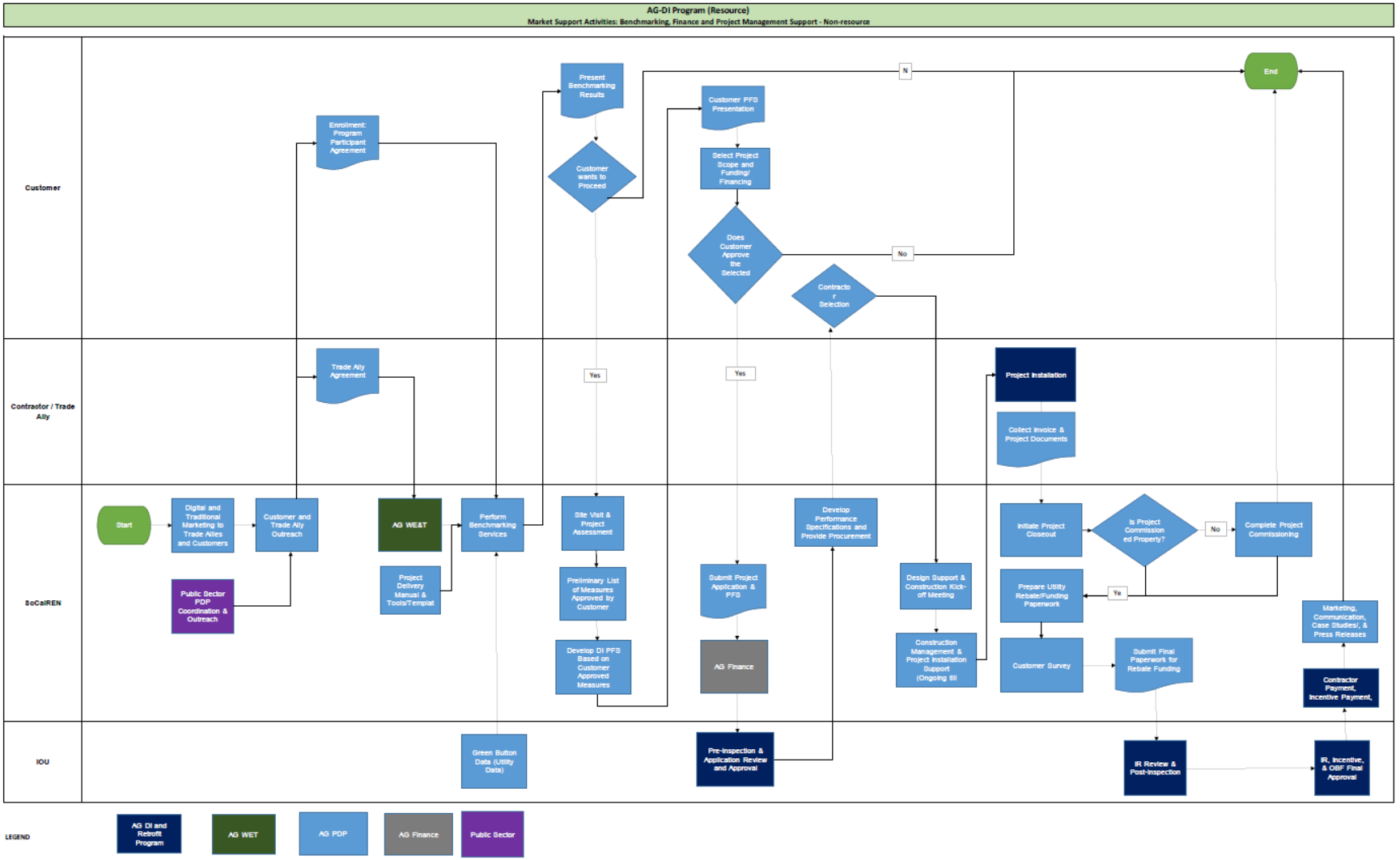


4 The expected causal relationships between program goals and program activities in a way that allows the reader to understand why the proposed program activities are expected to result in the accomplishment of the program goals. A well-developed program theory can (and should) also describe the barriers that will be overcome in order to accomplish the goals and clearly describe how the program activities are expected to overcome those barriers. California Evaluation Framework, June 2004.

5 The graphical representation of the program theory showing the flow between activities, their outputs, and subsequent short-term, intermediate, and long-term outcomes. California Evaluation Framework, June 2004.

3. Process Flow Chart

Figure 3. Process Flow Chart



4. Measures and Incentives

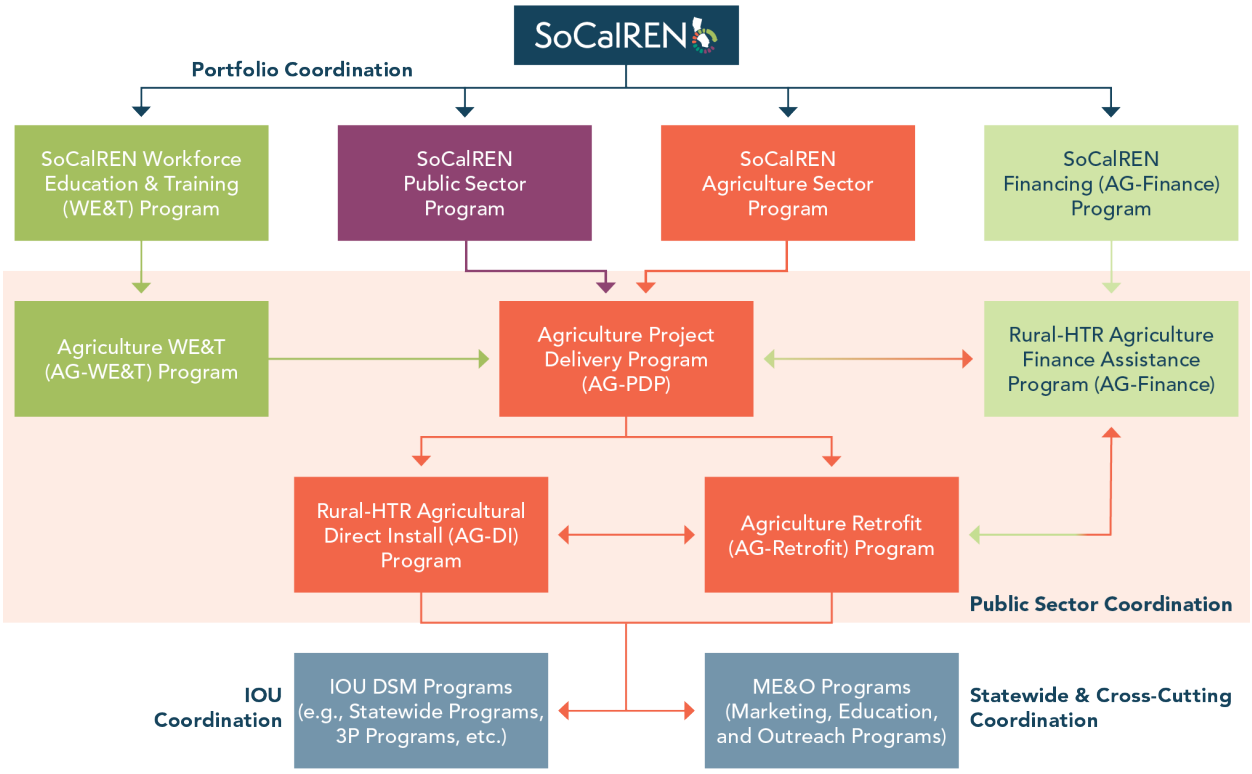
Following are sample measures that will be available to participants in the SoCalREN Ag Retrofit Program. This list will be expanded to include details regarding workpapers and other applicable information.

- Greenhouse Heat Curtains (Single or Double layer)
- Greenhouse IR Film
- Indoor Horticulture LED Grow Lighting
- Steam Boilers (Feedwater and Condensing Economizers)
- High Efficiency Vent Fans
- Vent Fan Variable Speed Drives
- Well Pump Variable Frequency Drives
- Boost Pump Variable Frequency Drives

5. Diagram of Program

The Diagram of the SoCalREN Ag-Retrofit is displayed below.

Figure 4. Diagram of Program



6. Program Measurement and Verification (M&V)

The Ag-Retrofit program is a resource program. As such, EM&V for the program focuses on both customer energy savings claimed as well as program performance metrics for services offered in alignment with the CPUC's California Long Term Energy Efficiency Strategic Plan[6]. Energy savings are determined by calculating the energy consumption of the system or facility before (referred to as the "baseline" period) and forecasting savings after the measures are implemented, adjusted for any differences, such as operating and weather conditions. Additionally, behavioral, retro-commissioning, and operational (BRO) strategies may utilize measured existing conditions baseline and may require additional energy model or simulation data.

Depending on the measure type, some calculations must use the most recent California Code of Regulations Title 24 (T24) Energy Efficiency Building Standards or Standard Practice for baseline operating conditions.

The Measurement and Verification (M&V) process built into Ag-Retrofit procedures is in accordance with IOU downstream intervention program requirements. For example, per the statewide Customized Calculation Savings Guidelines v. 22.0[7], a full M&V plan is required for most custom projects with more than 250,000 kWh in savings, though custom projects with less than 250,000 kWh in savings may also require an M&V plan. If a full M&V plan is required for a project, it will be provided by the assigned engineer during development of the Project Feasibility Study. The full M&V plan is approved by SoCalREN, or a third-party technical reviewer representing SoCalREN, and includes the minimum required M&V data for the baseline and/or measure equipment and system performance.

The M&V plan methodology is based on the principles, procedures, and guidelines set forth in the International Performance Measurement and Verification Protocol (IPMVP) Options A-D[8], and the Federal Energy Management Program (FEMP) M&V Guidelines[9]. The full M&V plan can be used as the basis for project verification. The project M&V plan is submitted as an attachment to the Project Feasibility Study at the time of application submission and attached to the Installation Report after project implementation.

The Ag-Retrofit also delivers non-resource benefits to the Agriculture sector. The following describes the approaches and data that is collected in support of continuous improvement and ongoing program evaluation.

The SoCalREN customer relationship database (CRM) is used to record most program and project related information and to generate reports that indicate progress toward program goals. In addition, the Ag-Retrofit seeks feedback from its customers with a project specific survey after each project closeout, via focus groups and through an annual customer survey. Focus group feedback and survey results are analyzed to understand the impact program services have on energy efficiency projects and how the program can improve. Through data collected in the CRM and analysis of survey feedback, as complements to the ongoing customer service by the Ag-Retrofit's dedicated project manager, the Ag-Retrofit has the capacity to evaluate its effectiveness and ability to deliver energy savings, build customer and contractor knowledge and capacity, conduct outreach activities, meet greenhouse gas (GHG)

[6] California Energy Efficiency Strategic Plan, http://www.cpuc.ca.gov/general.aspx?id=4125
[7] Statewide Customized Calculation Savings Guidelines for Non Residential Programs v. 22.0, https://sceonlineapp.com/DocCounter.aspx?did=670
[8] International Performance Measurement and Verification Protocol, http://www.eeperformance.org/uploads/8/6/5/0/8650231/ipmvp_volume_i 2012.pdf
[9] Federal Energy Management Program (FEMP) M&V Guidelines, https://www.energy.gov/eere/femp/downloads/mv-guidelines-measurement-and-verification-performance-based- contracts-version

reduction targets, create jobs, and streamline processes and procedures. The Ag-Retrofit ensures customer satisfaction and effectiveness in the delivery of its services by taking a nimble and highly adaptive approach to program implementation.

Deemed Projects

Deemed projects are often much less rigorous than custom projects in terms of M&V. All M&V protocol specified in the workpaper will be followed for deemed projects. Verification requirements include paid itemized invoices from the project, photos of both pre-existing and new equipment, specification sheets, project application, and any supplemental measure-specific information.

a) Installation Verification: Installation of ECMs will be verified through site inspections or pictures provided by the customer for all custom projects. Invoices for the installation will also be collected. For very low and low rigor projects, photos and remote data gathering will be sufficient in lieu of an on-site inspection. For medium to high rigor projects (i.e., when incentive is $25,000 or higher), on-site verification will be done in accordance with the installation review parameters listed in the Pre-Agreement Review.

b) SoCalREN's Post-Installation Review: Implementer will submit the PIR to SoCalREN's ES for a post-installation review. ES will randomly select projects for and conduct a site visit unless it waives it due to sufficient project data and supporting documentation. ES will verify and approve the final project energy savings.

Tracking/recording

Data gathered through site inspections and M&V activities will be documented for future use by Program Administrators and evaluation teams. This data will also prove useful in helping inform future program design to improve overall cost-effectiveness.

Savings Calculation

Savings calculations will follow SW IOU approved workpapers[10].

7. Normalized Metered Energy Consumption (NMEC)

Normalized Metered Energy Consumption (NMEC), Multi-DER ISDM Pilot, and SEM Program requirements are not applicable to this program.

[10] CalTF Website: Dashboard | ETRM (caetrm.com) or Measure Catalog | ETRM (caetrm.com)

Program Manual

All programs must have manuals uploaded to CEDARS to clarify the eligibility requirements and rules of the program for implementers and customers. Program rules must comply with CPUC policies and rules. Table templates are available at CEDARS. At minimum, manuals should include:

1. Program Overview

The Southern California Regional Energy Network (SoCalREN) Agriculture Sector is focused on identifying and implementing cost-effective energy efficiency projects for small and medium-sized agricultural customers in disadvantaged and rural communities. The Agriculture Retrofit Program supports over 30,000 eligible customers located in the Southern California Edison (SCE) and Southern California Gas (SoCalGas) service areas. These customers include operations such as crop farms, dairies, wineries, and livestock facilities.

The Ag-Retrofit Program drives installation of cost-effective solutions primarily through a combination of strategic measures and provides relevant technical assistance (AG-Ag-Retrofit) to drive customer awareness of both energy efficiency (EE) and non-EE measure benefits. In some cases, measures with high cost-effectiveness are relatively unknown to the target customers and face significant adoption barriers. For these measures, additional emphasis will be placed on creating compelling marketing collateral, case studies, and training curriculum (through the Agriculture WE&T program (Ag-WE&T)) for Ag customers and equipment vendors. This effort will be supplemented by current and anticipated non-EE funding (e.g., USDA grants). These grants (through the Rural-HTR Agriculture Finance Assistance Program) will provide significant additional resources to promote measures and overcome trust barriers, and specific funding will be pursued to achieve savings cost effectively for underserved communities. Additionally, the Ag-Retrofit Program recognizes the importance of water savings within California's agricultural sector and will identify new partnership and funding opportunities targeting the water-energy nexus. The program will work collaboratively with SoCalREN's Public Agencies Programs to evaluate and qualify opportunities to pursue grants to drive customer awareness and adoption of new and underutilized technologies that simultaneously achieve energy and water savings.

The Ag-Retrofit Program identifies and works with SCE & SoCalGas Ag industry customers to help them understand the benefits of implementing energy saving projects and measures; provides technical and project development assistance as needed; offers financial incentives and financing options; and for small/medium Disadvantaged Communities ("DAC") and Hard-to-Reach ("HTR") customers, installation of certain energy saving measures. The following activities will be conducted in support of achieving Program goals:

- Offer the Ag-Retrofit program focusing mainly on small and medium Ag customers that are engaged in growing, producing and processing various on-farm crops and animal products with a special emphasis on rural and underserved communities.
- Employ a multi-level outreach strategy that leverages the Program's account management team, local contractors, equipment vendors, key industry associations including universities, and other types of trade allies and service providers that engage the agricultural community.
- Utilize analytics-based customer targeting to identify and engage HTR customers and DAC regions to assist them in saving energy.

- Provide in-language sales and promotion materials (including Spanish and Hmong) and establish strategy partnerships aligned with unique Ag customer segments.
- Provide Ag customers with energy engineering support to identifying deemed, custom and NMEC measures.
- Provide Ag customers with access to a program information via a program website.
- Offer a variety of incentive payments suitable for the customer size, project size, HTR or DAC classification, and project complexity/scale and measure type (e.g., deemed, custom, or NMEC).
- Identify and evaluate partnership and funding opportunities to increase adoption of new and underutilized technologies that achieve both water and energy savings and develop full funding applications for any such opportunities that SoCalREN approves pursuing.

2. Eligible Measures

Ag-Retrofit Measures: Barn ventilation, Booster pump overhaul, Booster pump VSD, Evapotranspiration monitoring and optimization, Greenhouse air distribution, Green houses condensing boilers, Greenhouse heating envelope measures, Process optimization, Well pump overhaul, Well pump VSD, Greenhouse heat curtains, Pipe insulation, Greenhouse infrared film.

3. Customer Eligibility Requirements

All agricultural (Ag) customers who have a valid Southern California Edison (SCE) Southern California Gas Company (SoCalGas) service account are eligible to participate in SoCalREN Ag Programs. Ag customers are defined by two-digit North American Industry Classification System (NAICS) Code 11. Post-harvest production (e.g., wine production, nut drying, etc.) is eligible when performed directly on-farm as defined by NAICS Code 11. Agriculture sub-segments further defined by four- digit NAICS Codes 1111, 1112, 1113, 1114 (including cannabis production which does not have a specific NAICS Code), 1119, 1121, 1122, 1123, 1124, 1125, 1129, 1131, 1132, 1133, 1141,1142, 1151, 1152 and 1153.

4. Participating Contractors, Manufacturers, Retailers, Distributors, and Partners

This is a downstream program offering project development and project implementation services as well as post-installation incentives.

5. Additional Services

The Ag-Retrofit will offer education outreach to Ag customers in SCE and SoCalGas territories. This educational outreach will include information on the benefits associated with utility-based energy saving measures.

6. Audits

Once a project is identified, the Ag customer is asked to sign a project commitment form that communicates program services and records the customer's commitment to pursue a viable project prior to the investment of limited program resources. The Ag-PDP project manager will complete a detailed facility or site visit and identify a preliminary list of recommended energy efficiency measures to present to the customer. After the customer selects which energy efficiency measures to implement, the Ag-PDP Engineer prepares the audit calculations and a project proposal that recommends operational and maintenance improvements and/or upgrades to equipment and controls. The Project Feasibility Study (PFS) details the recommended measures and creates a business case for the implementation of

recommended energy measures by providing estimated project costs, energy bill savings, available incentives, and financing solutions for the package of measures.

The Ag-PDP team will present the PFS to the customer for their approval. Upon approval the Ag-PDP team prepares the incentive application, the on-bill financing (OBF) application (if requested by the customer), and/or 3P financing options (see Rural-HTR Agriculture Finance Assistance Program) available to the customer (if applicable). Other financing options (e.g., grants, etc.) may also be applied for and pursued at this time.

7. Program Quality Assurance Provisions

Quality assurance is maintained through use of the Contractor Management Portal (CMP) to track customer participation and feedback. Quality assurance checks will be implemented throughout the process at various milestones to maintain data accuracy and customer satisfaction.

8. Other Program Metrics

Unique Value Metrics

- Increased demand for energy-efficient products or services among SoCalREN targeted groups
- Access to capital for green energy and energy-saving projects

Quantitative Program Targets

SoCalREN Ag-HTRDI has established the following quantitative targets for the 2025–2027 program cycle.

Table 6. Quantitative Program Targets

Category	Quantitative Targets
Total System Benefit (TSB)	$23,341,036
Electric Savings (kWh)	18,199,022.45
Electric Demand Savings (kW)	11,429.07
Natural Gas Savings (Therms)	387,037.68