



County of Los Angeles
INTERNAL SERVICES DEPARTMENT

1100 North Eastern Avenue
Los Angeles, California 90063

Telephone: (323) 267-2101
FAX: (323) 264-7135

"To enrich lives through effective and caring service"

August 2, 2018

Advice 7-E-G

(Southern California Regional Energy Network ID #940)

Advice 3834-E

(Southern California Edison Company ID U 338-E)

Advice 5334-G

(Southern California Gas Company ID U 904 G)

Public Utilities Commission of the State of California

**Subject: SoCalREN, SCE, and SoCalGas' 2019 Joint Cooperation
Memorandum Pursuant to Decision 18-05-041**

Purpose

Southern California Regional Energy Network (SoCalREN), on behalf of Southern California Edison Company (SCE), and Southern California Gas Company (SoCalGas),¹ hereby submits for filing this Tier 2 advice letter (AL) pursuant to Decision (D.) 18-05-041, Ordering Paragraph 38.² This advice filing seeks approval from the California Public Utilities Commission (Commission) for the 2019 Joint Cooperation Memorandum submitted by SoCalREN, SCE and SoCalGas (2019 Joint PA JCM). The 2019 Joint PA JCM includes details regarding SoCalREN's 2019 programs, SCG and SCE's comparable 2019 programs, and the coordination among the Program Administrators (PAs) on overlapping service territories.

Background

On June 5, 2018, the Commission issued D.18-05-041, *Decision Addressing Energy Efficiency Business Plans*, which adopted the eight PAs' business plans, sector strategies, and associated budgets for the years 2018 through 2025. In addition, D.18-05-041 requires the PAs to submit a joint cooperation memorandum between energy

¹ Together referred to as the Joint Program Administrators (Joint PAs).

² D.18-05-041, p. 190.

efficiency program administrators with overlapping service areas, or “joint cooperation memos.” Specifically, the directive states:

We will require the PAs (RENs, IOUs and CCA) to develop a joint cooperation memo to demonstrate how they will avoid or minimize duplication for programs that address a common sector (e.g., residential or commercial) but pursue different activities, pilots that are intended to test new or different delivery models for scalability, and/or programs that otherwise exhibit a high likelihood of overlap or duplication and are not targeted at hard-to-reach customers. For such programs, each PA must explicitly identify and discuss how its activities are complementary and not duplicative of other PAs’ planned activities. Staff will utilize these memos in their reviews of the PAs’ ABALs, and may disapprove funding for specific activities or programs that do not conform with the memos, or more broadly with D.12-11-015 and D.16-08-019 (pg. 97).

Proposal

Attachment A of this advice filing contains the Joint PAs’ response to the Commission’s directive. The Joint Cooperation Memo is divided into three sections. The first section describes an overview of the Joint PAs portfolio coordination. The second section provides a summary of each of SoCalREN’s 2019 program offerings, a summary of each comparable SCE/SoCalGas program and details regarding the program coordination between SoCalREN, SCE and SoCalGas. The third section provides details regarding SoCalREN’s program compliance with D.12-11-015.

The Joint PAs make note that the budgets and programs outlined in this memo are the best estimates of 2019 offerings at the time of submittal and are not assumed to be approved. Programs and budgets will be reviewed and approved as part of the Annual Budget Advice Letter (ABAL).

In addition, several appendices have been included to provide relevant information for Energy Division staff. Appendices included in the Joint PAs 2019 JCM are as follows:

- Appendix A: Summary of SoCalREN Programs Compliance with D.12-11-015,
- Appendix B: SoCalREN Summary of Programs Offered For 2019,
- Appendix C: SCE AND SoCalGas Summary of Comparable Programs Offered for 2019,
- Appendix D: SoCalREN Eligible Measure List(s), and
- Appendix E: SoCalREN-IOU (SCE AND SoCalGas) Coordination Plan for Public Agencies.

Protests

Anyone may protest this Advice Letter. The protest must state the grounds upon which it is based. The protest must be made in writing and received by the Commission within 20 days of the date this Advice Letter was filed with the Commission, or August 22, 2018. The address for mailing or delivering a protest to the Commission is:

California Public Utilities Commission
CPUC Energy Division
Attention: Tariff Unit
505 Van Ness Avenue
San Francisco, CA 94102

Copies of the protest should also be sent via e-mail to the attention of the Energy Division at EDTariffUnit@cpuc.ca.gov. It is also requested that a copy of the protest be sent by email to addresses shown below on the same date it is mailed or delivered to the Commission.

For SoCalREN:

Minh Le
General Manager, Energy and Environmental Services
County of Los Angeles
1100 N. Eastern Avenue
Los Angeles, California 90063
Office: 323-267-2006
E-mail: MSLe@isd.LAcounty.gov

For SCE:

Gary A. Stern, Ph.D.
Managing Director – Statewide Regulatory Operations
Southern California Edison Company
8631 Rush Street
Rosemead, California 91770
Telephone: 626-302-9645
Facsimile: 626-302-6396
E-mail: AdviceTariffManager@sce.com

And

Laura Genao
Managing Director, State Regulatory Affairs
c/o Karyn Gansecki
Southern California Edison Company
601 Van Ness Avenue, Suite 2030
San Francisco, California 94102
Facsimile: (415) 929-5544
E-mail: Karyn.Gansecki@sce.com

For SoCalGas:

Attn: Ray B. Ortiz
Tariff Manager - GT14D6
555 West Fifth Street
Los Angeles, CA 90013-1011
Facsimile No.: (213) 244-4957
E-mail: ROrtiz@semprautilities.com

Effective Date

Per D.18-05-041 this Advice Letter is subject to Energy Division disposition and should be classified as Tier 2 (effective after staff approval) pursuant to General Order (GO) 96-B. The Joint PAs respectfully requests that this Advice Letter be made effective on August 31, 2018 which is 30 calendar days after the date filed.

Notice

A copy of this Advice Letter is being sent to the Commission's service lists for A.17-01-013 (et al.) and R.13-11-005. For changes to A.17-01-013 (et al.) and R.13-11-005 service lists, please contact the Commission's Process Office at 415-703-2021 or by electronic mail at process_office@cpuc.ca.gov.

Respectfully Submitted,

/s/ Minh Le _____

Minh Le³
General Manager, Energy and Environmental
Services

³SCG and SCE have authorized SoCalREN to sign and submit this advice letter on their behalf.

County of Los Angeles
1100 N. Eastern Avenue
Los Angeles, California 90063
Phone: 323-267-2006
MSLe@isd.LAcounty.gov

Attachment A: SoCalREN, SCE and SoCalGas 2019 Joint Cooperation Memo

cc: Service Lists for A.17-01-013 et. al. and R.13-11-005

CALIFORNIA PUBLIC UTILITIES COMMISSION

ADVICE LETTER FILING SUMMARY ENERGY UTILITY

MUST BE COMPLETED BY UTILITY (Attach additional pages as needed)

Company name/CPUC Utility No. Southern California Regional Energy Network (#940)

Utility type:

ELC GAS
 PLC HEAT WATER

Contact Person: Minh Le

Phone #: (323) 267-2006

E-mail: MinhLe@isd.lacounty.gov

EXPLANATION OF UTILITY TYPE

ELC = Electric GAS = Gas
PLC = Pipeline HEAT = Heat WATER = Water

Tier: 1 2 3

Advice Letter (AL) #: _7-E-G, 3834-E, and 5334-G

Subject of AL: SoCalREN, SCE, and SoCalGas' 2019 Joint Cooperation Memorandum Pursuant to Decision 18-05-041

Keywords (choose from CPUC listing): Energy Efficiency

AL filing type: Monthly Quarterly Annual One-Time Other

If AL filed in compliance with a Commission order, indicate relevant Decision/Resolution #:

D.18-05-041

Does AL replace a withdrawn or rejected AL? If so, identify the prior AL N/A

Summarize differences between the AL and the prior withdrawn or rejected AL¹: N/A

Resolution Required? Yes No

Requested effective date: 08/31/2018 NNo. of Tariff Sheets: N/A

Estimated system annual revenue effect (%): N/A

Estimated system average rate effect (%): N/A

When rates are affected by AL, include attachment in AL showing average rate effects on customer classes (residential, small commercial, large C/I, agricultural, lighting).

Tariff schedules affected: N/A

Service affected and changes proposed¹: Joint Cooperation Memo regarding overlapping Program Administrators Plans and details regarding energy efficiency programs coordination in compliance with D.18-05-041

Pending advice letters that revise the same tariff sheets: _____

Protests and all other correspondence regarding this AL are due no later than 20 days after the date of this filing, unless otherwise authorized by the Commission, and shall be sent to:

**CPUC, Energy Division
Attention: Tariff Unit
505 Van Ness Ave., 4th Flr.
San Francisco, CA 94102
EDTariffUnit@cpuc.ca.gov**

**Utility Info (including e-mail)
Minh Le
Energy and Environmental Services
General Manager
County of Los Angeles Office
1100 North Eastern Avenue
Los Angeles, CA 90063-3200
MSLe@isd.lacounty.gov**

¹ Discuss in AL if more space is needed.

Attachment A

Southern California Regional Energy
Network, Southern California Edison, and
SoCalGas[®]

2019 Joint Cooperation Memo

Table of Contents

I. SUMMARY OF SOCALREN, SCE, AND SOCALGAS PORTFOLIO COORDINATION	3
II. SUMMARY OF SOCALREN PORTFOLIO OF PROGRAMS OFFERED FOR 2019 AND COMPARABLE PARTNER IOU 2019 PROGRAMS.....	3
A. RESIDENTIAL - SOCALREN MULTIFAMILY PROGRAM (SCR-RES-A1)	3
1. Summary of Program Objectives	4
2. Summary of Program Differentiation	4
3. Comparable SoCalGas Program – Home Upgrade Program – SoCalGas Multifamily Upgrade Program [SCG 3705].....	8
4. Comparable SCE Multifamily Program – Multifamily Energy Efficiency Rebate Program [SCE-13-SW- 001C]	9
5. Coordination Protocol Between Programs	10
6. Coordination Between SW Program(s).....	10
7. Compliance With D.12-11-015, SCR-RES-A1	10
B. SOCALREN RESIDENTIAL COMMUNITY COORDINATOR, (SCR-RES-A2)	11
1. Summary of Program Objectives	12
2. Summary of Program Differentiation	12
3. Comparable Partner IOU Program.....	13
4. Coordination Protocol Between Programs – N/A	13
5. Coordination Between SW Program(s).....	13
6. Compliance With D.12-11-015, SCR-RES-A2.....	14
C. SOCALREN PUBLIC AGENCY ENERGY EFFICIENCY PROJECT DELIVERY PROGRAM, (SCR-PUBL-A1).....	14
1. Summary of Program Objectives	15
2. Summary of Program Differentiation	15
3. Comparable SCE Programs – Local Government Partnerships, Water Infrastructure System Efficiency (WISE), and Third-Party and In-House Energy Efficiency Programs and Services.....	19
4. Comparable SoCalGas Public Sector Programs.....	20
5. Coordination Protocol Between Programs	21
6. Coordination between SW program (s) – N/A.....	22
7. Compliance with D.12-11-015, SCR-PUBL-B1	22
D. SOCALREN PUBLIC AGENCY DER DAC PROJECT DELIVERY PROGRAM, (SCR-PUBL-B2).23	23
1. Summary of Program Objectives	23
2. Summary of Program Differentiation	23
3. Comparable Partner Program.....	26
4. Coordination Protocol Between Programs	27
5. Coordination Between SW Program (s) – N/A.....	27
6. Compliance With D.12-11-015, SCR-PUBL-B2	27
E. SOCALREN PUBLIC AGENCY NMEC PROGRAM, (SCR-PUBL-B3).....	28
1. Summary of Program Objectives	28
2. Summary of Program Differentiation	28
3. Comparable SCE Public Sector Program – Public Sector Performance-Based Retrofit High Opportunity Program [SCE-13-L-0031]	31
4. Comparable SoCalGas High Opportunity Projects and Program Sector Program – Metered and Performance Based Retrofit (MPBR) Program	32
5. Coordination Protocol Between Programs	33

6.	Coordination Between SW Program (s) – N/A	33
7.	Compliance With D.12-11-015, SCR-PUBL-B3	33
F.	SOCALREN PUBLIC AGENCY REVOLVING LOAN FUND, (SCR-FIN-C1).....	34
1.	Summary of Program Objectives	34
2.	Summary of Program Differentiation	34
3.	Comparable SCE and SoCalGas Statewide Finance Program – On-Bill Financing [SCE-13-SW-007A and SCG3735]	36
4.	Coordination Protocol Between Programs	37
5.	Coordination Between SW Program(s).....	37
6.	Compliance With D.12-11-015, SCR-FIN-C1	37
G.	SOCALREN RESIDENTIAL LOAN LOSS RESERVE, (SCR-FIN-C2).....	38
1.	Summary of Program Objectives	38
2.	Summary of Program Differentiation	38
3.	Comparable SCE Finance Program – New Finance Offerings [SCE-13-SW-007C]	40
4.	Coordination Protocol Between Programs	40
5.	Coordination Between SW Program (s).....	41
6.	Compliance With D.12-11-015, SCR-FIN-C2	41
H.	SOCALREN WORKFORCE EDUCATION & TRAINING, (SCR-WET-D1)	41
1.	Summary of Program Objectives	42
2.	Summary of Program Differentiation	42
3.	Comparable SoCalGas WE&T Program – SCG3729 - SoCalGas WE&T Integrated Energy Efficiency Training (IEET)	44
4.	Comparable SCE WE&T Integrate Energy Education Training Program – [SCE-13-SW-010A].....	44
5.	Coordination Protocol Between REN and IOU Programs	45
6.	Coordination Between SW Program(s).....	45
7.	Compliance With D.12-11-015, SCR-FIN-C2	46
III.	SOCALREN PROGRAM COMPLIANCE WITH D.12-11-015	46
A.	SOCALREN UNDERTAKING ACTIVITIES THAT UTILITIES CANNOT OR DO NOT INTEND TO UNDERTAKE.....	47
B.	SOCALREN UNDERTAKING PILOT ACTIVITIES WHICH NO CURRENT UTILITY IS UNDERTAKING, AND WHERE THERE IS A POTENTIAL FOR SCALABILITY TO A BROADER GEOGRAPHIC REACH, IF SUCCESSFUL.	48
C.	SOCALREN UNDERTAKING PILOT ACTIVITIES IN HARD-TO-REACH MARKETS, WHETHER OR NOT THERE IS A CURRENT UTILITY PROGRAM THAT MAY OVERLAP.	49
D.	CURRENT 2018 PROGRAMS NOT WITHIN D.12-11-015 COMPLIANCE.....	50
	APPENDIX A: SUMMARY OF SOCALREN PROGRAM COMPLIANCE WITH D.12-11-015	51
	APPENDIX B: SOCALREN SUMMARY OF PROGRAMS OFFERED FOR 2019	54
	APPENDIX C: SCE AND SOCALGAS SUMMARY OF COMPARABLE PROGRAMS.....	55
	APPENDIX D: SOCALREN ELIGIBLE MEASURE LIST	58
	APPENDIX E: SOCALREN-IOU (SCE AND SOCALGAS) COORDINATION PLAN FOR PUBLIC AGENCIES	66

I. SUMMARY OF SOCIALREN, SCE, AND SOCIALGAS PORTFOLIO COORDINATION

The SoCalREN, SCE, and SoCalGas' (hereinafter referred to as the "Joint PAs") 2019 portfolio will continue to focus on partnership and coordination among each other in the Joint PAs' overlapping programs. As part of the Joint PAs' focused transition to performance-based and comparatively cost-effective and cost-efficient 2019 portfolios, the Joint PAs will be deepening coordination and collaboration between their respective overlapping regional programs. PAs can derive additional value by providing information and referrals to programs across all program implementers, including those outside each other's implementation focus. This requires positive mutual relationships and clear messaging to differentiate, but also to complement and orchestrate, the suite of available energy efficiency services.

In 2019, the Joint PAs will bring this same level of coordination and cooperation as the market and program administration expands and gains new market actors. The Joint PAs' continued collaboration will ensure services remain to be complementary and supplemental to the market's needs.

In addition, the Joint PAs will use 2019 to continue to conduct ongoing performance assessments, introduce program administrative and implementation adjustments to reduce costs and increase energy savings, and optimize performance of all their portfolios.

Details on how each of the Joint PAs' overlapping sector programs will coordinate between each PA are provided below in the proceeding section.

II. SUMMARY OF SOCIALREN PORTFOLIO OF PROGRAMS OFFERED FOR 2019 AND COMPARABLE PARTNER IOU 2019 PROGRAMS

A. RESIDENTIAL - SOCIALREN MULTIFAMILY PROGRAM (SCR-RES-A1)

The SoCalREN's Multifamily Program provides audit and improvement incentives to building owners for comprehensive energy efficiency upgrades to qualifying structures of at least four units. The SoCalREN Multifamily Program offers a tiered promotion strategy designed to stimulate multi-measure

upgrades. The program was developed as a flexible turnkey solution, composed of technical assistance, advanced building audits, program implementation, and construction/installation incentives.

In addition, the SoCalREN Multifamily program utilizes a collaborative approach that provides direct account management services to participating energy efficiency program improvement raters (“raters”). This includes regular communication through various channels (e.g., conference calls, emails), as well as intensive follow-up on stagnant jobs in the pipeline to encourage project completion and increase the attainment of deep retrofit energy savings. These strategies will primarily target building improvements in hard-to-reach and disadvantaged communities (DACs); however, the program will be offered throughout SoCalREN territory.

1. Summary of Program Objectives

- To cost-effectively improve the efficiency of multifamily buildings through custom comprehensive retrofits.
- Provide a turnkey solution with financial incentives so property owners can adopt new and more efficient technologies and/or equipment, thus reducing energy waste.
- Leverage cross-cutting companion SoCalREN programs to drive participation in energy efficiency upgrades (i.e., LLR, RCC).
- Primarily target hard-to-reach and disadvantaged community multifamily properties.

2. Summary of Program Differentiation

The following table provides a summary of the PAs’ multifamily programs.

Table 1: SoCalREN, SCE, and SoCalGas Multifamily Program Summary

Program Parameters	SoCalREN	SCE	SoCalGas
Target Audience(s)	<i>Provided in order of target prioritization:</i> <ul style="list-style-type: none"> • HTR- Multifamily property owners - Primary language spoken is a language other than English • Multifamily property owners within DACs • Multifamily property owners 	Property owners and managers of existing multifamily properties. The program targets all levels of multifamily buildings (i.e., low-income, affordable-to-moderate income, market-rate), including those located in DACs.	Property owners and managers who seek to make energy-efficient upgrades to their properties while making well-informed decisions regarding cost and investment for the future.
Resource or Non-Resource	Resource	Resource	Resource

Eligible Measures	<i>Please see appendix D.</i>	The program offers a variety of deemed incentives for energy-saving products and services for both common and dwelling areas of multifamily properties; end uses include: Appliances, HVAC, Lighting, Pumping, and Water Heating.	MF Home Upgrade promotes long-term energy benefits through comprehensive EE retrofit measures -including building shell upgrades, high-efficiency HVAC units, central heating and cooling systems, central domestic hot water heating, and other deep energy reduction opportunities.
Budget¹	\$6,169,920	\$7,912,999	\$1,100,000

Similar to the SoCalGas multifamily whole building program that is currently offered to customers, SoCalREN’s multifamily projects must install at least three energy efficiency measures. However, SoCalREN’s 2019 Multifamily Program will require each project to achieve a minimum 12% reduction over existing conditions. SoCalGas’ current multifamily whole-building program only requires projects to achieve a minimum of 10% improvement over existing conditions. In addition, SoCalREN’s Multifamily Program currently only offers a \$5,000 assessment incentive, which is paid in two installments to participating raters (\$2,500 when assessment is submitted and \$2,500 upon project completion), as opposed to the IOU programs, which pay 100% of the assessment incentive. SoCalREN utilizes a limited assessment incentive and an installment of payment approach to ensure program conversion and to lessen the program’s ratepayer cost burden. SCE’s Multifamily program utilizes a different approach, offering a variety of deemed incentives for energy-saving products and services for both common and dwelling areas of multifamily properties. There are no whole building requirements in SCE’s multifamily program.

Lastly, SoCalREN will include in its eligible measure list power strips for multifamily projects’ common areas. SoCalREN’s multifamily program is not a direct install program and does not offer “single-measure” rebates.

¹ The budgets provided herein are estimates. Final 2019 budgets will be provided in the PAs’ Annual Budget Advice Letters that will be filed on September 4, 2018.

The following table compares the key program parameters of PAs' multifamily programs.

Table 2: Multifamily Program Comparison

Program Parameters	SCG - under the HUP umbrella	SCE	SCR Multifamily Program
Rater Requirements	N/A – All technical assistance provided by a SoCalGas authorized consultant.	N/A - (SCE does not use Raters) All projects go through authorized contractor depending on geographic region of project.	Must be a "Participating" Rater Raters must have 2 or more: - HERS II or RESNET Rater BPI Multifamily Building Analyst - GreenPoint Rater Existing Home Multifamily One: BPI Building Analyst or other BPI-certified professional
Rater Model	All projects go through SoCalGas Consultant for review. Consultant provides technical and program assistance.	N/A - (SCE does not use Raters) All projects go through authorized contractor depending on geographic region of project.	Raters must have 2 or more: - HERS II or RESNET Rater BPI Multifamily Building Analyst - GreenPoint Rater Existing Home Multifamily One: BPI Building Analyst or other BPI-certified professional
Minimum Energy Savings Required per Project	10%	n/a	12%
Minimum Number of Measures	3 measure minimum and must include at least one gas measure to meet the 10% savings requirement.	1 measure	3 measures
Minimum Number of Units	No minimum requirements	2 or more units	3 units
Deemed vs Calculated	Measures are calculated using a combination of energy modeling results and ED approved workpapers or custom calculations. Energy models are calibrated when possible to historical	Deemed	Calculated

	energy use.																
Assessment Structure	SoCalGas Consultant and program admin provides assessment as well as technical assistance and recommendations to assist customer and or customer's contractor.	Deemed - No assessment needed	Current 2018: Program is currently offering an assessment payment of \$5,000 for assessments. \$2,500 paid when assessment is submitted and approved and \$2,500 paid when improvement is completed and approved. In 2019, assessment incentive will increase and only be paid on project completion to ensure project conversion rate increases (similar to PG&E).														
Improvement Incentive Structure	<p>Incentives are tiered based on percent improvement in site energy use, and multiplied times the number of units in the property. For example, at 10% improvement the incentive per unit is \$210, at 15% improvement the incentive is \$240. Total amount cannot exceed measure and installation cost.</p> <table border="1"> <thead> <tr> <th>Energy Savings Achieved</th> <th>*Incentive per Dwelling Unit</th> </tr> </thead> <tbody> <tr> <td>10%</td> <td>\$210.0</td> </tr> <tr> <td>15%</td> <td>\$240.0</td> </tr> <tr> <td>20%</td> <td>\$300.0</td> </tr> <tr> <td>25%</td> <td>\$360.0</td> </tr> <tr> <td>30%</td> <td>\$420.0</td> </tr> <tr> <td>> 35%</td> <td>\$480.0</td> </tr> </tbody> </table> <p>*Total incentive amount cannot exceed measure and installation cost.</p>	Energy Savings Achieved	*Incentive per Dwelling Unit	10%	\$210.0	15%	\$240.0	20%	\$300.0	25%	\$360.0	30%	\$420.0	> 35%	\$480.0	Deemed - Improvement based off available measure	10-14.9% energy savings - \$550 per unit 15-19.99% energy savings - \$625 per unit 20-24.90 energy savings - \$800 per unit 25-29.99% energy savings - \$1,000 >30% energy savings - \$1,200
Energy Savings Achieved	*Incentive per Dwelling Unit																
10%	\$210.0																
15%	\$240.0																
20%	\$300.0																
25%	\$360.0																
30%	\$420.0																
> 35%	\$480.0																
CAS Testing Requirements	If required at test in (provided by technical assistance). If test out is required (per BPI BA and MFHERCC protocols) building owner is required to hire BPI BA to perform test out.	None	CAS testing required; all critical issues to be fixed prior to submitting for payment of the Assessment and all other corrections must be completed prior to submissions of the improvement incentive so that corrections can be integrated into the scope of work.														

Documentation Required	Paid itemized sales receipt, contractor invoices, paid home improvement contracts, permit closure, product cut sheets, savings calculations workbook generated by consultant, and application forms (Investment Grade Energy Audit Request Form, Energy Audit Report, Energy Report with recommended improvements and cost).	Deemed incentive application form, purchase receipt	ASHRAE Level 2 assesment report, EnergyPro simulations files, building sketch, Multifamily CAS workbook documenting CAS results, job and building information, proposed scope of work.
Project Measures Incentivized	All typical gas and electricity energy efficiency measures are eligible assuming savings can be modeled according to ED guidelines for whole building programs (EP5 simulation engine or outside calculations). No generation measures are eligible (solar thermal, solar PV). No fuel switching measures are eligible.	Lighting, HVAC technologies, and appliances	Gas/water/electric measures (please see eligible measure list) For 2019: the following measure will be added - power strips in common area.

3. Comparable SoCalGas Program – Home Upgrade Program – SoCalGas Multifamily Upgrade Program [SCG 3705]

As an extension of the existing Home Upgrade program, the Multifamily Home Upgrade Program has as a primary purpose to test performance-based approaches in the multifamily housing retrofit market. The Pilot utilizes professional energy consultants to perform energy audits using approved multifamily audit tools and procedures to evaluate potential EE measures based on a least cost, maximum benefit approach customized to each property’s specific needs.

The Multifamily Home Upgrade program seeks deeper energy savings through a comprehensive approach. The program targets property owners/managers with scheduled project rehabilitation who are willing to invest in a performance-based whole-building approach. This performance-based approach aims to assist property owners and managers with making informed decisions, identify measures for

energy savings, and maximize energy reductions for each property owner, manager, and tenant, as applicable. The incentives are designed to influence the implementation of comprehensive measures and therefore are based on energy reduction achieved.

In addition to this program, SoCalGas also offers direct install programs to its multifamily customers that provides natural gas and water efficiency upgrades at no cost to the customer. These programs are provided jointly with the Los Angeles Department of Water and Power.

4. Comparable SCE Multifamily Program – Multifamily Energy Efficiency Rebate Program [SCE-13-SW-001C]

The SCE Multifamily Energy Efficiency Rebate (MFEER) Program is a continuation of the existing statewide program within the residential energy efficiency portfolios. In accordance with the Strategic Plan, this program advances comprehensive energy efficiency measures, including whole house solutions, plug load efficiency, performance standards, local government opportunities, and DSM integration.²

The MFEER Program offers a variety of incentives for energy-saving products and measures to motivate the multifamily property owners and managers to install energy-efficient equipment in both common and dwelling areas of multifamily properties. The program integrates a direct install approach and offers select EE measures at no-cost, which can facilitate onsite assessments and encourage property owners to take advantage of rebates for more extensive improvements over time. The program targets all levels of multifamily buildings (i.e., low-income, affordable-to-moderate income, market-rate), including those located in DACs.

Additionally, the program addresses the ongoing concern with “split incentives,” where the residents are not the owners of the property, so they lack the incentive to improve their energy usage. Similarly, the property owners do not live on-site and thus do not pay higher utility expenses due to

² The CA Long-Term Energy Efficiency Strategic Plan can be found at: <http://www.cpuc.ca.gov/WorkArea/DownloadAsset.aspx?id=5305>

inefficient appliances, and therefore lack any incentive to upgrade to energy-efficient equipment.

5. Coordination Protocol Between Programs

A focus on coordination across PAs is critical to all multifamily programs' successes. The Joint PAs plan to implement monthly project coordination meetings with each PA's program implementers to minimize confusion for property owners, public agency stakeholders, and non-governmental market actors. Additionally, Joint PAs will participate in Energy Division-led Program Coordination Groups (PCG), with the goal of reaffirming clearly defined program goals and messaging.

The Joint PAs realize there is an opportunity to continue and deepen coordination to serve the multifamily segment. Coordination within multifamily programs has the potential to lead to deeper EE retrofits by combining their offerings with SoCalREN's whole-building program. Through SoCalREN's Residential Community Coordinator, all available information regarding all possible IOU program and incentive opportunities will be made available so that the Joint PAs' constituents are allotted all available options, thus gaining deeper energy savings for the state.³

6. Coordination Between SW Program(s)

The Joint PAs will continue to participate in ED-led PCGs. The statewide PCG for multifamily programs enables collaborative statewide (SW) discussions regarding all multifamily programs across all PAs throughout the state, not just those in Southern California.

7. Compliance With D.12-11-015, SCR-RES-A1

The following table describes in further detail how SoCalREN's Multifamily Program satisfies the REN criteria in D.12-11-015.

³ Multifamily property owners who would otherwise not be captured through "whole-building offerings" due to the lack of that type of upgrade need, may be served better with programs such as the IOU MFEER or residential upstream offerings.

Table 3: SoCalREN’s 2019 Multifamily Program Compliance With D.12-11-015

REN Criteria	SoCalREN Multifamily Program (SCR-RES-A1)
1. Activities IOU cannot or does not intend to undertake	<ul style="list-style-type: none"> • Leverage public agencies to drive multifamily downstream incentives to property owners. • Will market an incremental installation phase approach to allow multiple measures over time.
2. Pilot activities where there is no IOU program offering and where there is potential for scalability	N/A
3. Activities in hard-to-reach markets, whether or not there is an IOU program that may overlap	<ul style="list-style-type: none"> • SoCalREN’s multifamily program primarily targets hard-to-reach customers and DACs; however, services will be offered to multifamily properties throughout its service territory.

B. SOCALREN RESIDENTIAL COMMUNITY COORDINATOR, (SCR-RES-A2)

Partnerships with local governments continue to be a strong part of SoCalREN’s core service area, and the key to achieving SoCalREN’s goals. Similar to engaging with public agencies, having strong partnerships with stakeholders is another one of SoCalREN’s pillars. SoCalREN will be utilizing lessons learned from previous program cycles and will institute a Residential Community Coordinator (RCC) approach. This residential community coordinator sub-program is a companion program to the SoCalREN Multifamily program and will assist the hard-to-reach multifamily market by providing a variety of services to help this targeted segment overcome the traditional barriers to completing building energy upgrades.

Through the Residential Community Coordinator program, SoCalREN plans to increase the number and deepen the existing partnerships with Community Based Organizations (CBOs) to engage hard-to-reach multifamily stakeholders. This program plan will include hosting EE workshops through CBOs, showcasing events for apartment and multi-unit complexes that have undergone upgrades, community-level energy consultative services, and will assist building management to develop “playbooks” at project “close out” so that energy-efficient operations can continue and persist over time.

Energy efficiency upgrades continue to be a challenging concept to understand for most residential building property owners. Other programs focus primarily on technical assistance for individual property owners and building professionals (i.e., contractor outreach). SoCalREN will include community-level technical assistance on efforts for energy efficiency and integrated demand side management (IDSM). These events will help building owners overcome the hurdle of limited understanding and utilize the power of positive peer pressure to drive community support.

1. Summary of Program Objectives

- Demonstrate public agency actions toward promoting energy efficiency, targeting a goal of more than doubling the number of agencies and its constituents in making energy efficiency commitments.
- Drive program participation in hard-to-reach markets through local outreach and engagement about energy efficiency.
- Build relationships to drive conversion rates in underserved and hard-to-reach markets.
- Increase and deepen partnerships with stakeholders to drive adoption of Energy Efficiency.

2. Summary of Program Differentiation

The following table provides a summary of the Residential Community Coordinator Program.

SCE and SoCalGas do not have a Residential Community Coordinator Program, but instead have an IOU representative SPOC as part of the Multifamily Program.

Table 4: SoCalREN RCC Program Summary

Program Parameters	SoCalREN	SCE	SoCalGas
Target Audience (s)	Multifamily property owners –DACs/HTR	N/A	N/A
Resource or Non-Resource	Non-Resource	N/A	N/A
Eligible Measures	N/A	N/A	N/A

Budget⁴	\$550,000	N/A	N/A
---------------------------	-----------	-----	-----

As described above, SoCalREN’s RCC program will utilize a “community-based” engagement approach to build confidence within the multifamily market and assist multifamily property owners in pursuing energy efficiency upgrades. This approach differs from the traditional IOU approach, which utilizes an IOU representative to act as a “Single Point of Contact (SPOC)”. SoCalREN’s RCC program offers a coordinator who works with in-house local government agencies to organize events and assist with developing materials or tools for multifamily property owners. Leveraging local government agency community-based organizations will be an alternative to the traditional SPOC “single-entry point.” In addition, SoCalREN’s RCC Program will utilize its community reach to provide a comprehensive list of information on all EE and IDSM programs so that multifamily property owners are offered a wealth of information.

3. Comparable Partner IOU Program

Currently there is no comparable program to the proposed SoCalREN Residential Community Coordinator, but instead have an IOU representative SPOC as part of the Multifamily Program.

4. Coordination Protocol Between Programs – N/A

5. Coordination Between SW Program(s)

The Joint PAs will continue to participate in ED-led program PCGs. The statewide Program Coordination Group for Multifamily programs enables collaborative statewide (SW) discussions regarding all multifamily programs across all PAs throughout the state, not just those in Southern California.

⁴ The budgets provided herein are estimates. Final 2019 budgets will be provided in the PAs’ Annual Budget Advice Letters that will be filed on September 4, 2018.

6. Compliance With D.12-11-015, SCR-RES-A2

The following table describes in further detail how SoCalREN’s RCC program satisfies the REN criteria in D.12-11-015.

Table 5: SoCalREN’s 2019 RCC Program Compliance with D.12-11-015

REN Criteria	SoCalREN Residential Community Coordinator Program (SCR-RES-A2)
1. Activities IOU cannot or does not intend to undertake	<ul style="list-style-type: none"> • Currently IOUs do not offer public agency residential community engagement; IOU’s coordination is limited to private sector residential organizations.
2. Pilot activities where there is no IOU program offering and where there is potential for scalability	<ul style="list-style-type: none"> • Engage public agencies to drive energy efficiency in their residential communities. • Organize community-based events that explain the benefits of energy efficiency. • Partner with community development agencies to develop business processes that promote joint participation in energy efficiency and home rehabilitation programs.
3. Activities in hard-to-reach markets, whether or not there is an IOU program that may overlap	<ul style="list-style-type: none"> • Utilize public agency relationships to build trust and confidence with hard-to-reach and DAC multifamily properties.

C. SOCALREN PUBLIC AGENCY ENERGY EFFICIENCY PROJECT DELIVERY PROGRAM, (SCR-PUBL-A1)

The SoCalREN Public Agency Energy Efficiency Project Delivery Program (formerly known as SoCalREN’s “SoCalREC” program) offers services to identify and complete Public Sector projects that are customized to meet the unique needs of each agency. The program provides objective, third-party expertise to help agencies implement the best measures to maximize energy cost savings. All savings attribution goes to SCE and SoCalGas, because the SoCalREN Public Agency EE Project Delivery (PD) Program is a non-resource program that funnels projects through utility core and third-party programs. In addition, SoCalREN’s EE PD program assists in the development and sharing of tools through a peer-to-peer network to inspire local energy action.

Services include:

- Energy portfolio analysis tools and benchmarking support that help identify potential opportunities.
- Start-to-finish project management support
- Facility energy audit
- Exterior lighting retrofit assistance
- Pumping optimization, waste-water plant improvements, and other measures
- Retro-commissioning support
- Project financing analysis
- Support in access to financing
- Development of contractor scope of work with energy efficiency performance specifications
- Access to competitively bid specialty contractors
- Assistance with utility incentive and rebate processing
- Construction management support
- Project close-out support and training

1. Summary of Program Objectives

- Fill market gaps in the public sector and provide public agencies with an integrated, objective, and comprehensive energy efficiency solution for their facilities and non-facility infrastructure.
- Increase the percentage of public agencies that engage their communities in energy actions and energy efficiency strategies, thereby reducing overall community energy consumption, with a focus on disadvantaged and hard-to-reach communities.
- Increase the ability of public agencies to meet local, regional, and state energy targets and policy goals.
- Increase the number of participating public agencies in the SoCalREN EE Project Delivery program, with an emphasis on DACs.
- To position public agencies to lead community awareness campaigns; engage stakeholders; build public awareness of local, regional, and state efforts; and drive participation in utility core programs.

2. Summary of Program Differentiation

The following table provides a summary of the PAs' public agency programs.

Table 6: SoCalREN Public Agency Energy Efficiency Project Delivery Program and IOU Partners Comparable Programs Summary

Program Parameters	SoCalREN	SCE⁵	SoCalGas
Target Audience (s)	Public Agencies: <ul style="list-style-type: none"> • Cities, counties, tribes, K–12 schools, local government hospitals and hospital districts, water districts, wastewater districts, sanitation districts, ports, airports, and other special districts. 	Local governments, water/wastewater districts	All eligible: <ul style="list-style-type: none"> • Cities • Counties • Water/wastewater Districts • K–12 Schools • Special Districts
Resource or Non-Resource	Non-Resource	Resource	Non-Resource
Eligible Measures	N/A	Lighting, Pumping, HVAC, Process, Food Service, Whole Building, Motors, Office Equipment, Building Envelope, Refrigeration	N/A
Budget⁶	\$6,568,000	\$17,969,191	\$8,512,000

SoCalREN’s EE PD Program offers services customized to serve the specialized needs of public sector customers. For example, in SoCalREN’s EE PD program, project management and technical support are offered throughout the entire project lifecycle, including technical assistance, procurement assistance, construction management support, financing support, and access to actionable reports on energy data. The IOUs public sector technical assistance primarily focuses on project technical and financial details, but does not include technical specifications, detailed financial analysis, procurement assistance, or construction management support. SoCalREN EE PD program participants only need to be a SoCalREN enrolled agency to be eligible to participate in the program and will not be required to bid

⁵ Note: This includes all Local Government Partnership Programs and Water Infrastructure Systems EE Program only. However, SCE does provide EE services to all public sector customers through the programs outlined in the section below.

⁶ The budgets provided herein are estimates. Final 2019 budgets will be provided in the PAs’ Annual Budget Advice Letters that will be filed on September 4, 2018.

for participation in the program.

The following table compares the key program parameters of PAs’ public sector programs.

Table 7: Public Sector Program Comparison

Program Parameters	SCE Programs	SoCalGas Public Sector	SoCalREN: EE Project Delivery Program
Types of Public Agencies Served	All eligible: <ul style="list-style-type: none"> ● Cities ● Counties ● Water/wastewater Districts ● K–12 Schools ● Special Districts 	All eligible: <ul style="list-style-type: none"> ● Cities ● Counties ● Water/wastewater Districts ● K–12 Schools ● Special Districts 	All eligible: <ul style="list-style-type: none"> ● Cities ● Counties ● Water/wastewater Districts ● K–12 Schools ● Special Districts ● Tribes
Resource/ Non-resource	Resource	Non-resource	Non-resource
Procurement Assistance	None	None	Procurement and project delivery option analysis Access and extensive support to both customized and turnkey procurement approaches for energy projects Proposal and bid analysis Development of contractor scope of work with performance specifications Contractor cost estimate review
Technical Assistance	Customized technical support tailored to customer needs and potential, from project identification to completion, including investment grade audits to identify all energy saving	Customized technical assistance to identify all natural gas energy saving opportunities.	Customized technical support from project identification to completion, including investment grade audits to identify all energy saving opportunities, design scopes of work and

	opportunities.		provide construction management support.
Financial Support	Enhanced incentives for participation in downstream utility programs Support with financing and incentive applications and process through account representatives	Funnel to existing core programs	Financial Analysis for projects to compare different financing options Support with financing and incentive applications and process Assistance with non-ratepayer funded financing Access to financial advisory services
Access to Energy Data	Agency usage-level data on request Aggregate community-level data on request (EDRP Process) Green Button Connect My Data Green Button Download My Data Energy Atlas	Agency usage-level data on request Aggregate community-level data on request	Access to Green Button data and customized reports to communicate data. Benchmarking support
Energy Project Expertise to Implement Projects	Account Representatives provide project support Engineering support for all Public Sector customers Program Management support to coordinate technical assistance, procure third-party engineering support, and indentify additional funding resources to assist Local Governments with all stages of project	Account Representatives provide project support Engineering support to partnership agencies and local government customers Engineering support to water agencies	Provides support at each stage to each participating agency through an assigned Project Manager along with access to engineering and construction support

	development and implementation		
Community Outreach	Co-branded marketing to promote utility core programs Customized marketing support to engage communities and educate on other IDSM offerings	Co-branded marketing to promote utility core programs Customized marketing support to engage communities and educate on other IDSM offerings	Development and sharing of tools and resources to promote local energy action Customized support to engage community stakeholders and inspire local energy action
Sharing of Best Practices for Sustainability Efforts	SEEC Annual Best Practices Forum Statewide Best Practices Coordinator and website Regular communication with regional partnership Peer-to-peer meetings Regional meetings	SEEC Annual Best Practices Forum Statewide Best Practices Coordinator and website Regular communication with regional partnership Peer-to-peer meetings Regional meetings	Sub-regional peer-to-peer workshops and trainings on relevant topics Access to shared online resources and learning communities

3. Comparable SCE Programs – Local Government Partnerships, Water Infrastructure System Efficiency (WISE), and Third-Party and In-House Energy Efficiency Programs and Services

SCE’s Public Sector programs focus on four major segments: local governments (City, County, Special Districts, other Public Agencies), state government (Correctional Facilities, Hospitals, State Agencies & Departments), federal government (Military, Hospitals, Other Federal Agencies, Native American Tribes), and education (K-12, Higher Education, University Hospitals). SCE intends to meet its Public Sector goals by following a comprehensive list of program intervention strategies at various intervals throughout the 2019 period. SCE’s Public Sector Programs also target jurisdictions with DACs, and rural and HTR communities. Some of the programs that focus on local governments are highlighted below; however, all public sector customers are serviced by SCE EE programs.

SCE’s Local Government Partnership Program provides support to local governments in SCE’s service territory in order to identify and address energy efficiency (EE) opportunities in municipal

facilities, and take actions supporting the California Long-Term EE Strategic Plan (CLTEESP or "Strategic Plan"). SCE's Local Government Partnership program also helps increase community awareness of and participation in demand-side management opportunities. A key goal of SCE's Local Government Partnerships is helping cities and counties to lead by example by addressing EE first in their own municipal facilities. In addition, the program strives to expand the energy management policies and capacities of local governments in order to maintain a focus on long-term sustainability.

SCE's Water Infrastructure Systems Efficiency Program provides support to water and wastewater system operators (local governments, water and wastewater districts, etc.) to deliver energy efficiency in water distribution and treatment systems. The program offers a comprehensive and turnkey solution, including no-cost project engineering services, project support, and financial incentives.

SCE offers a portfolio of third-party implemented programs to support Public Sector customers and will be soliciting new third-party programs for the Public Sector in 2019. Additionally, SCE's energy efficiency Customized and Express Solutions program is available to all customers, regardless of size or energy use and can be paired with SCE in-house technical assistance to assist customers with site audits, project development, and creating project feasibility studies, among other services. Both third-party implemented programs and SCE in-house programs and services are offered at no cost to the customer.

4. Comparable SoCalGas Public Sector Programs

SoCalGas Public Sector Programs focus on four major segments: local governments (City, County, Special Districts, other Public Agencies), state government (Correctional Facilities, Hospitals, State Agencies & Departments), federal government (Military, Hospitals, Other Federal Agencies, Native American Tribes, and education (K-12, Higher Education, University Hospitals)). SoCalGas intends to meet its Public Sector goals by following a comprehensive list of program intervention strategies at various intervals throughout the Rolling Cycle. SoCalGas Public Sector Programs also target jurisdictions with DACs, and rural and HTR communities.

SoCalGas Local Government Partnerships (LGP) currently consist of 18 partnership programs listed in Table 2 below. SoCalGas LGP is designed to support local governments and some special

districts in the following areas:

Government Facilities

- Retrofit
- Retro-commissioning
- Facility Energy Audit
- Integrated Demand Response
- Technical Assistance
- On-Bill Finance
- Inter-agency Coordination

Strategic Plan Support

- Code Compliance
- Reach Code Support
- Benchmarking
- Guiding Document Support
- Peer to Peer Support, Best Practices

Core Program Coordination

- Outreach & Education (WE&T, Codes & Standards, EE Training and Workshop, etc.)
- Third-Party Program Coordination
- Financing for the Community
- Technical Assistance

SoCalGas intends to offer additional programs and services to all Public Sector customers, including those Public Agencies that are not in the existing LGP through a suite of new program offerings and services, such as EE Direct Install. Local and regional solutions may be adopted to achieve Public Sector goals. SoCalGas has partnerships with many municipal utilities to jointly design and deliver energy efficiency programs to the shared customer base.

5. Coordination Protocol Between Programs

In 2013, the Joint PAs worked closely together to produce a clear, concise project coordination strategy titled “SoCalREN-IOU Coordination Plan for Public Agencies” for SoCalREN’s SoCalREC program. This same document will be used as the coordination protocol for the newly named EE PD program. This plan is closely followed by all parties and lays out all coordination regarding agency enrollment, commitment, and ongoing SoCalREN project delivery services. This document is provided in Appendix E.

In addition to the SoCalREN-IOU Coordination Plan implemented by the Joint PAs, there is also a monthly "program coordination call" and monthly IOU-specific "project coordination call."

SoCalREN hosts a "pre-coordination call" prior to any in-person engagement meeting to enroll a new agency. This "pre-coordination call" helps to mitigate customer confusion and serves to keep all parties informed of ongoing projects. The Joint PAs will leverage this successful approach for other sectors in their 2019 portfolios.

6. Coordination between SW program (s) – N/A

7. Compliance with D.12-11-015, SCR-PUBL-B1

The following table describes in further detail how SoCalREN’s EE PD program satisfies the REN criteria in D.12-11-015.

Table 8: SoCalREN’s 2019 EE PD Program Compliance with D.12-11-015

REN Criteria	SoCalREN Public Agency EE Project Delivery Program (SCR-PUBL-B1)
1. Activities IOU cannot or does not intend to undertake	<ul style="list-style-type: none"> • One-stop, end-to-end service delivery that includes technical assistance, procurement assistance, construction management support, and all project management until project completion. IOU programs’ public sector technical assistance primarily focuses on project technical and financial details, but does not include procurement assistance or construction management support. • As a public entity, SoCalREN is able to offer valuable third-party advice to agencies as a trusted advisor and can help weigh the benefits and risks of various options.
2. Pilot activities where there is no IOU program offering and where there is potential for scalability	N/A
3. Activities in hard-to-reach markets, whether or not there is an IOU program that may overlap	N/A

D. SOCALREN PUBLIC AGENCY DER DAC PROJECT DELIVERY PROGRAM, (SCR-PUBL-B2)

To further support the Public Sector and to expand on lessons learned from existing strategies utilized by SoCalREN in the public sector, the SoCalREN will expand its one-stop EE project delivery to include consideration of Distributed Energy Resources (DER) during EE audits and provide recommendation integration of DERs in implementation of EE projects. This program is intended to be offered within DACs. Similar to SoCalREN's existing Public Agency Energy Efficiency Project Delivery Program, the Distributed Energy Resource DAC Project Delivery DER DAC PDP) sub-program will provide EE project management services but will also provide information and subject matter expertise regarding all aspects of possible DER implementation for a public agency, with the goal of maximizing EE opportunities, while driving the integration of DERs to increase understanding of ZNE-pathways.

SoCalREN DER DAC PDP will implement program enhancements to its existing Energy Efficiency Project Delivery platform to include services that deliver DER opportunity identification during EE audits, analysis, and educate agencies on available DER project services. SoCalREN has learned that for most public agencies that are enrolled in the program, energy efficiency retrofits are just the beginning. Many want to achieve deeper energy savings and greater energy self-reliance through renewable generation, energy storage, and sophisticated energy management systems as well as greater water efficiency savings.

1. Summary of Program Objectives

- Increase the percentage of DAC public agencies that engage their communities in DER energy actions and strategies, thereby reducing overall community energy consumption.
- Increase the ability of public agencies to meet local, regional, and state DER and DAC energy goals.
- Increase the number of public agencies participating in SoCalREN's EE programs, with an emphasis on DACs.
- Enroll DAC public agencies to engage their constituents about energy and DER programs and strategies, with a focus on disadvantaged and hard-to-reach communities.

2. Summary of Program Differentiation

The following table provides a summary of the Public Agency DER DAC Project Delivery

Program. The utilities have a variety of programs that promote DER technologies, but SCE and SoCalGas do not have a Public Agency DER DAC Project Delivery Program in their energy efficiency portfolios.

Table 9: SoCalREN Public Agency DER DAC Project Delivery Program Summary

Program Parameters	SoCalREN	SCE	SoCalGas
Target Audience (s)	Public Agencies in Disadvantaged Communities: <ul style="list-style-type: none"> Cities, counties, tribes, local government hospitals and hospital districts, water districts, wastewater districts, sanitation districts, ports, airports, and other special districts. 	N/A	N/A
Resource or Non-Resource	Non-Resource	N/A	N/A
Eligible Measures	N/A	N/A	N/A
Budget ⁷	\$2,832,000	N/A	N/A

SoCalREN’s DER DAC PD program differs from any within its region. It will leverage its historically successful Energy Efficiency Project Delivery program (formerly known as *SoCalREC*) to educate and inform public agencies on all DER integration with an EE emphasis. The proposed DER program enhancements, once implemented, plan to harness existing opportunities to drive greater reductions in GHG emissions from public agencies. Elements of this program enhancement will include:

- Education and outreach in regards to DER portfolio services that include the integration of distributed generation, energy storage, demand response, energy management, and water efficiency optimization for public agencies.
- Develop a process protocol of integrating DER activities into the program’s one-stop process.

⁷ The budgets provided herein are estimates. Final 2019 budgets will be provided in the PAs’ Annual Budget Advice Letters that will be filed on September 4, 2018.

- Develop the specific strategies, tools, and templates and integrate best industry standards into a project delivery manual.
- Identify the technical expertise required for each of the DER resource areas and assist public agencies in managing a competitive process to assemble the best team of expert consultants and practitioners.
- Build public agency expertise networks through training and development workshops related to best practices protocols across all DER energy service areas so this can be leveraged to assist current and potential SoCalREN enrolled public agencies.

This program will be launched as a trial phase to test and demonstrate essential components of the new project delivery system and approaches; so that if this approach proves successful in the integration of distributed energy resource implementation (i.e., EE, DR) for public agencies, it can be scaled or modeled by IOUs in the future. The program will also work to identify non-ratepayer funds so that the program can expand its services offered to include DER technical assistance and water efficiency into EE projects.⁸ Through the County of Los Angeles, SoCalREN is able to leverage non-ratepayer funds for non-EE related activities, ensuring compliance with CPUC EE guidance and lessening the cost to ratepayers. This non-ratepayer funding capability is unique to SoCalREN.

While there is no current IOU program through the EE portfolio that targets DERs, the following table outlines the differences between the existing IOU custom process and the SoCalREN Public Agency DER DAC Project Delivery Program.

Table 10: Public Agency DER DAC Program Comparison

Program Parameters	SCG/SCE Customized Program	SoCalREN DER (proposed)
Eligible Facilities	Buildings and Non-facilities	Buildings and Non-facilities; e.g., exterior lighting (incl. Street lighting)
Eligible Agencies	All non-residential customers	Eligible DAC Public Agencies

⁸ Currently EE funds are required to be utilized for any form of program incentive. For now program assistance regarding all DERs will be limited to education and outreach. In the near term SoCalREN will look to leverage non-CPUC funds so that DER technical assistance could be added to the program offerings.

		only
Eligible Measures	Measures that deliver above-code energy savings	Measures that may result in energy generation, demand response savings or water savings
Technical Assistance	Incentive application support offered by Account Executive	Project Management, Financial Analysis & Services, and Auditing
Measurement	Calculated approach - (IPMVP Options A, B, C and D)	Calculated approach - (IPMVP Options A, B, C and D)
Baseline	Code / ISP energy usage	Existing energy usage, summer peak demand and existing water usage
Performance Payment	Monetary incentives	No monetary incentives
Resource or Non-Resource	Resource	Non-resource – this program is similar to SoCalREN’s EE PD Program – it offers customers a one-stop shop project delivery and will include education and outreach regarding all DERs; EE Funds will be limited to EE in-kind incentives and if additional outside sources are found, SCR will utilize those to offer DER TA.
Approval Process	Custom Process	None as the agency would be guided to utility programs; e.g., SGIP, DR participation
2019 status	Accepting new projects	Accepting new projects
Funding	CPUC EE	EE and American Recovery and Reinvestment Act (ARRA) and other sources

3. Comparable Partner Program

Currently there is no comparable program to the proposed SoCalREN Public Agency DER DAC

Project Delivery program, in the IOU EE portfolio. The utilities do, however, have programs that target various DER technologies outlined in the SoCalREN Public Agency DER DAC Project Delivery Program. The SoCalREN Public Agency DER DAC Project Delivery program will be the conduit that helps fuel participation in the IOU programs that target various DER technologies.

4. Coordination Protocol Between Programs

Although there are no current comparable IOU programs in the EE portfolio, this program can serve as a conduit of information between all the IOUs’ applicable DER pilots/programs and public agencies. The Joint PAs will leverage the coordination protocol (in Appendix E) for the EE PD program (formerly known as SoCalREC) to continue program and project coordination to ensure that all available information is being provided to public agency participants and IOU partner programs.

5. Coordination Between SW Program (s) – N/A

6. Compliance With D.12-11-015, SCR-PUBL-B2

The following table describes in further detail how SoCalREN’s Public Agency DER DAC PD program satisfies the REN criteria in D.12-11-015.

Table 11: SoCalREN’s 2019 Public Agency DER DAC PD Program Compliance With D.12-11-015

REN Criteria	SoCalREN Public Agency DER DAC Project Delivery Program (SCR-PUBL-B2)
1. Activities IOU cannot or does not intend to undertake	<ul style="list-style-type: none"> One-stop end-to-end service delivery focused on all available DER opportunities (energy storage, demand response, energy management, and water efficiency optimization) that improves the customer experience, builds capacity and expertise, and inspires a level of public agency awareness and motivates action.
2. Pilot activities where there is no IOU program offering and where there is potential for scalability	<ul style="list-style-type: none"> Maximizing EE opportunities, while driving the integration of DERs (energy storage, demand response, energy management, and water efficiency optimization) to increase understanding of ZNE-pathways.

	<ul style="list-style-type: none"> Assists public agencies in understanding their choices and drives greater participation and higher adoption of DER programs, including all IOU partner programs. Designed to support upgrades of public agency buildings and facilities with an emphasis on supporting projects that serve disadvantaged communities (DACs).
3. Activities in hard-to-reach markets, whether or not there is an IOU program that may overlap	

E. SOCALREN PUBLIC AGENCY NMEC PROGRAM, (SCR-PUBL-B3)

Under the Public Agency NMEC Projects program, SoCalREN will employ a NMEC framework and will target projects that were previously identified by the SoCalREN EE PD program but were not pursued by agencies due to incentive or funding barriers. These public agencies will have an alternative to the existing utility incentive process, while pursuing stranded potential in their exterior lighting and buildings. This program will be a resource program, so EE savings from these projects will contribute to SoCalREN program goals and cost-effectiveness calculations.

1. Summary of Program Objectives

- To meet multiple NMEC program objectives, including: ensuring savings persistence, reducing multi-measure project complexity, and improving completion timelines in the public sector.
- Other key goals will be to explore performance-based methods in the public sector, achieve a minimum project savings 10% overall, and to develop new program and method expertise.

2. Summary of Program Differentiation

The following table provides a summary of the PAs’ public sector NMEC-based programs.

Table 12: SoCalREN, SCE, and SoCalGas NMEC-Based Programs Summary

Program Parameters	SoCalREN Public Agency NMEC Program, (SCR-PUBL-B3)	SCE Public Sector Performance-Based Retrofit High Opportunity	SoCalGas High Opportunity Projects and Program - Metered and
--------------------	--	---	--

		Program [SCE-13-L-0031]	Performance-Based Retrofits (MPBR) Program
Target Audience (s)	Public Agencies: <ul style="list-style-type: none"> Cities, counties, tribes, local government hospitals and hospital districts, water districts, wastewater districts, sanitation districts, ports, airports, and other special districts. 	Public Sector	Public Sector
Resource or Non-Resource	Resource (CMPA Process)	Resource	Resource
Eligible Measures	Street Lighting/Exterior Lighting Whole Building Retrofit	CMPA Methodology – includes whole building retrofits and behavioral and operational savings	Any measure that reduces energy usage
Budget⁹	\$2,100,000	\$540,032	\$17,058,214 ¹⁰

SoCalREN will initially target agencies within DACs who are enrolled in the EE Project Delivery Program and have not participated in utility programs. Participating agencies will also benefit from the SoCalREN program’s project management expertise and technical services. Similar to the partner IOU NMEC programs, engineers with experience in ASHRAE energy savings calculation standards and International Performance Measurement and Verification Protocols (IPMVP) will be prioritized in executing NMEC projects. The SoCalREN Public Agency NMEC program provides technical assistance, financial analysis services, and full-service streamlined process (project management for participating agency projects will all be conducted by SoCalREN until project completion) within CPUC NMEC Guidelines that will go through the CMPA process. The SoCalREN Public Agency NMEC program will differ from the IOUs NMEC programs by providing procurement and project delivery option analysis,

⁹ The budgets provided herein are estimates. Final 2019 budgets will be provided in the PAs’ Annual Budget Advice Letters that will be filed on September 4, 2018.

¹⁰ SoCalGas’ MPBR Program budget is a part of the SoCalGas Commercial Calculated Incentives Program. The budget reflected here is an estimate of the Commercial Calculated Incentives Program. Actual budget information will be provided in SoCalGas’ 2019 Energy Efficiency Annual Budget Advice Letter filed on September 1, 2018.

proposal and bid analysis, development of contractor scope of work with performance specifications, and contractor cost estimate review.

This approach will road-test critical elements of NMEC implementation in a public agency context, such as normalized usage data and metered savings verification, as a comprehensive, whole-building approach to energy upgrades. In contrast to the IOU programs, no monetary incentives will be preliminarily offered to the agency based on post-installation energy performance. However, SoCalREN future program optimization strategies may lend itself to modify this tactic.

The following table compares the key program parameters of PAs’ NMEC-based programs.

Table 13: NMEC-Based Program Comparison

Program Parameters	SCE HOPPs Program	SoCalGas HOPPS Program	SoCalREN NMEC (proposed)
Eligible Facilities	Buildings	Buildings	Buildings and Non-facilities; e.g., exterior lighting (incl. Street lighting)
Eligible Agencies	All Public Sector	All Public Sector	Eligible sub-segment of Public Agencies (target DACs)
Eligible Measures	Any measure that reduces energy usage, must include at least one retrofit	Any measure that reduces energy usage	Any measure that reduces energy usage
Technical Assistance	Modeling, M&V Plan, Project Management, Financial Analysis & Services	M&V Plan, facility audits, energy efficiency education related to retrofits, performance tracking and savings persistence	Project Management, Financial Analysis & Services, Auditing, Modeling and M&V Plan and Procurement
Measurement	CMPA (IPMVP Option C)	CMPA (IPMVP Option C)	CMPA (IPMVP Option C)
Baseline	Existing conditions	Existing Conditions	Existing conditions

Performance Payment	Monetary Incentives	Incentives provided on a post-implementation measurement of energy savings based on meter data.	No monetary incentives (TBC). Only Technical Assistance
Resource or Non-Resource	Resource	Resource	Resource
Approval Process	CPUC NMEC Process	Custom Process	Streamlined Process (Project Management for agencies so all heavy lifting is done by SCR implementer) within CPUC NMEC Guidelines that will go through the CMPA
2019 status	Likely to accept new projects, dependent on CPUC ruling	Accepting new projects	Accepting new projects and specifically projects that were first not eligible through the IOUs

3. Comparable SCE Public Sector Program – Public Sector Performance-Based Retrofit High Opportunity Program [SCE-13-L-0031]

SCE’s Public-Sector Performance Based Retrofit HOPPs is designed to leverage smart meter investments and to bring the benefits of Normalized Metered Energy Consumption (NMEC) to public sector buildings. Through key interventions, the program will interact with the public sector to reduce and/or eliminate market barriers and gaps. Key interventions include:

- Comprehensive audits, which help identify savings opportunities across traditional program types as a means of technical support;
- Metering or sub-metering combined with monitoring, to potentially drive greater energy efficiency by showing the direct ongoing economic impact of measures in existing buildings. Limited visibility of individual building energy costs can be improved by providing meter-based feedback that help determine if energy savings goals are being achieved in a persistent

fashion;

- Merging of multiple program offerings into a single unified program, thereby simplifying and streamlining the customer application process.

Additional interventions to ensure that the program remains cost-effective include:

- Incentives that are paid at 3, 12, and 24 months, with each payment truing up to the estimated savings at each interval, assisting in addressing cost-related barriers;
- Participant audits costs for the program are captured in total project costs;
- Ongoing measurement of savings to two years and beyond.

While it has been recommended that Behavioral, Retro-commissioning, Optimization (BRO) components sign three-year maintenance contracts, these contracts do not guarantee savings. Given that most public entities have internal maintenance programs, it is preferred to simply measure savings directly and provide feedback to participants to help them manage their energy and ensure that savings persist.

4. Comparable SoCalGas High Opportunity Projects and Program Public Sector Program – Metered and Performance Based Retrofit (MPBR) Program

The SoCalGas MPBR Program assists public sector customers in retrofitting existing facilities and incorporating innovative monitoring-based commissioning (MBCx). The Program established a “proof of concept” that energy efficient equipment retrofits in combination with monitoring-based commissioning of public sector buildings can achieve a higher level of cost-effective energy savings compared to traditional retrofits or retrocommissioning. Customers are able to streamline project implementation timelines by combining formerly separate energy efficiency actions. The MPBR Program is designed to incentivize projects to go from an existing condition baseline to or above code in order to encourage customers to implement retrofits that they would not have completed absent the program incentive. These incentives are provided both on a pre- and post-measurement of energy savings. In support of participants employing a whole-building retrofit, the program offers other non-resource benefits such as facility audits, technical assistance, and energy efficiency retrofit education.

Additionally, in 2019, SoCalGas is planning to add an NMEC incentive pathway to its nonresidential and public sector calculated programs for customers to be able to participate in this approach.

5. Coordination Protocol Between Programs

The Joint PAs will work together to add these identified comparable programs’ projects into the coordination scope of the SoCalREN IOU Coordination Plan for Public Agencies adopted in the SoCalREN EE PD program, which is also included in Appendix E. The Joint PAs’ “SoCalREN IOU Coordination Plan for Public Agencies” will serve as the coordination protocol in which all REN-IOU projects can coordinate.

6. Coordination Between SW Program (s) – N/A

7. Compliance With D.12-11-015, SCR-PUBL-B3

The following table describes in further detail how SoCalREN’s Public Agency NMEC program satisfies the REN criteria in D.12-11-015.

Table 14: SoCalREN’s 2019 Public Agency NMEC Program Compliance with D.12-11-015

REN Criteria	SoCalREN Public Agency NMEC Program (SCR-PUBL-B1)
1. Activities IOU cannot or does not intend to undertake	<ul style="list-style-type: none"> • Offers technical assistance, procurement assistance, construction management support, financial analysis services and project management with a NMEC approach. • A program design that offers an alternative to traditional rebate/incentive programs – no incentive provided.
2. Pilot activities where there is no IOU program offering and where there is potential for scalability	<ul style="list-style-type: none"> • Employ the NMEC framework and demonstrate a method for expanding future public agency project pipeline. • Designed to support upgrades of public agency buildings and facilities with an emphasis on supporting projects that serve disadvantaged communities (DACs).

3. Activities in hard-to-reach markets, whether or not there is an IOU program that may overlap

•

F. SOCALREN PUBLIC AGENCY REVOLVING LOAN FUND, (SCR-FIN-C1)

The SoCalREN Revolving Loan Fund (RLF) Program will serve as a companion to the Public Agency Energy Efficiency Project Delivery Programs of the SoCalREN Portfolio. The SoCalREN RLF is designed to support upgrades of public agency buildings and facilities with an emphasis on supporting projects that serve DACs. Financing through the RLF Program is designed to be a catalyst for accelerating project implementation. Loans serve as short-term construction financing and help under primarily two scenarios: bridge financing for approved On-Bill Financing (OBF) provided by the utility after project completion and bridge financing for approved but un-budgeted agency projects that would otherwise wait for budget allocation.

This offering will serve as a catalyst for agency enrollment and project development and as a potential magnet for increasing public agency participation in energy efficiency programs. The SoCalREN RLF Program will create a unique resource for public agencies in that it will have terms more advantageous than conventional loans and will significantly complement and supplement the IOU OBF programs. Loans will be financed by non-ratepayer funds. SoCalREN will leverage EE funds for the management and marketing of the fund.

1. Summary of Program Objectives

- To stimulate agency enrollment and project development and increase public agency participation in energy efficiency programs.
- Assist Public Agencies in overcoming the barrier to capital due to rigid funding and budget requirements/restrictions.
- Provide a low-cost solution for EE short-term project financing for public agencies.

2. Summary of Program Differentiation

The following table summarizes the PAs' Public Sector Financing Programs.

Table 15: SoCalREN, SCE and SoCalGas Public Sector Financing Programs Summary

Program Parameters	SoCalREN Public Agency RLF, (SCR-FIN-C1)	SCE On-Bill Financing [SCE-13-SW-007A]	SoCalGas Statewide Finance Program – On-Bill Financing [SCG3735]
Target Audience (s)	Public Agencies: <ul style="list-style-type: none"> Cities, counties, tribes, K-12, local government hospitals and hospital districts, water districts, wastewater districts, sanitation districts, ports, airports, and other special districts. 	All non-residential customers, including all Public Sector customers	All non-residential customers, including all Public Sector customers
Resource or Non-Resource	Non-resource	Non-resource	Non-resource
Eligible Measures	N/A	N/A	N/A
Budget ¹¹	\$450,000	\$1,893,049	\$650,000 (Implementation Budget) \$5,500,000 (total loan pool)

SoCalREN’s RLF offers short-term construction and bridge financing available immediately to fund projects while waiting for budget allocation or other longer-term financing options as they become available. This short-term, low-interest financing is currently not offered by the IOUs. In addition, the SoCalREN’s RLF leverages external funds such as ARRA funding, which differs from statewide and IOU financing programs that rely on CPUC ratepayer funds. This will assist in reducing the cost to ratepayers. SoCalREN EE funds will be limited to administration, marketing, and DI costs.

The following table compares the key program parameters of the PAs’ public sector financing programs.

Table 16: Public Sector Financing Program Comparison

Program	SCE comparable	SoCalGas comparable	SoCalREN: Revolving
---------	----------------	---------------------	---------------------

¹¹ The budgets provided herein are estimates. Final 2019 budgets will be provided in the PAs’ Annual Budget Advice Letters that will be filed on September 4, 2018.

Parameters	program: On-Bill Financing (OBF)	program: On-Bill Financing (OBF)	Loan Fund (RLF)
Amount Financed	Qualifying project cost, less approved rebates and incentives, up to program cap	Qualifying project cost, less approved rebates and incentives, up to program cap by meter	100% of project costs up to program cap (no incentive provided)
Timing of Loan Funds Distribution	Post-Installation - After project installation, Installation Report approval and signed OBF Loan Agreement submitted	Post-Installation - After project installation, installation approval and signed OBF Loan Agreement submitted	Upfront - before project installation and upon receipt of signed RLF Loan Agreement
Source of funds leveraged for financing	Ratepayer funding	Ratepayer funding	Non-ratepayer funding
Term	Up to 10 years or EUL of installed equipment	Up to 15 years of EUL of installed equipment	Anticipated to be up to 2 years, regardless of installed equipment
Eligible Measures	Measures with Utility rebates and incentives	Measures with Utility rebates and incentives	All measures related to an EE project
Annual % interest rate	0%	0%	0%
Other Fees	None	None	One-time Administrative Fee
Repayment	On-Bill	On-bill	Off-Bill

1. Comparable SCE and SoCalGas Statewide Finance Program – On-Bill Financing [SCE-13-SW-007A and SCG3735]

The Statewide Finance Program – On-Bill Financing (OBF) Program offers zero-interest financing for the installation of qualifying energy-efficient measures. Loans are available to qualifying

non-residential customers, including commercial, industrial, government, and institutional customers, and customers repay their loan as a line item on their electric bill. This program supports the Strategic Plan's commercial sector goals and strategies. OBF is offered with other SCE and SoCalGas programs, including Statewide, Third Party, Retro-commissioning, and Local Government Partnership offerings.

2. Coordination Protocol Between Programs

SoCalREN, SCE, and SoCalGas program teams will conduct monthly scheduled check-in calls to allow for notice of marketing campaigns, continued coordination, discussion of any issues impacting the programs, and to learn about updates of other programs (i.e., financing) that could benefit financed energy efficiency projects.

In addition, these calls will be utilized to discuss project status, updates, and coordination between the projects’ participation in SoCalREN’s RLF and IOU OBF programs. These calls will also be utilized to identify any overlaps and mitigate customer confusion.

3. Coordination Between SW Program(s)

The Joint PAs will continue to coordinate with the SW implemented financing programs so that customers are provided with all possible EE financing options. In addition, the Joint PAs will leverage lessons learned from SW implemented financing programs and provide feedback in public meetings held by the SW implementer for EE financing programs, California Alternative Energy and Advanced Transportation Financing Authority (CAEFETA).

4. Compliance With D.12-11-015, SCR-FIN-C1

The following table describes in further detail how SoCalREN’s Public Agency RLF program satisfies the REN criteria in D.12-11-015.

Table 17: SoCalREN’s 2019 Public Agency RLF Program Compliance with D.12-11-015

REN Criteria	SoCalREN Public Agency RLF Program (SCR-FIN-C1)
1. Activities IOU cannot or does not intend to undertake	

<p>2. Pilot activities where there is no IOU program offering and where there is potential for scalability</p>	<ul style="list-style-type: none"> • Provide public agencies short-term financing for EE projects. • Designed to be a catalyst for accelerating EE project implementation. • Terms more advantageous than conventional CEC loans. • Complement and supplement the IOU OBF programs. • Designed to support upgrades of public agency buildings and facilities with an emphasis on supporting projects that serve DACs.
<p>3. Activities in hard-to-reach markets, whether or not there is an IOU program that may overlap</p>	

G. SOCALREN RESIDENTIAL LOAN LOSS RESERVE, (SCR-FIN-C2)

The SoCalREN Loan Loss Reserve program will be utilized to entice potential financial institutional partners to offer products for multifamily energy efficiency financing.

1. Summary of Program Objectives

- Use public funds to mobilize, leverage, and support the financial institution partner.
- Broaden access to finance for more multifamily property owners by allowing the financial institution partner to modify its underwriting criteria and accept more risk than it would otherwise.
- Provide additional credit-risk enhancement to hard-to-reach markets.

2. Summary of Program Differentiation

The following table summarizes the PAs’ Loan Loss Reserve Financing Programs.

Table 18: SoCalREN, SCE, and SoCalGas Loan Loss Reserve/Financing Programs Summary

Program Parameters	SoCalREN Residential LLR, (SCR-FIN-C2)	SCE New Finance Offerings [SCE-13-SW-007C]	SoCalGas New Finance Offerings [SCG3737]
Target Audience (s)	Multifamily property owners	Residential customers	Residential customers and Affordable Multifamily Property Owners
Resource or Non-Resource	Non-resource	Non-resource	Resource
Eligible Measures	N/A	N/A	See gogreenfinancing.com

Budget¹²	\$1,787,000	\$1,893,049	Residential - \$21 million in credit enhancements Multifamily Program- \$2.1 million in credit enhancements
----------------------------	-------------	-------------	--

SoCalREN’s Residential LLR program will be limited to multifamily property owners who are actively seeking a “whole-building” retrofit. SoCalREN’s LLR will primarily target customers with the most need and who are hard to reach, and properties within DACs.

The following table compares the key program parameters of the PAs’ Loan Loss Reserve/Financing Programs.

Table 19: Residential Loan Loss Reserve Program Comparison

Program Parameters	SCE/SoCalGas New Finance Programs - Residential Energy Efficiency Loan (REEL) Assistance Program	SoCalREN: Loan Loss Reserve Program
Target Audience	Single Families	Multifamily
Source of funds for administration	Ratepayer funding	Ratepayer funding
Source of funds leveraged for loan loss reserve	Ratepayer funding	Public agency funds
Source of funds leveraged for financing	Private capital	Public agency funds

¹² The budgets provided herein are estimates. Final 2019 budgets will be provided in the PAs’ Annual Budget Advice Letters that will be filed on September 4, 2018.

Statewide/Local	Statewide	Local
Partner Organization	California Alternative Energy and Advanced Transportation Financing Authority (CAEATFA, a subdivision of the California Treasurer's office serving as the pilots' administrator)	LA County

3. Comparable SCE Finance Program – New Finance Offerings [SCE-13-SW-007C]

The IOUs, along with the California Alternative Energy and Advanced Transportation Financing Authority (CAEATFA, a subdivision of the California Treasurer's office serving as the pilots' administrator), have developed statewide financing pilot programs that:

- Offer scalable and leveraged financing products
- Test market incentives for attracting private capital through investment of ratepayer funds, and
- Test whether payment via the utility bill ("on-bill repayment") increases debt service performance across market sectors.

The Residential Energy Efficiency Loan (REEL) Assistance Program (formerly known as the Single Family Loan Program), the first of these California Hub for EE Financing (CHEEF) Pilot Programs to launch, offers a loan loss reserve to mitigate lender risk in providing access to financing for residential EE projects in IOU service territories. The affordable multifamily financing pilot will allow qualified property owners to finance up to \$5 million for energy efficiency retrofits. Ratepayer funds will provide credit enhancements on the first \$1 million financed. The program is scheduled to be launched in late 2018 or early 2019.

Coordination Protocol Between Programs

SoCalREN, SCE, and SoCalGas program teams will leverage the monthly multifamily check-in calls to allow for notice of marketing campaigns, continued coordination, discussion of any issues impacting the programs, and to learn about updates of other programs (i.e., financing) that could benefit financed energy efficiency projects. These calls will also be utilized to identify any overlaps and mitigate

customer confusion.

4. Coordination Between SW Program (s)

The Joint PAs will continue to coordinate with the SW implemented financing programs so that customers are provided all possible EE financing options. In addition, the Joint PAs will leverage lessons learned from SW implemented financing programs and provide feedback in public meetings held by the SW implementer for EE financing programs, California Alternative Energy and Advanced Transportation Financing Authority (CAEFETA).

5. Compliance With D.12-11-015, SCR-FIN-C2

The following table describes in further detail how SoCalREN’s Residential LLR program satisfies the REN criteria in D.12-11-015.

Table 20: SoCalREN’s 2019 Residential LLR Program Compliance with D.12-11-015

REN Criteria	SoCalREN Residential LLR Program (SCR-FIN-C2)
1. Activities IOU cannot or does not intend to undertake	
2. Pilot activities where there is no IOU program offering and where there is potential for scalability	<ul style="list-style-type: none"> • Provides multifamily property owners financing opportunities. • Companion cross-cutting model to assist in overcoming multifamily program participation barriers.
3. Activities in hard-to-reach markets, whether or not there is an IOU program that may overlap	<ul style="list-style-type: none"> • Designed to support upgrades of multifamily properties and facilities with an emphasis on supporting projects that serve hard-to-reach customers and disadvantaged communities (DACs).

H. SOCIALREN WORKFORCE EDUCATION & TRAINING, (SCR-WET-D1)

SoCalREN has utilized policies and instruments for local hiring and workforce partnerships and developed infrastructure for minority contractors to access clean energy investments. SoCalREN’s WE&T program offerings will continue to include a robust regional workforce education and training infrastructure to support underserved and Disadvantaged Workers (DAW). The primary goals of this program will be 1) an organized, comprehensive regional workforce education and training partnership

and resource network for disadvantaged workers and contractors at all skill levels; 2) entry-level workforce skills training infrastructure; 3) a Disadvantage Business Enterprise/Women Business Enterprise/Disabled Veteran Business Enterprise (DBE/WBE/DVBE) contractor training program; and 4) a regional data reporting system.

1. Summary of Program Objectives

- Increase Southern California regional workforce and training infrastructure/partnerships, comprising community-based training organizations, K–12 and higher educational institutions, apprenticeship programs, and workforce investment boards; increase the quantity and skills of entry-level and incumbent workers in all levels of the demand-side management (DSM) and EE industry.
- Increase entry-level skills training and job opportunities for disadvantaged workers.
- Develop a regional energy management training program to increase the operational efficiencies of energy efficiency retrofit projects.
- Standardize local contracting policies and protocols into public bid/solicitation documents across the SoCalREN region to increase capacity and the participation of diverse, small, and disabled veteran–owned businesses in EE work.
- Establish a SoCalREN online data and reporting system to collect, monitor, and report workforce and contracting outcomes.

2. Summary of Program Differentiation

The following table summarizes the PAs’ WE&T Programs.

Table 21: SoCalREN, SCE, and SoCalGas WE&T Programs Summary

Program Parameters	SoCalREN WE&T (SCR-WET-D1)	SCE WE&T Integrate Energy Education Training Program – [SCE-13-SW-010A]	SoCalGas WE&T Integrated Energy Efficiency Training (IET) [SCG3729]
Target Audience (s)	Architects, designers, engineers, contractors, building operators, technicians, craft/tradesmen, customers, youth, classified disadvantaged workers, and building owners	Occupations supporting IOU resource program sectors.	Occupations supporting IOU resource program sectors.
Resource or Non-Resource	Non-resource	Non-resource	Non-resource
Eligible Measures	N/A	N/A	N/A

Budget¹³	\$284,000	\$4,480,729	\$2,548,697 ¹⁴
----------------------------	-----------	-------------	---------------------------

SoCalREN’s WE&T program differs from the IOU WE&T programs by focusing all WE&T resources on (1) entry-level workforce skills training infrastructure; (2) a DBE/WBE/DVBE contractor training; and (3) youths.

The following table compares the key program parameters of the PAs’ WE&T Programs.

Table 22: WE&T Program Comparison

Program Parameters	SCE WE&T Integrate Energy Education Training Program	SoCalGas WE&T Intergrate Energy Education Training Program	SoCalREN WE&T
Target Audience	Occupations supporting IOU resource program sectors.	Occupations supporting IOU resource program sectors.	Target the most underserved and disadvantaged workers (DAW) - Architects, designers, engineers, contractors, building operators, technicians, craft/tradesmen, customers, youth, classified disadvantaged workers and building owners
Location of Training	Training will be conducted at Energy Center, alternative training sites, and through other distribution channels, in collaboration with industry and other training providers, as appropriate, for reaching	Training to be conducted at SoCalGas’ Energy Resource Center, alternative training sites, and through other distribution channels, in collaboration with industry and other training providers, as appropriate, for reaching	In Person – at local public agency facilities

¹³ The budgets provided herein are estimates. Final 2019 budgets will be provided in the PAs’ Annual Budget Advice Letters that will be filed on September 4, 2018.

¹⁴ Budget information is an estimate. Actual budget information will be provided on SoCalGas’ 2019 Energy Efficiency Annual Budget Advice Letter filed on September 1, 2018.

	target audiences.	target audiences.	
Training Types	In-person/online	In-person/online	In-Person
Statewide/Local	Statewide	Statewide	Local
Partner Organization	Other IOUs	Other IOUs	Public Agencies

3. Comparable SoCalGas WE&T Program – SCG3729 - SoCalGas WE&T Integrated Energy Efficiency Training (IEET)

The SoCalGas WE&T Integrated Energy Efficiency Training (IEET) subprogram (formerly Centergies) will offer both technical and foodservice workforce trainings that can leverage SoCalREN local contacts to inform and equip workforce talent with skills to assist in meeting the State’s energy and climate goals.

The Workforce Education and Training (WE&T) Program contributes to the IOUs’ energy efficiency goals by empowering customers and market actors with the knowledge to make energy reduction decisions. WE&T’s primary target audience includes market actors who design, build, maintain, and operate buildings and building systems—engineers, technicians, building operators, designers, contractors, etc. Additionally, WE&T supports post-secondary institutions who are training future generations of the energy workforce by providing them with energy efficiency, sustainability, and green career awareness materials and resources. Because these market actors have the potential to shape a building’s energy use, WE&T teaches them how to recognize energy savings and GHG-reduction opportunities, and then provides them with the skills, tools, and resources to act upon those opportunities.

4. Comparable SCE WE&T Integrate Energy Education Training Program – [SCE-13-SW-010A]

The SCE Workforce WE&T Integrate Energy Education Training program (formerly Centergies), offers resources to help shape the future energy workforce through occupational, employer, and

technology focused workshops and seminars, along with workplace-based hands-on technical training. These programs aim to provide pathways and training for certifications and credentials in energy-related industries.

In addition to the training courses offered, the Foodservice Technology Center conducts standards-based equipment testing and evaluation that enhance commercialization of emerging energy efficient technologies and programs. These services are delivered with superb technical integrity and scientific rigor in order to ensure our partners stay competitive and maintain cost effectiveness.

The Energy Centers provide a host of other value-added customer programs and services such as the Tool Lending Library, tours, and on-site energy audits at no-cost to the customer.

5. Coordination Protocol Between REN and IOU Programs

Partnering is key to SoCalREN's intervention strategies, specifically the efforts related to WE&T. In 2013, a Workforce Advisory Committee and Small Business Advisory Committee were formed to create the framework for a collaboration and partnership that would enable SoCalREN to address barriers to education and training for entry- and mid-level workers as well as competition and skills training for diverse SBE and DVBE firms. These partnership collaborations include labor, industry associations, community-based organizations, community colleges, utilities, and participating agencies. An expansion of these partnerships is ongoing to facilitate regional access as well as access within local communities.

In addition, SoCalREN, SCE, and SoCalGas will be instituting monthly coordination calls so that strategies and tactics can be cross-leveraged and support the core activities the Joint PAs have to offer. This monthly coordination will also help to ensure that all constituents served by WE&T programs in the shared service territory are properly covered and receive the optimal level of WE&T opportunities.

6. Coordination Between SW Program(s)

The IOU's WE&T programs have not historically offered a formal soft skills training, such as people, social, and communication skills. However, the IOU partners will coordinate with organizations that offer soft skills training and workforce development support as part of the Statewide Career and Workforce Readiness (CWR) program in 2019. This program will also be leveraged by SoCalREN to

support the core WE&T activities of SoCalREN. In addition, the IOU local Integrated Energy Efficiency Training post-secondary program component can be leveraged to collaborate with post-secondary and similarly positioned education and training entities to increase the quantity and competency of all workers at all levels of EE industry sectors.

7. Compliance With D.12-11-015, SCR-FIN-C2

The following table describes in further detail how SoCalREN’s WE&T program satisfies the REN criteria in D.12-11-015.

Table 23: SoCalREN’s 2019 WE&T Program Compliance with D.12-11-015

REN Criteria	SoCalREN WE&T Program (SCR-WE&T-D1)
1. Activities IOU cannot or does not intend to undertake	<ul style="list-style-type: none"> • An organized, comprehensive regional workforce education and training partnership and resource network for disadvantaged workers and contractors at all skill levels. • Entry-level workforce skills training infrastructure that emphasizes assisting youths and WMDVBE. • A DBE/WBE/DVBE contractor training program.
2. Pilot activities where there is no IOU program offering and where there is potential for scalability	
3. Activities in hard-to-reach markets, whether or not there is an IOU program that may overlap	

III. SOCIALREN PROGRAM COMPLIANCE WITH D.12-11-015

In D.12-11-015, the CPUC directed the RENs to deliver programs and activities that met a threshold of criteria:¹⁵

¹⁵ D.12-11-015, p. 17.

- Activities that utilities cannot or do not intend to undertake.
- Pilot activities where there is no current utility program offering, and where there is potential for scalability to a broader geographic reach, if successful.
- Pilot activities in hard-to-reach markets, whether or not there is a current utility program that may overlap.

The SoCalREN has exercised the power of governments to leverage alternative funding, community networks, and other government programs to enhance portfolio capacity, particularly in support of programs that fill gaps or represent scalable offerings. SoCalREN will continue to utilize this “peer driven” approach to leverage public agencies, with a focus on serving hard-to-reach and disadvantaged communities in both its public and residential sectors while maintaining a path to increased cost efficiency. SoCalREN’s services will continue to complement and supplement IOU programs and fill gaps and find synergies among approaches to maximize opportunities for customers and other market actors, which is in line with all the objectives laid out in both D.12-11-015 and D.16-08-019.

A. SOCALREN UNDERTAKING ACTIVITIES THAT UTILITIES CANNOT OR DO NOT INTEND TO UNDERTAKE.

Regional Energy Networks (RENs) possess relationships with customers that other administrators (including utilities and potential statewide administrators) or local government partnerships do not.¹⁶ As a peer-driven organization, SoCalREN’s portfolio utilizes its local expertise and direct relationship networks to undertake activities that IOUs cannot or do not intend to undertake.

SoCalREN’s Residential Community Coordinator program will use its resources and local expertise to leverage local government agencies’ housing and community development programs and community-based organizations, programs not currently offered by the IOUs.

¹⁶ D.16-08-019, pp. 11-12.

SoCalREN will also organize events based on these government agencies' relationships, that explain multifamily property EE upgrade benefits and connect community property owners and their residents with the education and resources needed to take action.

In addition, the SoCalREN 2019 public agencies offerings successfully complement and supplement the activities of existing Local Government Partnership (LGP) programs as well as other public-sector energy efficiency programs administered by partner utilities, SCE, and SoCalGas. Public agencies face unique challenges and barriers that include limited technical resources to identify, develop, and implement projects; inadequate and limited access to data about building performance; financing hurdles; unique procurement requirements; protracted decision-making processes; and managing within a political environment, among others.

SoCalREN's Public Agency Energy Efficiency Project Delivery program, DER DAC Project Delivery program, and NMEC program aim to address these unique challenges and provide the necessary services different from or not currently offered by IOU programs for public agencies.

B. SOCIALREN UNDERTAKING PILOTS ACTIVITIES WHERE THERE IS NO CURRENT UTILITY UNDERTAKING, AND WHERE THERE IS A POTENTIAL FOR SCALABILITY TO A BROADER GEOGRAPHIC REACH, IF SUCCESSFUL.

The SoCalREN strategies for its 2019 portfolio strive to enhance cross-cutting activities, collaboration and leverage with its incumbent IOUs; but to also adjust and reform its overall program portfolio, consistent with and in furtherance of the Commission's mandate for RENs to pilot new approaches and models that are scalable and replicable (D. 12-11-015). These new approaches include:

- Public Agency Revolving Loan Fund – short-term construction financing [no current utility undertaking]
- Residential Community Coordinator – public sector coordinator targeting multifamily property owners and upgrade education & outreach at a community not individual level [no current utility undertaking]

- Public Agency NMEC Program – NMEC program for public agencies with no rebate incentives and includes exterior lighting measures [different from current utility undertaking]

These new approaches currently are different from or not offered by SoCalREN's IOU partners but do have the potential to be scaled and replicated if proven successful. SoCalREN's 2019 Portfolio meets the criteria outlined in D.12-11-015 by establishing new strategies intended to be unique, scalable, and cost-effective, with the potential to be long term.

C. SOCIALREN UNDERTAKING PILOT ACTIVITIES IN HARD-TO-REACH MARKETS, WHETHER OR NOT THERE IS A CURRENT UTILITY PROGRAM THAT MAY OVERLAP.

A primary objective for all SoCalREN strategies is to meet the needs of hard-to-reach markets and disadvantaged communities. As a Program Administrator managed by a local government, the SoCalREN has an inherent duty to serve hard-to-reach markets and DACs. Regional government PAs are well-suited to address hard-to-reach markets and DACs, through deployment of independent yet parallel programs, initiatives, and actions specifically developed to respond to underserved constituents. As a result, the SoCalREN can cross-cut energy efficiency programs onto a number of pre-existing government frameworks specifically designed for underserved and DAC communities, reducing administrative, development, and other costs.

SoCalREN's Multifamily Program will work in parallel with its Residential Community Coordinator to build relationships among its hard-to-reach constituents, such as multifamily property owners whose primary language is not English and who currently own properties in DACs. Public agency relationships will help to gain trust and confidence in REN offerings as well as their IOU partner program offerings. Building trust will in turn help these hard-to-reach constituents understand the value proposition of energy efficiency.

In addition, SoCalREN's WE&T program market focus emphasizes tactics that reach the most under-represented disadvantaged populations currently in the energy efficiency industry, specifically Women Minority Disabled Veteran Business Enterprises (WMDVBE) and youths. Through public agency and community engagement, SoCalREN will continue to identify and establish pathways for entry-level skills training through a network of public and non-profit training programs.

The SoCalREN has structured its 2019 portfolio strategies to be administratively cost-efficient, with a focus on regional government capacities and systems already in-place to address hard-to-reach markets and disadvantaged communities. These existing custom systems and capacities will further enable and support the State's EE Portfolio goals for the under-served and DACs through the rigorous deployment by REN Program Administrators.

D. CURRENT 2018 PROGRAMS NOT WITHIN D.12-11-015 COMPLIANCE

SoCalREN will be seeking in its 2019 Annual Budget Advice Letter (ABAL) to eliminate programs it deems in non-compliance with D.12-11-015 and not cost-effective. Specifically, SoCalREN will propose to no longer offer the SoCalREN Single Family Home Upgrade program. Currently, SoCalREN offers the Single Family Home Upgrade program, which mirrors the IOUs Single Family Home Upgrade programs and thus is not compliant with D.12-11-015.

APPENDIX A: SUMMARY OF SOCALREN PROGRAM COMPLIANCE WITH D.12-11-015

Table A-1. SoCalREN D. 12-11-015 Compliance, by Program

Check D.12-11-015 Threshold Criteria that apply for each program	Comparable IOU Program, if applicable	1. Activities that utilities cannot or do not intend to undertake.	2. Pilot activities where there is no current offering, and where there is potential for scalability to a broader geographic reach, if successful.	3. Pilot activities in hard to reach markets, whether or not there is a current utility program that may overlap.
Multifamily Program [SCR-RES-A1]	SCE Multifamily Energy Efficiency Rebate Program [SCE-13-SW-001C] SoCalGas Home Upgrade Program – SoCalGas Multifamily Upgrade [SCG3705]	XX		XX
Residential Community Coordinator [SCR-RES-A2]	Not Applicable	XX	XX	XX
Energy Efficiency Project Delivery Program [SCR-PUBL-B1]	SCE Energy Leader Partnership Program [SCE-13-L-002Rollup] Note: Includes all subprogram partnerships	XX		

	SoCalGas Government Partnership Programs ¹⁷			
DER DAC Project Delivery Program [SCR-PUBL-B2]	Not Applicable	XX		
Public Agency NMEC Program [SCR-PUBL-B3]	SCE Public Sector Performance-Based Retrofit High Opportunity Program [SCE-13-L-0031] SoCalGas High Opportunity Projects and Programs - Metered and Performance-Based Retrofits (MPBR) Program	XX	XX	
Public Agency Revolving Loan Fund [SCR-FIN-C1]	SCE Statewide Finance Program – On-Bill Financing [SCE-13-SW-007A] SoCalGas Statewide Finance Program – New Financing Offerings [SCG3737]		XX	

¹⁷ This includes all SoCalGas partnership programs with local governments.

Residential Loan Loss Reserve [SCR-FIN-C2]	SCE New Financing Offerings [SCE-13-SW-007C] SoCalGas New Financing Offerings – Residential Energy Efficiency Loan (REEL) [SCG3737]		XX	XX
Workforce Education & Training [SCR-WET-D1]	SCE WE&T Integrate Energy Education Training Program [SCE-13-SW-010A] SoCalGas' WE&T Integrate Energy Education Training Program [SCG3729]	XX		

APPENDIX B: SOCALREN SUMMARY OF PROGRAMS OFFERED FOR 2019

Table B-1. SoCalREN Summary of Programs, 2019

REN Program Unique ID	Sector	Annual Budget	Eligible Measures
Multifamily Program [SCR-RES-A1]	Residential	\$6,169,920	Resource program. <i>Please see appendix D for eligible measure list.</i>
Residential Community Coordinator [SCR-RES-A2]	Residential	\$550,000	Not applicable. Non-resource program
Energy Efficiency Project Delivery Program [SCR-PUBL-B1]	Public	\$6,568,000	Not applicable. Non-resource program
DER DAC Project Delivery Program [SCR-PUBL-B2]	Public	\$2,832,000	Not applicable. Non-resource program
Public Agency NMEC Program [SCR-PUBL-B3]	Public	\$2,100,000	CMPA process
Public Agency Revolving Loan Fund [SCR-FIN-C1]	Cross-cutting: Financing	\$450,000	Not applicable. Non-resource program
Loan Loss Reserve [SCR-FIN-C2]	Cross-cutting: Financing	\$1,787,000	Not applicable. Non-resource program
Workforce Education & Training [SCR-WET-D1]	Cross-cutting: WE&T	\$284,000	Not applicable. Non-resource program

APPENDIX C: SCE AND SOCALGAS SUMMARY OF COMPARABLE PROGRAMS

Table C-1. SCE Summary of Comparable 2019 programs

IOU Program Unique ID	Sector	Annual Budget	Eligible Measures¹⁸
Multifamily Energy Efficiency Rebate Program [SCE-13-SW-001C]	Residential	\$7,912,999	Lighting, HVAC technologies, and appliances
Statewide Finance Program – On-Bill Financing [SCE-13-SW-007A]	Cross-cutting: Financing	\$1,735,458	Not applicable. Non-resource program
New Financing Offerings [SCE-13-SW-007C]	Cross-cutting: Financing	\$1,893,049	Not applicable. Non-resource program
Local Government Partnership Programs Note: Includes all subprogram partnerships & Water Infrastructure Systems EE Program	Public	\$17,969,191	Lighting, Pumping, HVAC, Process, Food Service, Whole Building, Motors, Office Equipment, Building Envelope, Refrigeration ¹⁹
Public Sector Performance-Based Retrofit High Opportunity Program [SCE-13-L-0031]	Public	\$540,032	CMPA process
WE&T Integrate Energy Education Training Program [SCE-13-SW-010A]	Cross-cutting: WE&T	\$4,480,729	Not applicable. Non-resource program

¹⁸ For up-to-date program information and detailed measures list for the multifamily rebate program, please visit: <https://www.sce.com/wps/portal/home/residential/rebates-savings/multifamily-rebate-program/>

¹⁹ For up-to-date program information and detailed measures list for Public Sector programs, please visit: <https://www.sceonlineapp.com/>

Table C-2. SoCalGas Summary of Comparable 2019 Programs

IOU Program Unique ID	Sector	Annual Budget ²⁰	Eligible Measures
Home Upgrade Program - Multifamily Home Upgrade Program [SCG3705]	Residential	\$1,100,000	Resource program
Statewide Finance Program – On-Bill Financing [SCG3735]	Cross-cutting: Financing	\$650,000 (Implementation Budget) \$5,500,000 (total loan pool)	Resource
New Financing Offerings [SCG3737]	Cross-cutting: Financing	Residential - \$21 million in credit enhancements Multifamily Program- \$2.1 million in credit enhancements	Resource
LA County Partnership [SCG3742]	Public	\$-	Non-resource
Kern County Partnership [SCG3743]	Public	\$-	Non-resource
Riverside County Partnership [SCG3744]	Public	\$-	Non-resource
San Bernardino County Partnership [SCG3745]	Public	\$-	Non-resource
Santa Barbara County Partnership [SCG3746]	Public	\$-	Non-resource
South Bay Cities Partnership [SCG3747]	Public	\$-	Non-resource
San Luis Obispo County Partnership [SCG3748]	Public	\$-	Non-resource
San Joaquin Valley Partnership [SCG3749]	Public	\$-	Non-resource

²⁰ Budget information related to the Partnership Programs listed here are a part of SoCalGas Public Sector. Actual budget information for the Public Sector and all other SoCalGas programs for PY 2019 will be provided in SoCalGas' 2019 Energy Efficiency Budget Advice Letter to be filed on September 1, 2018.

Orange County Cities Partnership [SCG3750]	Public	\$-	Non-resource
SEEC Partnership [SCG3751]	Public	\$-	Non-resource
Desert Cities Partnership [SCG3753]	Public	\$-	Non-resource
Ventura County Partnership [SCG3754]	Public	\$-	Non-resource
Gateway Cities Partnership [SCG3776]	Public	\$-	Non-resource
San Gabriel Valley COG Partnership [SCG3777]	Public	\$-	Non-resource
Westside Cities Community Partnership [SCG3779]	Public	\$-	Non-resource
Western Riverside Energy Partnership [SCG3783]	Public	\$-	Non-resource
North Orange County Cities Partnership [SCG3801]	Public	\$-	Non-resource
San Bernardino Regional Energy Partnership [SCG3802]	Public	\$-	Non-resource
WE&T IEET [SCG3729]	Cross-cutting: WE&T	\$2,548,697	Not applicable. SW Non-resource program

APPENDIX D: SOCALREN ELIGIBLE MEASURE LIST

Category	Measure Type	Measure
Insulation	Attic insulation	Attic insulation (per cubic ft); R0 - R38 Insulation
Insulation	Wall Insulation	Wall insulation (per square ft)
Insulation	Floor Insulation	
Envelope	Windows	High Performance Window U-0.32/SHGC 0.23
HVAC	Duct Sealing	Total Leakage Reduced from (40/35%) to (12/15%)
HVAC	Duct Sealing	Total Leakage Reduced from (25/24%) to (15/12%)
HVAC	Duct Insulation	
HVAC	Fan Controller for AC and Furnaces	Efficient Fan Controller for Residential Air Conditioners and Furnaces
HVAC	Smart Thermostat	Residential Smart Communicating Thermostat
HVAC	Package Terminal Air Conditioner (PTAC)	<=24 kBtu/hr High Efficiency Package Terminal Air Conditioner (Res) DX Equipment
HVAC	Package Terminal Heat Pump (PTHP)	<=24 kBtu/hr High Efficiency Package Terminal Heat Pump (Res) DX Equipment
HVAC	Room (or through the wall) Air Conditioner	Room air conditioners (RAC) that meet Energy Star RAC requirements (ES-RAC).
HVAC	Variable Refrigerant Flow Ductless Heat Pump	
HVAC	Water Source Heat Pump	<65kBtu/hr 14.0 EER Water-Source Heat Pump
HVAC	Water Source Heat Pump	<65kBtu/hr 15.0 EER Water-Source Heat Pump
HVAC	Water Source Heat Pump	<65kBtu/hr 16.0 EER Water-Source Heat Pump
HVAC	Water Source Heat Pump	<65kBtu/hr 17.0 EER Water-Source Heat Pump
HVAC	Water Source Heat Pump	<65kBtu/hr 18.0 EER Water-Source Heat Pump
HVAC	Water Source Heat Pump	65-135 kBtu/hr 14.0 EER Water-Source Heat Pump
HVAC	Water Source Heat Pump	65-135 kBtu/hr 15.0 EER Water-Source Heat Pump
HVAC	Water Source Heat Pump	65-135 kBtu/hr 16.0 EER Water-Source Heat Pump
HVAC	Water Source Heat Pump	65-135 kBtu/hr 17.0 EER Water-Source Heat Pump
HVAC	Water Source Heat Pump	65-135 kBtu/hr 18.0 EER Water-Source Heat Pump
HVAC	Water Source Heat Pump	135-240 kBtu/hr 14.0 EER Water-Source Heat Pump

HVAC	Water Source Heat Pump	135-240 kBtu/hr 15.0 EER Water-Source Heat Pump
HVAC	Water Source Heat Pump	>240 kBtu/hr 13.0 EER Water-Source Heat Pump
HVAC	Water Source Heat Pump	>240 kBtu/hr 14.0 EER Water-Source Heat Pump
HVAC	Room (or through the wall) Heat Pump	
HVAC	Central Natural Gas Furnace	Central Natural Gas Furnace $\geq 92\%$ & $< 95\%$ AFUE
HVAC	Central Natural Gas Furnace	Central Natural Gas Furnace $\geq 95\%$ & $< 96\%$ AFUE
HVAC	Central Natural Gas Furnace	Central Natural Gas Furnace $\geq 96\%$ & $< 97\%$ AFUE
HVAC	Central Air Conditioner and Heat Pump	Residential Split AC, SEER 14, 45-65kbtuh
HVAC	Central Air Conditioner and Heat Pump	Residential Split AC, SEER 14, 18-45kbtuh
HVAC	Central Air Conditioner and Heat Pump	Residential Split AC, SEER 15, 18-65kbtuh
HVAC	Central Air Conditioner and Heat Pump	Residential Split AC, SEER 16, 18-65kbtuh
HVAC	Central Air Conditioner and Heat Pump	Residential Split AC, SEER 17, 18-65kbtuh
HVAC	Central Air Conditioner and Heat Pump	Residential Split AC, SEER 18, 18-65kbtuh
HVAC	Central Air Conditioner and Heat Pump	Residential split Heat Pump, SEER 14, HSPF 8.2
HVAC	Central Air Conditioner and Heat Pump	Residential split Heat Pump, SEER 15, HSPF 8.2
HVAC	Central Air Conditioner and Heat Pump	Residential split Heat Pump, SEER 16, HSPF 8.2
HVAC	Central Air Conditioner and Heat Pump	Residential split Heat Pump, SEER 17, HSPF 8.2

HVAC	Central Air Conditioner and Heat Pump	Residential split Heat Pump, SEER 18, HSPF 8.2
HVAC	Radiant/Hydronic Heating	
HVAC	HVAC Duct Replacement/Retrofit	Total Leakage Reduced from (40/35%) to (12/15%)
HVAC	Refrigerant Charge	Adjust refrigerant charge in residential AC unit
HVAC	System Air Flow Verification	Airflow and Refrigerant Check
HVAC	System Fan Wattage Verification	
Water Heating	Energy Star Electric Storage Water Heater	Install High Efficiency Electric Water Heater; 75 gallon, EF = 0.91
Water Heating	Energy Star Electric Storage Water Heater	Install High Efficiency Electric Water Heater; 75 gallon, EF = 0.87
Water Heating	Energy Star Electric Storage Water Heater	Install High Efficiency Electric Water Heater; 60 gallon, EF = 0.92
Water Heating	Energy Star Electric Storage Water Heater	Install High Efficiency Electric Water Heater; 60 gallon, EF = 0.89
Water Heating	Energy Star Electric Storage Water Heater	Install High Efficiency Electric Water Heater; 50 gallon, EF = 0.93
Water Heating	Energy Star Electric Storage Water Heater	Install High Efficiency Electric Water Heater; 50 gallon, EF = 0.90
Water Heating	Energy Star Electric Storage Water Heater	Install High Efficiency Electric Water Heater; 40 gallon, EF = 0.94
Water Heating	Energy Star Electric Storage Water Heater	Install High Efficiency Electric Water Heater; 40 gallon, EF = 0.92
Water Heating	Energy Star Electric Storage Water Heater	Install High Efficiency Electric Water Heater; 30 gallon, EF = 0.95
Water Heating	Energy Star Electric Storage Water Heater	Install High Efficiency Electric Water Heater; 30 gallon, EF = 0.93

Water Heating	High Efficiency DHW Boilers	MF Central Storage Water Heater >75 kBtuh, Tier 1 (83% TE)
Water Heating	High Efficiency DHW Boilers	MF Central Storage Water Heater >75 kBtuh, Tier 2 (90% TE)
Water Heating	Insulation	Insulate Exposed Hot Water Pipes (per linear foot)
Water Heating	High-Efficiency Natural Gas Storage Water Heater	Install High Efficiency Electric Water Heater; 30 gallon, EF = 0.57
Water Heating	High-Efficiency Natural Gas Storage Water Heater	Install High Efficiency Electric Water Heater; 30 gallon, EF = 0.58
Water Heating	High-Efficiency Natural Gas Storage Water Heater	Install High Efficiency Electric Water Heater; 30 gallon, EF = 0.61
Water Heating	High-Efficiency Natural Gas Storage Water Heater	Install High Efficiency Electric Water Heater; 30 gallon, EF = 0.62
Water Heating	High-Efficiency Natural Gas Storage Water Heater	Install High Efficiency Electric Water Heater; 30 gallon, EF = 0.63
Water Heating	High-Efficiency Natural Gas Storage Water Heater	Install High Efficiency Electric Water Heater; 30 gallon, EF = 0.65
Water Heating	High-Efficiency Natural Gas Storage Water Heater	Install High Efficiency Electric Water Heater; 30 gallon, EF = 0.70
Water Heating	High-Efficiency Natural Gas Storage Water Heater	Install High Efficiency Electric Water Heater; 40 gallon, EF = 0.57
Water Heating	High-Efficiency Natural Gas Storage Water Heater	Install High Efficiency Electric Water Heater; 40 gallon, EF = 0.58
Water Heating	High-Efficiency Natural Gas Storage Water Heater	Install High Efficiency Electric Water Heater; 40 gallon, EF = 0.59
Water Heating	High-Efficiency Natural Gas Storage Water Heater	Install High Efficiency Electric Water Heater; 40 gallon, EF = 0.615
Water Heating	High-Efficiency Natural Gas Storage Water Heater	Install High Efficiency Electric Water Heater; 40 gallon, EF = 0.62
Water Heating	High-Efficiency Natural Gas Storage Water Heater	Install High Efficiency Electric Water Heater; 40 gallon, EF = 0.65

Water Heating	High-Efficiency Natural Gas Storage Water Heater	Install High Efficiency Electric Water Heater; 40 gallon, EF = 0.67
Water Heating	High-Efficiency Natural Gas Storage Water Heater	Install High Efficiency Electric Water Heater; 40 gallon, EF = 0.70
Water Heating	High-Efficiency Natural Gas Storage Water Heater	Install High Efficiency Electric Water Heater; 40 gallon, EF = 0.82
Water Heating	High-Efficiency Natural Gas Storage Water Heater	Install High Efficiency Electric Water Heater; 50 gallon, EF = 0.57
Water Heating	High-Efficiency Natural Gas Storage Water Heater	Install High Efficiency Electric Water Heater; 50 gallon, EF = 0.58
Water Heating	High-Efficiency Natural Gas Storage Water Heater	Install High Efficiency Electric Water Heater; 50 gallon, EF = 0.60
Water Heating	High-Efficiency Natural Gas Storage Water Heater	Install High Efficiency Electric Water Heater; 50 gallon, EF = 0.62
Water Heating	High-Efficiency Natural Gas Storage Water Heater	Install High Efficiency Electric Water Heater; 50 gallon, EF = 0.67
Water Heating	High-Efficiency Natural Gas Storage Water Heater	Install High Efficiency Electric Water Heater; 50 gallon, EF = 0.70
Water Heating	High-Efficiency Natural Gas Storage Water Heater	Install High Efficiency Electric Water Heater; 60 gallon, EF = 0.56
Water Heating	High-Efficiency Natural Gas Storage Water Heater	Install High Efficiency Electric Water Heater; 60 gallon, EF = 0.62
Water Heating	High-Efficiency Natural Gas Storage Water Heater	Install High Efficiency Electric Water Heater; 60 gallon, EF = 0.66
Water Heating	High-Efficiency Natural Gas Storage Water Heater	Install High Efficiency Electric Water Heater; 60 gallon, EF = 0.70
Water Heating	High-Efficiency Natural Gas Instantaneous Water heater	Instantaneous Gas water heater: EF = 0.82
Water Heating	High-Efficiency Natural Gas Instantaneous Water heater	Instantaneous Gas water heater: EF = 0.84
Water Heating	High-Efficiency Natural Gas	Instantaneous Gas water heater: EF = 0.92

	Instantaneous Water heater	
Domestic Hot Water	Variable Speed Circulation Pump for DHW High efficiency boilers	
Solar	Solar Thermal	
Space Heating	Central System Boiler for Space Heating	Space Heating Hot Water boiler < 300 MBtuh AFUE. >300MBtuh TE > 84%
Appliance	High-efficiency Refrigerators	Refrigerators; Energy Star qualified, kWh = 491
Appliance	High-efficiency Refrigerators	Refrigerators; 30% better than Code, kWh = 382
Appliance	High-efficiency Washing Machines	Energy Star Top-Loading
Appliance	High-efficiency Washing Machines	Energy Star Front-Loading
Appliance	High-efficiency Washing Machines	Energy Star Most Efficient
Appliance	High-efficiency Washing Machines	CEE Tier 3
Appliance	High-efficiency Clothes Dryers	Energy Star Gas Clothes Dryer
Appliance	High-efficiency Clothes Dryers	Energy Star Electric Clothes Dryer
	High-efficiency Dishwashers	High Efficiency Dishwasher - Standard Size - EAEU = 199kWh
Cool Roof	Residential Cool Roof	
Lighting	Interior Lighting	LED A19
Lighting	Interior Lighting	LED BR20
Lighting	Interior Lighting	LED BR30
Lighting	Interior Lighting	LED BR40
Lighting	Interior Lighting	LED Double-Pin CFL Replacement
Lighting	Interior Lighting	LED Candelabra
Lighting	Interior Lighting	LED G24 Base
Lighting	Interior Lighting	LED G25 Globe
Lighting	Interior Lighting	LED MR16
Lighting	Interior Lighting	LED PAR 16
Lighting	Interior Lighting	LED PAR 30
Lighting	Interior Lighting	LED PAR 38
Lighting	Interior Lighting	LED PL 2-PIN GX23

Lighting	Interior Lighting	LED Circular (bulb)
Lighting	Interior Lighting	LED Recessed Can 4 Inch (fixture)
Lighting	Interior Lighting	LED Recessed Can 6 Inch (fixture)
Lighting	Interior Lighting	LED Recessed Can 8 Inch (fixture)
Lighting	Interior Lighting	LED 4-Foot Luminaire (fixture)
Lighting	Interior Lighting	LED 8-Foot Luminaire (fixture)
Lighting	Interior Lighting	LED Linear 4-Foot Bi-Pin (bulb)
Lighting	Interior Lighting	LED Linear 8-Foot Bi-Pin (bulb)
Lighting	Interior Lighting	LED Wall Sconce (fixture)
Lighting	Interior Lighting	Surfact Mount Housing GU24
Lighting	Interior Lighting	Ballast Bypass (direct wiring fixture, per ballast bypass)
Lighting	Exterior Lighting	RAB 18W Flood Light
Lighting	Exterior Lighting	Strip Fixture 2- T8
Water Efficient Fixtures	Showerheads, bathroom faucets, kitchen faucets	Shower Head: 2.5 GPM, code standard Technology
Water Efficient Fixtures	Showerheads, bathroom faucets, kitchen faucets	Shower Head: Any low flow showerhead
Water Efficient Fixtures	Showerheads, bathroom faucets, kitchen faucets	Shower Head and Flow Restriction Valve: 1.6 GPM
Water Efficient Fixtures	Showerheads, bathroom faucets, kitchen faucets	Shower Flow Restriction Valve only:
Water Efficient Fixtures	Showerheads, bathroom faucets, kitchen faucets	Faucet Aerator: 2.2 GPM, Code-Standard Technology
Water Efficient Fixtures	Showerheads, bathroom faucets, kitchen faucets	Faucet aerator: less than 2.2 GPM, Measure Technology
Water Efficient Fixtures	Showerheads, bathroom faucets, kitchen faucets	Kitchen Faucet
Water Efficient Fixtures	Showerheads, bathroom faucets, kitchen faucets	Bathroom Faucet
On- demand Recirculation Pump	Recirculation pump	DWH Recirculation Flow Control on a 44-unit MF Building
On- demand Recirculation Pump	Recirculation pump	DWH Recirculation Flow Control on an 88-unit MF Building
On- demand Recirculation Pump	Recirculation pump	Temperature Modulation Control (storage tank control) on a 44-unit MF Building

On- demand Recirculation Pump	Recirculation pump	Temperature Modulation Control (storage tank control) on an 88-unit MF Building
On- demand Recirculation Pump	Recirculation pump	Temperature Modulation Control (new electronic tempering valve) on a 44 unit MF Building
On- demand Recirculation Pump	Recirculation pump	Temperature Modulation Control (new electronic tempering valve) on an 88 unit MF Building
Recirculation Pump	Recirculation pump	Recirculating Pump on a Central Water Heater in 44 unit MF Building
Recirculation Pump	Recirculation pump	Recirculating Pump on a Central Water Heater in 88 unit MF Building
Refrigeration	Controllers	Beverage Merchandise Cooler Control
Refrigeration	Controllers	Cold Vending Machine Controls
Refrigeration	Controllers	Snack Vending Machine Controls
Other Measures	Other measures with work papers and or disposition may be considered	* power strips for common area

APPENDIX E: SOCALREN-IOU (SCE AND SOCALGAS) COORDINATION PLAN FOR PUBLIC AGENCIES

SoCalREN, SCE, SoCalGas Coordination Strategy for Public Agencies

SoCalREN and IOUs will coordinate their respective program offerings and resources to minimize duplicative offerings and work in an approach where the SoCalREN complements and supplements the IOU and IOU's Third Party programs, yet understanding this is a reciprocal relationship. SoCalREN and IOUs should work toward a goal that allows all public agencies a choice amongst all offerings of Program Administrators, allowing the customer to be the decision maker. This approach is in the best interest of the customer, providing a range of options to help them meet their agencies goals.

Coordination laid out in this document is for agency enrollment, commitment, and ongoing of SoCalREN's project delivery services. As the SoCalREN Public Agency Program continues to grow and the program evaluates additional services, this document will continue to serve as guidance for coordination activities between SoCalREN and the IOUs for agencies interested in and committed to energy efficiency project implementation.

Energy efficiency project delivery services include, but are not limited to, energy planning, energy use analysis, energy efficiency audits, design scopes of work, incentives and financing support, financial analysis, and obtaining procurement assistance, bid analysis, and construction management support.

How will SoCalREN and IOUs coordinate services and activities for all public agencies?

SoCalREN, SCE, and SCG will work collaboratively to develop coordinated strategies that enrich respective program offerings and elevate services to public agencies. Direct communications between SoCalREN Program Representatives, SCE Account Managers, and SCG Account Executives are intended to successfully drive energy efficiency project delivery and foster public agency satisfaction. Key coordination strategies include the following:

- Efforts will be made to present all utility core programs to customers by SoCalREN

representatives when evaluating projects. SoCalREN will connect agencies with appropriate utility representatives when interest is expressed, and Utility leads will connect interested parties to SoCalREN representatives when interest is expressed.

- IOUs will provide regular information and updates to SoCalREN program representatives on core utility programs available to public agencies.
- SoCalREN's preference is to obtain customer information directly from the customer. SoCalREN may provide written customer authorization in order to obtain additional customer information related to energy efficiency project delivery, as needed.
- Upon request IOUs will provide customer authorized project-level data to SoCalREN monthly through the IOU/REN Data Transfer template.
- SoCalREN will acquire written documentation of the customer's authorization for sharing information. This documented authorization will be distributed by SoCalREN to appropriate utility stakeholders (LGP Program Managers, Account Executives and key points of contact).
- SoCalREN will timely inform SCE Account Managers and SCG Account Executives of an engagement meeting prior to enrollment in EE Project Delivery services, and offer a pre-meeting coordination call to discuss client needs and opportunities. Notification would happen typically two weeks prior to a meeting and pre-coordination meetings should happen a week prior to the customer meeting.
- SoCalREN will do their best to include the SCE Lead PM and SCG Lead PM on all appropriate communications to other IOU representatives related to SoCalREN activity.
- SoCalREN will follow the existing process of submitting incentive applications typical to a Trade Professionals when the customer has asked SoCalREN to file the incentive applications on their behalf. SoCalREN will work with the appropriate IOU representative for completing items such as a program narrative, tech summary, etc. to insure a complete application for submittal.
- SoCalREN will provide a courtesy copy of Custom Incentive applications to Account Managers/Account Executives at the time of submittal to Business Incentives.

How will SoCalREN and Local Government Partnerships coordinate services and activities?

SoCalREN, IOU and LGP program leads will prioritize collaboration and reciprocal communication with regards to energy efficiency project delivery services for LGP agencies as well as engagement with prior to enrollment in SoCalREN programs. Key coordination strategies include the following:

- SoCalREN will inform the utility LGP Program Managers/Account Representatives when scheduling the engagement meeting with the local government.
 - IOU representation at the engagement meeting is not a requirement, however, reasonable efforts to arrange for participation by interested IOU leads will be made by SoCalREN.
 - In person participation at the engagement meeting is preferred by all, although remote participation may be coordinated as needed if an alternative

- representative cannot be identified.
 - Confirmation of IOU attendance will be requested by the SoCalREN representative coordinating the engagement meeting. Participation by no more than two (2) representatives from each IOU is preferred at the meeting with agency leads.
- SoCalREN will work with the utility representatives (LGP Program Manager/Account Manager) at coordinated pre-meetings prior to attending the engagement meeting to coordinate technical assistance offerings and determine how to best collaborate on a strategy that helps meet the client's needs, leveraging all feasible resources. For example: If an LGP has audit resources available, these should be evaluated (considering comprehensiveness and project needs) as a first step.
 - Agency contacts, roles, and responsibilities will be confirmed, and communication strategies discussed.
- Agencies past activities through the LGP and participation in utility programs will be discussed to calibrate expectations of energy savings potential.
- If an LGP Program Manager/Account Representative receives an inquiry about SoCalREN program services, the LGP Program manager will contact SoCalREN representatives and determine how best to set the follow up meeting with the city.
- Once the agency is enrolled, SoCalREN will inform the IOU and LGP representatives on key project related SoCalREN interactions with the LGP and keep them informed of activities with those agencies.
- Once the agency is enrolled, IOU and LGP representatives will inform SoCalREN Representatives on key SoCalREN project-related interactions with the agency and keep them informed of activities with agencies.

How will SoCalREN and other SCE/SCG programs coordinate services and activities?

SoCalREN and other SCE/SCG programs will work collaboratively in the following manner:

- For engagement with water agencies, SoCalREN will include the SCE 3rd Party Program Manager responsible for the WISE program on coordination communications ahead of enrollment to determine current activities with existing programs.
- For engagement with school districts, SoCalREN will include the SCG 3rd Party Program Manager and the SCE 3rd Party Program Manager responsible for schools program(s) on coordination communications to determine current activities with existing programs.
- For both water agencies and school districts, SoCalREN will offer to host a pre-meeting coordination call prior to attending an engagement meeting with the agency to coordinate offerings and determine how to best collaborate on a strategy that helps meet the client's needs, leveraging all feasible resources. Agency past participation history will be discussed to calibrate expectations of energy savings potential.
- At the pre-coordination meeting, agency past participation history will be discussed to calibrate expectations of energy savings potential.

- SoCalREN may engage and coordinate with additional utility program leads in order to avoid duplication of efforts and offerings. Initial introductions to 3rd Party or other Utility Program Leads for coordination purposes will be initiated through the SCE Lead PM and the SCG Lead PM.

How will outreach and education related to SoCalREN be communicated to Public Agencies?

Any requests for presentations about SoCalREN should be coordinated through SoCalREN. SoCalREN Program representatives are available to present program offerings to any audience.

How will LGPs, Account Managers and other Program leads learn about SoCalREN?

The IOUs will have lead responsibility for informing their LGP representatives and Account Managers about the coordination strategy with SoCalREN.

Opportunities to learn about the program include:

- Attendance at a Joint IOU / SoCalREN Reintroduction Workshop, to be offered at various locations throughout the IOU territory in coordination with the IOUs.
- LGP Program Managers/Account Managers may request to coordinate with SoCalREN to jointly host meetings with LGP cities to present SoCalREN's services.
- 3rd Party Program Managers may also choose to coordinate with SoCalREN to jointly host meeting with public agencies to present SoCalREN's services.
- Additional opportunities for SoCalREN presentations will be offered on request.