cog
Council of Governments

cta
County Transportation Authority

Support Material Agenda Item No. 19

Board of Directors Meeting

October 5, 2022
10:00 a.m.

LOCATION:
San Bernardino County Transportation Authority
First Floor Lobby Board Room
1170 W. 3rd Street, San Bernardino, CA

DISCUSSION CALENDAR

Air Quality/Traveler Services

19. Inland Regional Energy Network Appointments and Agreements and Executive Committee Appointments

That the Board, acting as the San Bernardino Associated Governments (SANBAG):

A. Authorize the Executive Director, or his designee, to finalize and execute the Memorandum of Agreement (MOA) No. 22-1002767 with the Western Riverside Council of Governments (WRCOG) and the Coachella Valley Association of Governments (CVAG) for the Inland Regional Energy Network (I-REN) Program for a not-to-exceed amount of $65,577,932 with SANBAG receiving an estimated not-to-exceed amount of $21,359,643.94 over a five (5) year period, upon approval as to form by General Counsel.

B. Authorize the Executive Director, or his designee, to finalize and execute the Programs and Budgets Agreement (Programs Agreement) No. 23-1002898 for the I-REN Program with WRCOG and CVAG, Southern California Gas Company, and Southern California Edison for the limited purposes identified in the Programs Agreement, upon approval as to form by General Counsel.

C. Authorize the Board President to appoint three (3) SANBAG Board Members to the I-REN Executive Committee.

The Inland Regional Energy Network Program Business Plan is attached.

Exhibit A

Inland Regional Energy Network Technical Assistance and Strategic Energy Planning Program Implementation Plan

June 1, 2022

Page Intentionally Left Blank

CONTENTS

PROGRAM OVERVIEW

The Inland Regional Energy Network's (I-REN) Technical Assistance and Strategic Energy Planning program will provide short-term and mid-term technical support for local governments, special districts, school districts, and tribes to increase energy efficiency in publicly owned facilities. Additional support and technical services will be provided to design high performing, energy efficient buildings. The program will implement a strategy of developing a regional Building Upgrade Concierge (BUC) for local governments, special districts, and tribal communities with technical guidance and tools to inform and enable priority energy improvements. I-REN will provide person-to-person support for local governments to get higher levels of assistance and support for their energy efficiency projects, through concierge-style support to help fill gaps in staff capacity and resources at these local government jurisdictions.

PROGRAM BUDGET AND SAVINGS

1. Program and/or Sub-Program Name

Technical Assistance and Strategic Energy Planning

2. Program / Sub-Program ID number

IREN-PUBL-001

3. Program / Sub-program Budget Table

Technical Assistance and Strategic Energy Planning	2022	2023	2024	2025	2026	2027
Administration	$358,819	$339,172	$352,739	$366,849	$366,849	$366,849
Marketing, Education, & Outreach	$162,000	$168,000	$186,120	$204,365	$204,365	$204,365
Implementation (Non-Incentives)	$2,582,083	$2,401,047	$2,466,688	$2,536,555	$2,536,555	$2,536,555
Incentives	$0	$0	$0	$0	$0	$0
Total	$3,102,902	$2,908,219	$3,005,547	$3,107,769	$3,107,769	$3,107,769

4. Program / Sub-program Gross Impacts Table

Projected Net Savings	2022	2023	2024	2025	2026	2027
Forecast kWh	-	-	-	-	-	-
Forecast kW	-	-	-	-	-	-
Forecast Therms	-	-	-	-	-	-

5. Program / Sub-Program Cost Effectiveness (TRC)

2022	2023	2024	2025	2026	2027
-	-	-	-	-	-

6. Program / Sub-Program Cost Effectiveness (PAC):

2022	2023	2024	2025	2026	2027
-	-	-	-	-	-

7. Type of Program / Sub-Program Implementer (PA-delivered, third party-delivered or Partnership):

Third party-delivered

8. Market Sector

Public

9. Program / Sub-program Type

Non-resource, equity segment

10. Market channel(s) (i.e., downstream, midstream, and/or upstream) and Intervention Strategies (e.g., direct install, incentive, finance, audit, technical assistance, etc.), campaign goals, and timeline

Technical assistance, Partnership-building, Outreach and education

IMPLEMENTATION PLAN NARRATIVE

11. Program Description

The councils of government (COGs) that make up I-REN have direct relationships and a history of collaborating with the many government jurisdictions in their territory. I-REN will provide person-to-person technical assistance to local governments to support energy efficiency projects including, but not limited to, strategic energy planning and benchmarking. I-REN will also develop tools and resources to increase public sector participation in other federal, state, and local programs.

12. Program Delivery and Customer Services

The program will develop a regional Building Upgrade Concierge (BUC) for local governments, special districts, and tribal communities with technical guidance and tools to inform and enable priority energy improvements. To achieve this, the program plans to implement the following tactics, with the overall objective of the program to ensure local governments have support and resources to develop and implement their strategic energy plans and energy efficiency projects.

- Establish person-to-person support for local governments to get higher levels of assistance and support for their EE projects.
- Develop or enhance strategic energy plans to connect local government goals related to climate, resilience, and economic development to energy efficiency programs and adoption.

- Create resources for the public sector to tap into EE and distributed energy resources programs offered by other providers and IOUs.

13. Program Design and Best Practices

The Technical Assistance and Strategic Energy Planning program's design was chosen by I-REN in response to challenges faced by local governments regarding EE improvements. I-REN's local governments have limited incentives to complete energy upgrades and are challenged to maintain and upgrade these facilities due to lack of funding for capital improvements, a lack of awareness related to energy efficiency and other energy efficiency program opportunities, limited time, and staff resources, along with conflicting priorities.

Strategies to achieve I-REN's goals for the Public Sector will place added emphasis on "aggressive efficiency for jurisdiction-owned buildings,"[1] and energy efficiency improvements to existing buildings that serve low income, moderate income, and disadvantaged communities. I-REN will provide person-to-person technical assistance to local governments to support energy efficiency projects including, but not limited to, strategic energy planning and benchmarking. I-REN will also develop tools and resources to increase public sector participation in other federal, state, and local programs.

14. Innovation

Some of the greatest challenges to participation in the public sector in the I-REN service area may also be indicators of unrealized energy savings potential. I-REN has designed its Public Sector strategies and tactics to help local government agencies, tribal leadership, and staff at school districts and special districts overcome these participation barriers to improve their facilities' energy performance and harvest "stranded" energy savings.

15. Metrics

Based on intervention strategies I-REN developed for Public Sector, the following are examples of metrics that will track program performance:

- Public Sector market penetration
- Public Sector financing

Additional metrics for this new program are forthcoming.

16. For Programs claiming to-code savings

Not applicable.

17. Pilots

Not applicable.

18. Workforce Education and Training

While there are no direct Workforce Education and Training efforts, this program aims to provide technical assistance, locally focused resources, and person-to-person support that are needed to develop and implement strategic energy plans for the public sector.

[1] Existing Buildings Energy Efficiency Action Plan, Strategy 1.7 Local Government Leadership. https://efiling.energy.ca.gov/getdocument.aspx?tn=206015 Accessed October 2020.

19. Workforce Standards

Not applicable.

20. Disadvantaged Worker Plan

It is a priority of this program to target and serve disadvantaged, and underserved communities.

21. Additional information

Not applicable.

SUPPORTING DOCUMENTS

1. Program Manuals and Program Rules

The Program Manual will be developed and incorporated into this Implementation Plan after program implementers are under contract.

2. Program Theory and Program Logic Model

Forthcoming.

3. Process Flow Chart

Forthcoming.

4. Incentive Tables, Workpapers, Software Tools

Not applicable.

5. Quantitative Program Targets

Targets will be established after program implementers are under contract.

6. Diagram of Program

Forthcoming.

7. Evaluation, Measurement & Verification (EM&V)

The current lack of energy efficiency data about the public sector places added importance on the role of EM&V. I-REN will collaborate with the CPUC and stakeholders to ensure that data collection activities are embedded in Public Sector program design to capture the information necessary to meet evaluation requirements and to help expand the understanding of energy efficiency potential and best practices in this relatively new sector.

8. Normalized Metered Energy Consumption (NMEC)

Not applicable.

Inland Regional Energy Network Public Buildings NMEC Program Implementation Plan

June 1, 2022

Page Intentionally Left Blank

CONTENTS

PROGRAM OVERVIEW

The Inland Regional Energy Network's (I-REN) Public Buildings NMEC Program will (in year two of I-REN program administration) provide incentives and financing for savings based on Normalized Metered Energy Consumption (NMEC) achieved over three to five years, with a special focus on HVAC improvements to community-serving buildings. I-REN will also leverage sustaining financing mechanisms to support HVAC upgrades in public buildings. If a third-party program becomes available that serves this need and makes this resource offering duplicative, I-REN will focus its full Public Sector budget on providing technical assistance and strategic energy planning through the BUC. I-REN has designed its Public Sector offerings to be flexible and its goals and targets can be adjusted accordingly to meet the needs of the region. Through their extensive work with local governments and their committee structure, the I-REN governing agencies have become a trusted voice and advocate for the public sector in their two counties. By collaborating with their member jurisdictions and using their established communication networks, I-REN can provide regionally focused public sector solutions to help local governments succeed as energy efficiency leaders.

PROGRAM BUDGET AND SAVINGS

1. Program and/or Sub-Program Name

Public Buildings NMEC

2. Program / Sub-Program ID number

IREN-PUBL-001

3. Program / Sub-program Budget Table

Public Buildings NMEC	2022	2023	2024	2025	2026	2027
Administration	$270,000	$280,000	$310,200	$340,608	$340,608	$340,608
Marketing, Education, & Outreach	$215,292	$203,503	$211,643	$220,109	$220,109	$220,109
Implementation (Non-Incentives)	$1,200,000	$1,300,000	$1,352,000	$1,406,080	$1,406,080	$1,406,080
Incentives	$1,500,000	$1,500,000	$1,750,000	$2,000,000	$2,000,000	$2,000,000
Total	$3,185,292	$3,283,503	$3,623,843	$3,966,797	$3,966,797	$3,966,797

4. Program / Sub-program Gross Impacts Table

Projected Net Savings	2022	2023	2024	2025
Forecast kWh	4,175,629	4,361,224	4,361,224	5,763,031
Forecast kW	720	813	813	1084
Forecast Therms	121,315	147,884	147,884	196,707

5. Program / Sub-Program Cost Effectiveness (TRC)

2022	2023	2024	2025
0.45	0.51	0.47	0.61

6. Program / Sub-Program Cost Effectiveness (PAC):

2022	2023	2024	2025
0.74	0.81	0.79	1.03

7. Type of Program / Sub-Program Implementer (PA-delivered, third party-delivered or Partnership):

Third party-delivered

8. Market Sector

Public

9. Program / Sub-program Type

Resource, equity segment

10. Market channel(s) (i.e., downstream, midstream, and/or upstream) and Intervention Strategies (e.g., direct install, incentive, finance, audit, technical assistance, etc.), campaign goals, and timeline

Downstream, incentive, technical assistance

IMPLEMENTATION PLAN NARRATIVE

1. Program Description

I-REN proposes to offer a resource program with incentives for measures including but not limited to HVAC tune ups and retrofits; exterior and interior lighting and smart controls; and operations and maintenance. The program would be open to all public sector facilities including those operated by county and city government, school districts, special districts, and tribes.

2. Program Delivery and Customer Services

Program outreach will focus initially on public gathering spaces such as community and neighborhood centers, health and recreation centers, senior centers, teen centers, and libraries. Implementing energy efficiency projects at these locations will serve multiple goals, including but not limited to those described here:

- Upgrades and retrofits to HVAC and lighting equipment both interior and exterior will improve comfort and safety at facilities that benefit vulnerable populations such as children, elders, and low income, disadvantaged, and underserved communities.
- Higher efficiency equipment, appliances and controls such as cooling-dominated HVAC loads as well as improvements to operations and maintenance will lower energy bills for local governments, reducing overhead and freeing up funds for other projects.

- Completion of projects at these high-visibility locations will support achieving local and statewide energy efficiency and greenhouse gas reduction goals while also positioning local governments as energy efficiency leaders within their communities.

The program will use an NMEC approach to calculate savings and demonstrate persistence of savings. By using NMEC to calculate savings, the program will help protect against unrealized savings. Combined with technical assistance and reinforcement of operations and management best practices, public sector customers will experience maximized savings.

3. Program Design and Best Practices

Public Buildings NMEC Program's design was chosen by I-REN in response to challenges faced by local governments regarding EE improvements. I-REN's local governments have limited incentives to complete energy upgrades and are challenged to maintain and upgrade these facilities due to lack of funding for capital improvements, a lack of awareness related to energy efficiency and other energy efficiency program opportunities, limited time, and staff resources, along with conflicting priorities.

Strategies to achieve I-REN's goals for the Public Sector will be based around establishing incentives and leveraging existing financing mechanisms to assist local governments with implementing energy efficiency projects in public buildings. To achieve I-REN's goal in the public sector of helping local governments afford and finance a range of energy efficiency upgrades, the Public Buildings NMEC Program will implement the following tactics:

- Deliver a resource offering to provide incentives for savings based on Normalized Metered Energy Consumption (NMEC) achieved over three to five years.
- Leverage sustaining financing mechanisms for HVAC upgrades in public buildings.

4. Innovation

Some of the greatest challenges to participation in the public sector in the I-REN service area may also be indicators of unrealized energy savings potential. I-REN has designed its Public Sector strategies and tactics to help local government agencies, tribal leadership, and staff at school districts and special districts overcome these participation barriers to improve their facilities' energy performance and harvest "stranded" energy savings.

5. Metrics

Based on intervention strategies I-REN developed for Public Sector, the following are examples of metrics that will track program performance:

- Energy Savings
- Public Sector market penetration
- Public Sector financing

Additional metrics for this new program are forthcoming.

6. For Programs claiming to-code savings

Not applicable.

7. Pilots

Not applicable.

8. Workforce Education and Training

There are no Workforce Education and Training initiatives for this program.

9. Workforce Standards

Not applicable.

10. Disadvantaged Worker Plan

While this program does not aim specifically to target disadvantaged workers and communities, it is a consistent goal of I-REN's to reach and serve this demographic.

11. Additional information

Not applicable.

SUPPORTING DOCUMENTS

1. Program Manuals and Program Rules

The Program Manual will be developed and incorporated into this Implementation Plan after program implementers are under contract.

2. Program Theory and Program Logic Model

Forthcoming.

3. Process Flow Chart

Forthcoming.

4. Incentive Tables, Workpapers, Software Tools

Not applicable.

5. Quantitative Program Targets

Targets will be established after program implementers are under contract.

6. Diagram of Program

Forthcoming.

7. Evaluation, Measurement & Verification (EM&V)

The current lack of energy efficiency data about the public sector places added importance on the role of EM&V. I-REN will collaborate with the CPUC and stakeholders to ensure that data collection activities are embedded in Public Sector program design to capture the information necessary to meet evaluation requirements and to help expand the understanding of energy efficiency potential and best practices in this relatively new sector.

8. Normalized Metered Energy Consumption (NMEC)

I-REN will deliver a resource offering to provide incentives for meter-based savings (Normalized Metered Energy Consumption or NMEC) achieved over three to five years. I-REN will also leverage sustaining financing mechanisms to support HVAC upgrades in public buildings. Additional details regarding the I-REN public sector NMEC program are forthcoming after program implementers are under contract.

Inland Regional Energy Network Training and Education Program Implementation Plan

June 1, 2022

Page Intentionally Left Blank

CONTENTS

PROGRAM OVERVIEW

The Inland Regional Energy Network's (I-REN) Training and Education Program is a non-resource program with the purpose of establishing local partnerships with existing and potential training providers in the region to assess the training resources available in the region, offer "train the trainer" support to providers on energy efficiency topics and trends with a focus on the needs of the local market, and develop sites and delivery mechanisms to help ensure equitable access to training.

PROGRAM BUDGET AND SAVINGS

1. Program and/or Sub-Program Name

Training and Education

2. Program / Sub-Program ID number

IREN-WET-001

3. Program / Sub-program Budget Table

Training and Education	2022	2023	2024	2025	2026	2027
Administration	$101,295	$103,217	$109,561	$108,342	$108,342	$108,342
Marketing, Education, & Outreach	$74,421	$81,675	$80,493	$95,474	$95,474	$95,474
Implementation (Non-Incentives)	$837,233	$847,277	$905,552	$879,600	$879,600	$879,600
Incentives						
Total	**$1,012,949**	**$1,032,169**	**$1,095,606**	**$1,083,416**	**$1,083,416**	**$1,083,416**

4. Program / Sub-program Gross Impacts Table

Projected Net Savings	2022	2023	2024	2025	2026	2027
Forecast kWh	-	-	-	-	-	-
Forecast kW	-	-	-	-	-	-
Forecast Therms	-	-	-	-	-	-

5. Program / Sub-Program Cost Effectiveness (TRC)

2022	2023	2024	2025	2026	2027
-	-	-	-	-	-

6. Program / Sub-Program Cost Effectiveness (PAC):

2022	2023	2024	2025	2026	2027

-	-	-	-	-	-

7. Type of Program / Sub-Program Implementer (PA-delivered, third party-delivered or Partnership):

Third party-delivered

8. Market Sector

Cross-Cutting

9. Program / Sub-program Type

Non-resource, market support segment

10. Market channel(s) (i.e., downstream, midstream, and/or upstream) and Intervention Strategies (e.g., direct install, incentive, finance, audit, technical assistance, etc.), campaign goals, and timeline

Outreach, Training and Education

IMPLEMENTATION PLAN NARRATIVE

1. Program Description

I-REN's Training and Education Program objective is to create a robust local network of training programs that increase capacity and knowledge related to energy efficiency in the building industry. Through this program, I-REN will employ data collection to assess the training offerings in the region. This effort is crucial for informing a plan of action that will address gaps, build on promising opportunities, and avoid duplication of effort. This exercise also helps establish connections or build on existing partnerships among regional stakeholders. In addition, from the data collection previously mentioned, I-REN will collaborate with training providers and the IOUs to address gaps in educational offerings and determine the most effective way to bridge those gaps in the region.

2. Program Delivery and Customer Services

I-REN's tactics for this Program will be to assess training opportunities available in the region by rigorous data collection exercises to establish connections or build on existing partnerships among regional stakeholders. This training marketplace analysis will be examined through multiple lenses, potentially including but not limited to the following:

- Stakeholders: Who are the organizations currently providing training in the region?
- Content: What topics, technologies, and skills are covered in currently available training?
- Modalities: How is training delivered?
- Metrics: What metrics need to be tracked to ensure that trainings are effective?
- Geography: For in-person training, where in the region are these trainings offered?
- Equity: Are underserved communities, DACs, tribes, and other marginalized groups able to take advantage of training opportunities?
- Access: What are the barriers to accessing and hosting training, especially for disadvantaged workers?

- Program and market needs: What are the programs that will be offered by IOUs or other PAs that require specific skills?

Additionally, I-REN will offer "train the trainer" support to providers on energy efficiency topics and trends. Encourage providers to focus on the needs of the local market. Through their work with both the public and private sectors the I-REN governing agencies bring connections to professionals in various trades who can lend their expertise to this effort. I-REN can work with providers to develop and/or tailor content around energy efficiency topics and trends potentially including but not limited to the following:

- Mechanical HVAC basics
- Passive house and zero net carbon/energy
- Heat pump water heaters, and other electrification measures
- Certified Energy Manager (CEM)
- Operations and facilities management
- Building Performance Institute (BPI) trainings
- Codes training including solar and battery installation and smart energy systems
- Building Envelope sealing (duct blower tests, insulation/radiant barrier checks, etc.)
- HERS, CHEERS and DOE Home Energy Scores certifications

3. Program Design and Best Practices

I-REN's Training and Education program design was chosen by I-REN in response to the gap between demand and supply of existing trades people to provide energy efficiency services in the I-REN service territory. For contractors looking to expand their skills, career advancement and access to high-road jobs, the pathways for obtaining additional certifications can be complicated, costly, and limited by timing or distance.

To address this gap, I-REN's program design will include the following strategies:

- Promote relevant training opportunities in collaboration with WIBs to upskill the workforce. Collaborate with employers to provide continuing education for professional development and employee retention.
- Foster connections between workforce and industry. Promote relevant training opportunities in collaboration with WIBs to upskill the workforce.
- Promote relevant training opportunities to upskill the workforce. Improve access to training by increasing the number of sites and delivery mechanisms. Collaborate with employers to provide continuing education for professional development and employee retention

4. Innovation

Based on I-REN's market analysis, there is a gap between the demand and supply of existing trades people to provide energy efficiency services in the I-REN service territory. For contractors looking to expand their skills, career advancement and access to high-road jobs, the pathways for obtaining additional certifications can be complicated, costly, and limited by timing or distance.

Through I-REN's program design and best practices outlined above, this program aims to overcome these barriers and provide the Workforce Education and Training sector with new and innovative approaches to do so going forward.

5. Metrics

I-REN's Training and Education Program intends to track the following metrics to establish program progress:

- Number of collaborations
- Participants by sector
- Participation relative to eligible population
- Percent of incentive dollars spent contracts with a demonstrated commitment to provide career pathways to disadvantaged workers
- Number of participants that are employed for 12 months after training

6. For Programs claiming to-code savings

Not applicable.

7. Pilots

Not applicable.

8. Workforce Education and Training

I-REN's Training and Education Program is solely focused on providing workforce education and training as outlined above. I-REN will partner with employers, such as engineering, building, architecture, and construction-related firms, other PAs, and local governments to provide EE workforce education and training to these entities' stakeholders. Additional details forthcoming after program training partners and/or implementers are onboarded.

9. Workforce Standards

Not applicable.

10. Disadvantaged Worker Plan

It is a priority for this program to target disadvantaged workers. Disadvantaged worker participation in the program will be tracked consistently to ensure that this population is being served. Additional details forthcoming after program training partners and/or implementers are onboarded.

11. Additional information

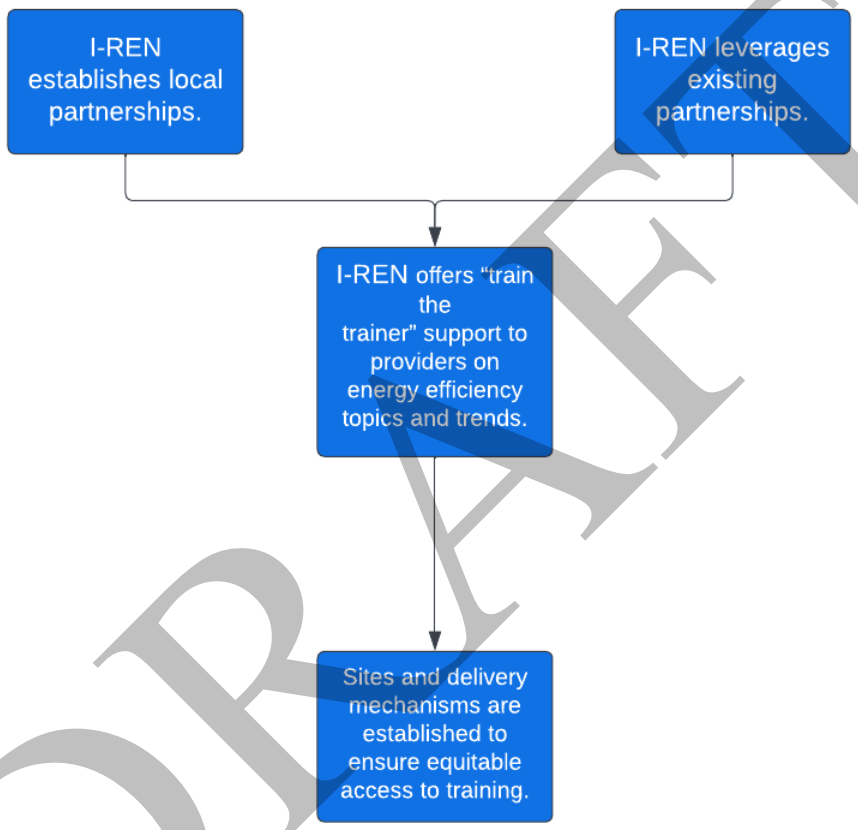
Not applicable.

SUPPORTING DOCUMENTS

1. Program Manuals and Program Rules

The Program Manual will be developed and incorporated into this Implementation Plan once trainers are onboarded.

2. Program Theory and Program Logic Model



3. Process Flow Chart

Forthcoming and more detailed components will be developed once trainers are onboarded.

4. Incentive Tables, Workpapers, Software Tools

Not applicable.

5. Quantitative Program Targets

Forthcoming and more detailed components will be developed once trainers are onboarded.

6. Diagram of Program

Forthcoming and more detailed components will be developed once trainers are onboarded.

7. Evaluation, Measurement & Verification (EM&V)

As a new REN, I-REN is interested in collaborating with the CPUC, CEC, Energy Division, other PAs, and the WE&T community to support statewide and regional efforts around WE&T EM&V Roadmaps and Plans. I-REN will collaborate with the CPUC and other stakeholders to ensure that data collection activities are embedded in C&S program design to capture the information necessary to meet evaluation requirements and also to help expand the understanding of REN program impacts in this cross-cutting sector.

8. Normalized Metered Energy Consumption (NMEC)

Not applicable.

Inland Regional Energy Network Workforce Development Program Implementation Plan

June 1, 2022

Page Intentionally Left Blank

CONTENTS

PROGRAM OVERVIEW

The Inland Regional Energy Network's (I-REN) Workforce Development Program is a non-resource program with the purpose of facilitating industry engagement and develop job pathways by convening local partners in the community, reinforcing pathways from schools into jobs in the energy efficiency workforce, and encouraging connections between industry and workforce development organizations.

PROGRAM BUDGET AND SAVINGS

1. Program and/or Sub-Program Name

Workforce Development

2. Program / Sub-Program ID number

IREN-WET-002

3. Program / Sub-program Budget Table

Workforce Development	2022	2023	2024	2025	2026	2027
Administration	$124,034	$136,126	$134,155	$159,123	$159,123	$159,123
Marketing, Education, & Outreach	$60,777	$61,931	$65,737	$65,005	$65,005	$65,005
Implementation (Non-Incentives)	$1,055,535	$1,163,200	$1,141,666	$1,367,106	$1,367,106	$1,367,106
Incentives						
Total	**$1,240,346**	**$1,361,257**	**$1,341,558**	**$1,591,234**	**$1,591,234**	**$1,591,234**

4. Program / Sub-program Gross Impacts Table

Projected Net Savings	2022	2023	2024	2025	2026	2027
Forecast kWh	-	-	-	-	-	-
Forecast kW	-	-	-	-	-	-
Forecast Therms	-	-	-	-	-	-

5. Program / Sub-Program Cost Effectiveness (TRC)

2022	2023	2024	2025	2026	2027
-	-	-	-	-	-

6. Program / Sub-Program Cost Effectiveness (PAC):

2022	2023	2024	2025	2026	2027

-	-	-	-	-	-

7. Type of Program / Sub-Program Implementer (PA-delivered, third party-delivered or Partnership):

Third party-delivered

8. Market Sector

Cross-Cutting

9. Program / Sub-program Type

Non-resource, market support segment

10. Market channel(s) (i.e., downstream, midstream, and/or upstream) and Intervention Strategies (e.g., direct install, incentive, finance, audit, technical assistance, etc.), campaign goals, and timeline

Outreach, Training and Education

IMPLEMENTATION PLAN NARRATIVE

1. Program Description

I-REN's Workforce Development Program objective is to increase the number of skilled energy efficiency workers in the region. To achieve this objective, I-REN will implement a strategy of facilitating industry engagement and development of job pathways to identify demand and jobs for a trained workforce.

2. Program Delivery and Customer Services

I-REN's tactics for this Program include convening and engaging partners and organizations to define and establish a green workforce, reinforce pathways from high school, trade schools, and colleges into jobs in the energy efficiency workforce, in collaboration with established community partners, and facilitating identification of opportunities for building companies and local workforce partners to network and connect.

3. Program Design and Best Practices

I-REN's Workforce Development program design was chosen by I-REN in response to the gap between demand and supply of existing trades people to provide energy efficiency services in the I-REN service territory. For contractors looking to expand their skills, career advancement and access to high-road jobs, the pathways for obtaining additional certifications can be complicated, costly, and limited by timing or distance.

To address this gap, I-REN's program design will include the following strategies:

- Foster connections between workforce and industry. Identify and illuminate the pathways to energy efficiency and advanced energy jobs

4. Innovation

As part of its established committee structure, I-REN regularly engages with leaders in both the public sector and private industry. In establishing what the green workforce means to the Inland Empire, it will be important to consider the green job opportunities within cross-cutting areas such as the Public Sector and C&S community. For example, to maximize the benefits of energy efficiency in the region, local governments have a need for well-trained facility managers in publicly owned buildings, and knowledgeable permitting staff in building departments. Similarly, local, and regional contractors and other members of the building community have a need for skilled workers to implement efficient construction and equipment installation practices. Through this engagement tactic I-REN can gain valuable insight into each entity's role in this work, while creating connections between stakeholders and fostering a collective vision and mission for developing the Inland Empire's green workforce.

5. Metrics

I-REN's Workforce Development Program intends to track the following metrics to establish program progress:

- Number of collaborations
- Participants by sector
- Participation relative to eligible population
- Percent of incentive dollars spent contracts with a demonstrated commitment to provide career pathways to disadvantaged workers
- Number of participants that are employed for 12 months after training

6. For Programs claiming to-code savings

Not applicable.

7. Pilots

Not applicable.

8. Workforce Education and Training

I-REN's plan for workforce education and training within the Workforce Development Program consists of convening and engaging partners and organizations to define and establish a green workforce, with the objective of increasing the number of skilled energy efficiency workers in the region. Additionally, the Workforce Development Program will reinforce pathways from high school, trade schools, and colleges into jobs in the energy efficiency workforce, in collaboration with established community partners. Additional details forthcoming as program partners are onboarded.

9. Workforce Standards

Not applicable.

10. Disadvantaged Worker Plan

It is priority for this program to target disadvantaged workers. Disadvantaged worker participation in the program will be tracked consistently to ensure that this population is being served. Additional details forthcoming as program partners are onboarded.

11. Additional information

Not applicable.

SUPPORTING DOCUMENTS

1. Program Manuals and Program Rules

The Program Manual will be developed and incorporated into this Implementation Plan once program partners are onboarded.

2. Program Theory and Program Logic Model

3. Process Flow Chart

Forthcoming and more detailed components will be developed once program partners are onboarded.

4. Incentive Tables, Workpapers, Software Tools

Not applicable.

5. Quantitative Program Targets

Forthcoming and more detailed components will be developed once program partners are onboarded.

6. Diagram of Program

Forthcoming and more detailed components will be developed once program partners are onboarded.

7. Evaluation, Measurement & Verification (EM&V)

As a new REN, I-REN is interested in collaborating with the CPUC, CEC, Energy Division, other PAs, and the WE&T community to support statewide and regional efforts around WE&T EM&V Roadmaps and Plans. I-REN will collaborate with the CPUC and other stakeholders to ensure that data collection activities are embedded in C&S program design to capture the information necessary to meet evaluation requirements and also to help expand the understanding of REN program impacts in this cross-cutting sector.

8. Normalized Metered Energy Consumption (NMEC)

Not applicable.

Inland Regional Energy Network Codes and Standards Training and Education Implementation Plan

June 1, 2022

Page Intentionally Left Blank

CONTENTS

PROGRAM OVERVIEW

The Inland Regional Energy Network's (I-REN) C&S Training and Education Program is a non-resource program to establish and implement training and education for building department staff and the building industry to support, understand, and effectively implement energy efficiency codes and standards. I-REN's locally focused interventions will equip building department staff to identify potential issues, provide guidance to permit applicants, and streamline the permitting process. With increased knowledge and capacity, local building department staff will have the tools and additional resources to support their code enforcement and compliance, as well as cultivate the associated energy savings from efficient building practices.

PROGRAM BUDGET AND SAVINGS

1. Program and/or Sub-Program Name

C&S Training and Education

2. Program / Sub-Program ID number

IREN-CS-001

3. Program / Sub-program Budget Table

C&S Training and Education	2022	2023	2024	2025	2026	2027
Administration	$77,430	$80,527	$83,748	$87,098	$87,098	$87,098
Marketing, Education, & Outreach	$51,620	$53,685	$55,832	$58,066	$58,066	$58,066
Implementation (Non-Incentives)	$731,284	$760,535	$790,957	$822,594	$822,594	$822,594
Incentives						
Total	$860,334	$894,747	$930,537	$967,758	$967,758	$967,758

4. Program / Sub-program Gross Impacts Table

Projected Net Savings	2022	2023	2024	2025	2026	2027
Forecast kWh	-	-	-	-	-	-
Forecast kW	-	-	-	-	-	-
Forecast Therms	-	-	-	-	-	-

5. Program / Sub-Program Cost Effectiveness (TRC)

2022	2023	2024	2025	2026	2027
-	-	-	-	-	-

6. Program / Sub-Program Cost Effectiveness (PAC):

2022	2023	2024	2025	2026	2027
-	-	-	-	-	-

7. Type of Program / Sub-Program Implementer (PA-delivered, third party-delivered or Partnership):

Third party-delivered

8. Market Sector

Cross-Cutting

9. Program / Sub-program Type

Non-resource, codes and standards segment

10. Market channel(s) (i.e., downstream, midstream, and/or upstream) and Intervention Strategies (e.g., direct install, incentive, finance, audit, technical assistance, etc.), campaign goals, and timeline

Training, outreach, technical assistance

IMPLEMENTATION PLAN NARRATIVE

11. Program Description

I-REN will implement a well-rounded set of activities related to supporting improved codes and standards compliance and enforcement through training, outreach, and technical assistance. The I-REN region includes many smaller jurisdictions that face significant challenges with codes and standards enforcement and compliance. The local building department staff in these jurisdictions are key to realizing energy savings from implementation and enforcement of codes and standards. For that reason, I-REN proposes to focus much of its C&S Sector work on empowering and supporting these local building department staff to be energy efficiency leaders in their own communities, through improved communications, protocols, and systems for increased efficiency. I-REN sees an opportunity to leverage its strong network with public sector staff to offer resources and support, while also providing targeted training and outreach to support building and construction industry actors to foster increased compliance with codes and standards.

12. Program Delivery and Customer Services

One of I-REN's goals for the C&S Training and Education Program is to foster working relationships with local building departments and the building industry to support, train, and enable long-term streamlining of energy code compliance. To achieve this goal, I-REN will provide direct support and assistance to local building departments as well as regional construction firms responsible for complying with permitting requirements. I-REN's intervention strategies address the barriers faced by the C&S community in order to streamline code enforcement and permitting, and increase energy efficiency in the region through C&S.

13. Program Design and Best Practices

I-REN's C&S Training and Education program's design was chosen by I-REN in response to challenges faced by Building Department staff, local governments, building professionals, and developers regarding compliance. To address these challenges and achieve the program's objective of Improving understanding of energy efficiency codes and standards among local building departments and the building industry to increase implementation and compliance, I-REN intends to implement the following strategy:

- Establish an ongoing training program to assist building department staff and the building industry to support, understand, and effectively implement energy efficiency codes and standards.

To ensure efficacy of this strategy, I-REN's C&S Training and Education Program will deploy the following tactics:

- Identify and address the areas of greatest need for improved code compliance, in collaboration with local governments and the building industry.

- Develop training curriculum to address gaps in compliance with current requirements. Offer ongoing training on changes and trends in C&S.

14. Innovation

The C&S sector faces unique barriers to increased energy efficiency. This is especially true in the I-REN service territory, given its size and distance from the Los Angeles MSA. I-REN proposes to offer a C&S program tailored to the specific needs of this region, even though the sector has been targeted by other non-local programs. This approach is consistent with CPUC's policy in D.12.11-2015 that Regional Energy Networks (RENs) should implement energy efficiency initiatives in hard-to-reach markets. In designing their approach to the C&S sector, I-REN has selected strategies and tactics based on insights from the I-REN governing agencies, with consideration also given to previous attempts by other PAs to address the C&S sector in this region. Those lessons learned informed I-REN's planning process, as well as best practices from successful C&S programs elsewhere in the state.

15. Metrics

Based on intervention strategies I-REN developed for C&S, the following are examples of metrics that will track program performance:

- Measures adopted
- Federal standards adopted
- Local government Reach Codes implemented
- Number of training activities held
- Increase in code compliance knowledge

Additional metrics for this new program are forthcoming.

16. For Programs claiming to-code savings

Not applicable.

17. Pilots

Not applicable.

18. Workforce Education and Training

Part of I-REN's C&S Training and Education Program will focus heavily on workforce education and training.

19. Workforce Standards

There are no workforce standards for this program.

20. Disadvantaged Worker Plan

I-REN's approach to serving the C&S sector incorporates training for local building department staff, to help those individuals perform their jobs and build capacity in their departments to better enforce codes and standards. This is important for developing a skilled workforce in some of the rural jurisdictions with less resources in their local building departments, and for areas that include underserved and disadvantaged communities, in line with the directive in Senate Bill 350.

21. Additional information

Not applicable.

SUPPORTING DOCUMENTS

1. Program Manuals and Program Rules

The Program Manual will be developed and incorporated into this Implementation Plan after program implementers are under contract.

2. Program Theory and Program Logic Model

Forthcoming.

3. Process Flow Chart

Forthcoming.

4. Incentive Tables, Workpapers, Software Tools

Not applicable.

5. Quantitative Program Targets

Targets will be established after program implementers are under contract.

6. Diagram of Program

Forthcoming.

7. Evaluation, Measurement & Verification (EM&V)

As a new REN, I-REN is interested in collaborating with the CPUC, CEC, Energy Division, other PAs, and the region's C&S community to support statewide and regional efforts around C&S EM&V Roadmaps and Plans. I-REN will collaborate with the CPUC and other stakeholders to ensure that data collection activities are embedded in C&S program design to capture the information necessary to meet evaluation requirements and also to help expand the understanding of REN program impacts in this cross-cutting sector.

8. Normalized Metered Energy Consumption (NMEC)

Not applicable.

Inland Regional Energy Network Codes and Standards Technical Support Program Implementation Plan

June 1, 2022

Page Intentionally Left Blank

CONTENTS

PROGRAM OVERVIEW

The Inland Regional Energy Network's (I-REN) C&S Technical Support Program is a non-resource program with the purpose of developing technical assistance tools and resources to assist building departments and the building industry with understanding, evaluating, and permitting the energy codes. The Program aims to Identify and address the areas of greatest need for improved code compliance, in collaboration with local governments and the building industry.

PROGRAM BUDGET AND SAVINGS

1. Program and/or Sub-Program Name

C&S Technical Support

2. Program / Sub-Program ID number

IREN-CS-002

3. Program / Sub-program Budget Table

C&S Technical Support	2022	2023	2024	2025	2026	2027
Administration	$66,181	$69,868	$72,663	$75,569	$75,569	$75,569
Marketing, Education, & Outreach	$36,146	$36,552	$38,015	$39,534	$39,534	$39,534
Implementation (Non-Incentives)	$483,446	$502,785	$522,895	$543,813	$543,813	$543,813
Incentives						
Total	**$585,773**	**$609,205**	**$633,573**	**$658,916**	**$658,916**	**$658,916**

4. Program / Sub-program Gross Impacts Table

Projected Net Savings	2022	2023	2024	2025	2026	2027
Forecast kWh	-	-	-	-	-	-
Forecast kW	-	-	-	-	-	-
Forecast Therms	-	-	-	-	-	-

5. Program / Sub-Program Cost Effectiveness (TRC)

2022	2023	2024	2025	2026	2027
-	-	-	-	-	-

6. Program / Sub-Program Cost Effectiveness (PAC):

2022	2023	2024	2025	2026	2027

-	-	-	-	-	-

7. Type of Program / Sub-Program Implementer (PA-delivered, third party-delivered or Partnership):

Third party-delivered

8. Market Sector

Cross-Cutting

9. Program / Sub-program Type

Non-resource, codes and standards

10. Market channel(s) (i.e., downstream, midstream, and/or upstream) and Intervention Strategies (e.g., direct install, incentive, finance, audit, technical assistance, etc.), campaign goals, and timeline

Technical assistance, Outreach

IMPLEMENTATION PLAN NARRATIVE

11. Program Description

I-REN's C&S Technical Support Program will bring direct in-house experience developing and implementing surveys of their member local governments and constituents to assess gaps in program areas. Their staff compile and analyze the responses, prepare reports, and outreach materials to share their findings, and ultimately use those insights to make improvements to programs. Rigorous data collection will be a near-term effort to support implementation of other activities in the C&S sector. Key partners for this effort include the C&S enforcement and permitting community, such as local government agencies and building departments, as well as frequent permit applicants such as private construction and architectural firms. The objective of the program is to deliver locally informed resources and tools that streamline code compliance and enforcement and increase permit closeout.

12. Program Delivery and Customer Services

I-REN's primary tactic for this Program will be to Identify and address the areas of greatest need for improved code compliance, in collaboration with local governments and the building industry. The proposed activities to implement this tactic may include but are not limited to the following:

- Collaborate with local governments to design and deploy an effective survey instrument, via an online survey platform already utilized by I-REN.
- Conduct additional in-depth phone interviews as needed to survey key decision makers and/or to fill identified gaps in response data.
- Review secondary data sources obtained in collaboration with local government agencies and code officials.
- Compile results and preparation of report materials for sharing with local governments.
- Analyze results, in cooperation with local governments, to inform program planning efforts and evaluation, measurement and verification (EM&V).

13. Program Design and Best Practices

I-REN's C&S Technical Support program design was chosen by I-REN in response to challenges faced by Building Department staff, local governments, building professionals, and developers regarding compliance. To address these challenges and achieve the program's objective of Improving understanding of energy efficiency codes and standards among local building departments and the building industry to increase implementation and compliance, I-REN intends to implement the following strategy:

- Establish an ongoing training program to assist building department staff and the building industry to support, understand, and effectively implement energy efficiency codes and standards.

To ensure efficacy of this strategy, I-REN's C&S Training and Education Program will deploy the following tactics:

- Identify and address the areas of greatest need for improved code compliance, in collaboration with local governments and the building industry.

- Develop training curriculum to address gaps in compliance with current requirements. Offer ongoing training on changes and trends in C&S.

14. Innovation

One of the greatest benefits of a regional organization working with local jurisdictions is the ability to leverage the knowhow of a large body of professionals and then to distribute that knowledge and resources to less advantaged groups. The I-REN team will enable this regional collaboration by identifying important areas for policy improvements, such as future reach codes, efficiency, and fire ordinances, et.al., and work with jurisdictions to create model ordinances and policies that can be adopted by interested local governments. This tactic will also enable I-REN to test and pilot various approaches to common concerns and establish an effective regional response that can be easily and affordably adopted region-wide. This effort will ensure dollars spent are well utilized and have the greatest impact possible.

Specifically, I-REN will survey, and interview key jurisdictions as needed to understand the major areas for concern and potential policies. Then working through their committee structure, they will develop regionally appropriate model ordinances and vet and refine them with participating local governments. Once finalized, these model resources will be made available to any jurisdiction in the region. I-REN will provide ongoing technical assistance to adjust and implement the ordinances as well as provide ongoing monitoring and tracking to address any needed changes or updates.

15. Metrics

Based on intervention strategies I-REN developed for C&S, the following are examples of metrics that will track program performance:

- Measures adopted
- Federal standards adopted

- Local government Reach Codes implemented
- Number of training activities held
- Increase in code compliance knowledge

Additional metrics for this new program are forthcoming.

16. For Programs claiming to-code savings

Not applicable.

17. Pilots

Not applicable.

18. Workforce Education and Training

A key aspect of I-REN's C&S Technical Support program will be to assist building departments and the building industry with understanding, evaluating, and permitting the energy codes.

19. Workforce Standards

Not applicable.

20. Disadvantaged Worker Plan

I-REN's approach to serving the C&S sector incorporates training for local building department staff, to help those individuals perform their jobs and build capacity in their departments to better enforce codes and standards. This is important for developing a skilled workforce in some of the rural jurisdictions with less resources in their local building departments, and for areas that include underserved and disadvantaged communities, in line with the directive in Senate Bill 350.

21. Additional information

Not applicable.

SUPPORTING DOCUMENTS

1. Program Manuals and Program Rules

The Program Manual will be developed and incorporated into this Implementation Plan after program implementers are under contract.

2. Program Theory and Program Logic Model

Forthcoming

3. Process Flow Chart

Forthcoming

4. Incentive Tables, Workpapers, Software Tools

Not applicable.

5. Quantitative Program Targets

Targets will be established after program implementers are under contract.

6. Diagram of Program

Forthcoming

7. Evaluation, Measurement & Verification (EM&V)

As a new REN, I-REN is interested in collaborating with the CPUC, CEC, Energy Division, other PAs, and the region's C&S community to support statewide and regional efforts around C&S EM&V Roadmaps and Plans. I-REN will collaborate with the CPUC and other stakeholders to ensure that data collection activities are embedded in C&S program design to capture the information necessary to meet evaluation requirements and also to help expand the understanding of REN program impacts in this cross-cutting sector.

8. Normalized Metered Energy Consumption (NMEC)

Not applicable.

Exhibit B

Maximum Contract Sum and IOU Maximum Contribution

I-REN's Commission Authorized Budget for 2022-2027

I-REN Authorized Budgets for 2022-2027							
Cost Category	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**Total**
Public Sector							
Administration	628,819	619,172	662,939	707,457	707,457	707,457	4,033,301
Marketing	377,292	371,503	397,763	424,474	424,474	424,474	2,419,980
Direct Implementation	3,782,083	3,701,047	3,818,688	3,942,635	3,942,635	3,942,635	23,129,723
Incentive	1,500,000	1,500,000	1,750,000	2,000,000	2,000,000	2,000,000	10,750,000
Subtotal	**6,288,194**	**6,191,722**	**6,629,390**	**7,074,566**	**7,074,566**	**7,074,566**	**40,333,004**
Workforce Education and Training							
Administration	225,329	239,343	243,716	267,465	267,465	267,465	1,510,783
Marketing	135,198	143,606	146,230	160,479	160,479	160,479	906,471
Direct Implementation	1,892,768	2,010,477	2,047,218	2,246,706	2,246,706	2,246,706	12,690,581
Subtotal	**2,253,295**	**2,393,426**	**2,437,164**	**2,674,650**	**2,674,650**	**2,674,650**	**15,107,835**
Codes and Standards							
Administration	144,611	150,395	156,411	162,667	162,667	162,667	939,418
Marketing	87,766	90,237	93,847	97,600	97,600	97,600	564,650
Direct Implementation	1,214,730	1,263,320	1,313,852	1,366,407	1,366,407	1,366,407	7,891,123
Subtotal	**1,446,107**	**1,503,952**	**1,564,110**	**1,626,674**	**1,626,674**	**1,626,674**	**9,392,191**
EM&V	114,441	115,604	121,810	130,349	130,349	130,349	742,902
2022-27 Total	**10,102,037**	**10,204,704**	**10,752,474**	**11,506,239**	**11,506,239**	**11,506,239**	**65,577,932**

IOU Maximum Contribution

I-REN Sub-program	2022		2023		2024	
	SCE	SoCalGas	SCE	SoCalGas	SCE	SoCalGas
Public Sector	$ 4,779,027.44	$ 1,509,166.56	$ 4,705,708.72	$ 1,486,013.28	$ 5,038,336.40	$ 1,591,053.60
WE&T	$ 1,802,636.00	$ 450,659.00	$ 1,914,740.80	$ 478,685.20	$ 1,949,731.20	$ 487,432.80
Codes & Standards	$ 1,156,885.60	$ 289,221.40	$ 1,203,161.60	$ 300,790.40	$ 1,251,288.00	$ 312,822.00
	$ 7,738,549.04	**$ 2,249,046.96**	**$ 7,823,611.12**	**$ 2,265,488.88**	**$ 8,239,355.60**	**$ 2,391,308.40**
EM&V PA Split	$ 88,670.72	$ 25,770.28	$ 89,645.33	$ 25,958.67	$ 94,409.52	$ 27,400.48

I-REN Sub-program	2025		2026		2027	
	SCE	SoCalGas	SCE	SoCalGas	SCE	SoCalGas
Public Sector	$ 5,376,670.16	$ 1,697,895.84	$ 5,376,670.16	$ 1,697,895.84	$ 5,376,670.16	$ 1,697,895.84
WE&T	$ 2,139,720.00	$ 534,930.00	$ 2,139,720.00	$ 534,930.00	$ 2,139,720.00	$ 534,930.00
Codes & Standards	$ 1,301,339.20	$ 325,334.80	$ 1,301,339.20	$ 325,334.80	$ 1,301,339.20	$ 325,334.80
	$ 8,817,729.36	**$ 2,558,160.64**	**$ 8,817,729.36**	**$ 2,558,160.64**	**$ 8,817,729.36**	**$ 2,558,160.64**
EM&V PA Split	$ 101,036.68	$ 29,312.32	$ 101,036.68	$ 29,312.32	$ 101,036.68	$ 29,312.32

PROGRAMS AGREEMENT
EXHIBIT C

Security Incident Response Provisions

1. Nondisclosure of Customer Confidential Information

Customer Confidential Information is deemed to be Confidential Information under the Programs Agreement, except that the exceptions to the obligations of nondisclosure and non-use of Confidential Information in ARTICLE XVI, "Confidential Information and Security Requirements", of this Programs Agreement shall not apply to Customer Confidential Information. Notwithstanding anything to the contrary in the Programs Agreement, WRCOG's nondisclosure obligations with respect to Confidential Information that is also Customer Confidential Information shall survive any expiration or termination of the Programs Agreement in perpetuity. WRCOG shall hold the Customer Confidential Information in confidence and meet requirements of Applicable Laws and Applicable Standards relating to the custody, care and integrity of data and information.

2. Expiration or Termination of Programs Agreement

Notwithstanding anything to the contrary in the Programs Agreement, upon the expiration or termination of the Programs Agreement, or at any time upon request of Utility, WRCOG shall, within fifteen (15) days, either: (a) deliver to Utility all Customer Confidential Information in any medium, including all copies or parts of the Customer Confidential Information, in possession of WRCOG, its Subcontractors, and any of their respective employees, agents, or representatives, or (b) destroy or render non-readable and incapable of reconstruction all Customer Confidential Information. If destroyed, the destruction shall be certified in writing by WRCOG. Following expiration or termination of the Programs Agreement, or a request from Utility as described in the preceding sentences, WRCOG, its Subcontractors, and their respective employees may not retain any copy of the Customer Confidential Information for any purpose, including in anticipation of audits or litigation.

3. Subpoena Notification

Notwithstanding anything the contrary in the Programs Agreement, unless prohibited by law or court order, WRCOG shall, within 2 business days of receipt of a subpoena for disclosure of any Customer Confidential Information, provide notice as set forth in the Programs Agreement so that Utility and WRCOG may engage in good faith discussions about the appropriate response to the subpoena; provided however, if Utility informs WRCOG that it will seek to quash or modify the subpoena, then WRCOG shall delay responding to the subpoena to permit Utility time to quash or modify the subpoena. Nothing herein is intended to preclude WRCOG from complying with the subpoena when and as required to do so by law or court order. Additionally, WRCOG will provide Utility with an annual report identifying whether it has received any subpoenas for disclosure of Customer Confidential Information, and, if so, the dates of same. The annual report will be furnished to Utility no later than January 15 of the next calendar year.

4. Right to Audit

WRCOG will maintain, for a period of five (5) years after final payment of the last invoice of the calendar year, complete records of compliance with the terms of this Exhibit. Utility reserves the right to audit and copy any applicable documents related hereto. Utility may, at its discretion, assign the audit and duplication rights of this paragraph to a governmental agency or entity operating under the authority of a governmental agency. Any limitations on the number, frequency, scope or conduct of audits in the Programs Agreement shall not apply to audits relating to Customer Confidential Information, nor shall any

audit relating exclusively to Customer Confidential Information count against any limitation on the number or frequency of other audits permitted under the Programs Agreement.

5. Security Incidents

(A) Security Incident Response Plan: WRCOG shall develop, implement and maintain a written plan and process for preventing, detecting, identifying, reporting, tracking and remediating Security Incidents ("Security Incident Response Plan" or "SIRP"). A Security Incident shall mean an event or set of circumstances that results in a reasonable expectation of a compromise of the security, confidentiality or integrity of Customer Confidential Information under WRCOG's control ("Security Incident"). Examples of Security Incidents include:

(1) Security breaches to WRCOG's network perimeter or to internal applications resulting in potential compromise of Utility data or information;

(2) Loss of physical devices or media, e.g., laptops, portable media, paper files, etc., containing Utility data;

(3) Lapses in, or degradation of, WRCOG's security controls, methods, processes or procedures;

(4) The unauthorized disclosure of Customer Confidential Information; and

(5) Any and all incidents adversely affecting Utility's or its Affiliates', as the case may be, information assets.

(B) SIRP General Requirements: WRCOG's SIRP will include Security Incident handling and response procedures, specific contacts in an event of a Security Incident, the contacts' roles and responsibilities, and their plans to notify Utility or its Affiliates, as the case may be, concerning the Security Incident. The SIRP must be based on and meet all requirements of the following:

(1) U.S. federal and applicable state laws, statutes and regulations concerning the custody, care and integrity of data and information. WRCOG shall ensure that its SIRP and its business practices in performing work on behalf of Utility comply with California's Information Practices Act of 1977, California Civil Code §§ 1798.80 et seq., which addresses the provision of notice to Utility or its Affiliates, as the case may be, of any breach of the security of Customer Confidential Information if it is reasonably believed to have been acquired by an unauthorized person.

(2) Utility information management and information security policies and procedures as made available to WRCOG upon WRCOG's request ("Utility Policies and Procedures").

(C) WRCOG Response to Security Incident. The following will apply in the event of a Security Incident:

(1) WRCOG will submit a Security Incident Report (SIR) to Utility or its Affiliates, as the case may be. In the case of SCE, WRCOG shall submit the SIR by e-mailing the report to AVERT@sce.com ***and*** calling AVERT at (626)543-6003 in accordance with SCE Policies and Procedures and Applicable Laws. The SIR shall be given promptly, and in no event no more than one business day, upon discovery of a Security Incident as required by Applicable Laws and keep Utility or its Affiliates, as the case may be, informed of developments and new information. In the case of SoCalGas, WRCOG *further agrees that any breach or any other security incident that has the potential to compromise SoCalGas data must be reported to the Sempra Energy Security Operations Center (SOC@sempra.com (858) 613-3278) within 24 hours of knowledge of the breach followed by a plan for remediation within 72 hours*

(2) At Utility's or its Affiliates', as the case may be, request, WRCOG will meet with Utility or its Affiliates, as the case may be, to discuss the cause of the Security Incident, WRCOG's response, lessons learned and potential improvements to WRCOG's system security processes and procedures.

(D) Compromise of Customer Confidential Information.

(1) Additional SIRP Requirements for Customer Confidential Information. With respect to any Customer Confidential Information in the possession or under the control of WRCOG, to protect Customer Confidential Information from unauthorized access, destruction, use, modification or disclosure, WRCOG shall:

(a) Develop, implement and maintain reasonable security procedures and practices appropriate to the nature of the information to protect Customer Confidential Information from unauthorized access, destruction, use, modification, or disclosure; and

(b) Develop, implement and maintain data privacy and security programs with administrative, technical, and physical safeguards appropriate to the size and complexity of the WRCOG's business and the nature and scope of WRCOG's activities to protect Customer Confidential Information from unauthorized access, destruction, use, modification, or disclosure.

(2) Notice Requirements for Customer Confidential Information. In the event of a Security Incident where Customer Confidential Information was, or is reasonably believed to have been, acquired by an unauthorized person, WRCOG shall immediately provide the SIR required by Section 5 (C) of this Exhibit. This SIR shall state that Customer Confidential Information may be involved, and shall describe the suspected nature of the Customer Confidential Information.

(E) SIRP Review. At Utility's or its Affiliates', as the case may be, request, WRCOG shall review the SIRP at least annually with Utility's or its Affiliates', as the case may be, designated representatives to identify updates, changes or potential improvements; and a process to document these changes within ninety (90) days of these changes.

(F) Document Retention. WRCOG shall maintain all documentation relating to Security Incidents, whether in written or electronic form, including their identification, processing and resolution, for five (5) years after final resolution of the Security Incident, including the final resolution of all claims arising out of the Security Incident.

PROGRAMS AGREEMENT

EXHIBIT D

Computing System Access and Security Review Obligations

1. Computing System Access.

(A) If Utility determines Contractor requires access to Utility's Computing Systems in order to perform the work or services under the Programs Agreement (hereafter in this exhibit, "Services"), Utility may grant WRCOG access subject to the conditions in this Exhibit, but only for the purpose of WRCOG performing the Services in accordance with the terms of the Programs Agreement.

(B) WRCOG represents, warrants and covenants that it and its employees, Subcontractors and agents shall only access Utility's Computing Systems as necessary to perform the Services in accordance with the terms of the Programs Agreement.

(C) WRCOG shall promptly identify in writing to Utility those WRCOG employees, Subcontractors and agents who will require access to the Computing Systems in order to perform the Services. WRCOG shall execute, and shall cause each of its employees, Subcontractors and agents to execute the Computing System Use Acknowledgment ("CSUA") form and any other documents Utility may deem reasonably necessary to ensure WRCOG's compliance with this Exhibit. Upon receipt by Utility Information Security of WRCOG's signed CSUA form, and any other documents Utility may reasonably require, with regard to each person requiring Computing Systems access, Utility may issue appropriate computer or e-mail accounts, passwords, or access authorizations to WRCOG and its personnel. WRCOG acknowledges that these authorizations are for the specifically identified individuals only, and WRCOG shall ensure that these authorizations shall not be shared or transferred among its or Subcontractors' or agents' personnel. WRCOG shall ensure that the Computing Systems, any accessed Utility information or data, any user accounts, passwords or any other access authorizations remain secure during WRCOG's access. All information and data retrieved during WRCOG's access to Utility Computing Systems are Confidential Information and subject to Section 15, "Confidential Information and Security Requirements", of this Programs Agreement.

(D) WRCOG shall be responsible for any breach of this Exhibit by its employees, Subcontractors or agents, or by any other person who obtained access to the Computing Systems directly or indirectly from WRCOG. WRCOG shall notify Utility immediately in the event WRCOG has reason to know or suspect that a breach of this Exhibit has occurred. Utility may immediately revoke WRCOG's, Subcontractors' or their agents' access to Utility Computing Systems. Such revocation shall not relieve WRCOG of its obligations to perform the Services in accordance with the terms of the Agreement.

2. Security Review.

WRCOG represents and warrants to Utility that it and its Subcontractors and agents each has taken all commercially reasonable steps necessary to maintain the confidentiality, integrity and availability of its own computing systems. Utility or its authorized representative shall have the right to examine WRCOG's and its Subcontractors' and agents' records and reports relating to their respective security policies, practices and procedures at any time. These include, without limitation, any internal, external or regulatory audit reports or reviews relating to the security of WRCOG's or its Subcontractors' or agents' computing systems, and their compliance with their respective security policies, practices and procedures. WRCOG represents and warrants that it has the authority to grant Utility and its authorized representatives access to its Subcontractors' and agents' records and reports.

Exhibit E

Monthly Invoicing and Reporting Requirements

The Invoice Reporting Tools (iRTools) is developed in consultation with WRCOG. The iRTools may be updated from time to time to accommodate I-REN program changes and improve invoice reporting process. All required monthly invoice reports and the invoice for advanced funding can be generated by the iRTools. An iRTool instruction is available as a user guide for the invoice templates.

WRCOG is required to submit monthly invoice report by the fifteenth (15th) calendar day each month to SoCalGas using the iRTools. The templates in the iRTools must be properly completed along with relevant supporting documents to serve the following purposes:

(1) Provide monthly cost accounting for program activities
(2) Provide information or back-up for program activities that supports the costs incurred
(3) Establish support for allowable costs in energy efficiency programs
(4) Provide information for utility cost sharing allocation (joint or single utility cost) when applicable

Invoice Requirements

(1) Monthly invoice

The monthly invoices will consist of one invoice for each program or area in I-REN portfolio. A simplified iRTool is set up for EM&V activities.

Each invoice will include relevant back-up documents (e.g., receipts, paid invoices, etc.) for cost incurred and contractor or sub-contractor's iRTool along with contractor's back-up documents if applicable.

(2) Invoice for incentive advance funding

The iRTool is configured to prepare invoices for incentive advance funding. The following information is required to determine the amount of incentive advance funding in accordance with Section 7.5 of the Programs Agreement.

(i) Initial advance funding for incentive

Documents to show EE project enrollments with measure details

Documents to show EE project commitments with measure details

Invoice to request incentive advance funding for each program

(ii) Subsequent advance funding for incentive

Custodial Bank statement to show account balance at the time of the request

Reconciliation of drawdown (incentive spending) supported by incentive payments to the customers or authorized contractor, per measure per customer account

New enrollment and/or new EE project commitments (incremental to the previous enrollments and/or EE project commitments) with measure details

Invoice to request incentive advance funding for each resource program

(3) Invoice for non-incentive advance funding

The iRTool is also configured to prepare invoices for non-incentive advance funding. The following information is required to determine the amount of non-incentive advance funding in accordance with Section 7.5 of the Programs Agreement.

(i) Initial advance funding for non-incentive

Documents to show the first nine (9) months of program expenditure in 2022 for each program in the I-REN portfolio

Invoice to request non-incentive advance funding for each program

(ii) Subsequent advance funding for non-incentive

Custodial bank statement to show account balance at the time of the request

Reconciliation of drawdown (non-incentive spending) supported by program expenditure

Invoice to request non-incentive advance funding for each program

Invoice Submission

All invoices are submitted to SoCalGas through EDT (Electronic Data Transfer), a Secure File Transfer Protocol (SFTP) provided by SoCalGas. The monthly invoices are due by the fifteenth (15th) calendar day of each month. The invoice for advance payment may be submitted separately at a different time in accordance with Section 7.5 of the Programs Agreement.

All reports or data that may contain customer or proprietary information should be transmitted through EDT.

Registration is required for users of EDT. The registration for EDT is by invitation only. WRCOG will provide SoCalGas a list of staff who would need to use EDT for secure transmission. The following information is needed for each EDT user:

Email address
First Name
Last Name
Display Name
Company Name

A registration link will be emailed to the requester to set up user's log-in. Upon completion of user registration, the user can transmit to and receive from SoCalGas via the SFTP. The EDT log-in can be found in the following link.

https://edt.sempra.com/bds/login.do

your logo here

I-REN - Workforce Education & Training

Monthly Expenditures for March 2023

	2023 Current Month Spent
Admin	$2,116.00
Marketing	$70.00
Direct Implementation	$113.00
DI - Incentives	$26.00

Invoice Total **$2,325.00**

Bill To:

Invoice Date: 03-10-2022
Vendor # 5678
Attention: Chauncy Tou
Southern California Gas Company
555 W 5th Street, ML GT20B4
Los Angeles, CA 90013

Accounts Payable,

This is an invoice for Workforce Education & Training
for the period of March 2023
Invoice Number: 12345

Admin	$2,116.00
Marketing	$70.00
Direct Implementation	$113.00
DI - Incentives	$26.00
Amount Due This Invoice:	$2,325.00

Invoice contact for WRCOG at (213) 555-1234.
Name:
Email:

PLEASE REMIT PAYMENT TO:
Blue Moon
1 Main St
Los Angeles, CA 90001

Approved: Signature

Exhibit F

ENERGY EFFICIENCY POLICY MANUAL

Version 6

April 2020

Applicable to post-2018 Energy Efficiency Programs

Table of Contents

(Click on each heading to access that part of the document)

ENERGY EFFICIENCY POLICY MANUAL Version 6.0
FOR POST-2018 PROGRAMS

i. Introduction

This document presents the California Public Utilities Commission's (CPUC's) policy rules and related reference documents for the administration, oversight, and evaluation of energy efficiency (EE) programs funded by ratepayers in California. The purpose of the Energy Efficiency Policy Manual is to provide the most up to date list of the rules established by Commission Decisions and Resolutions that govern the administration of energy efficiency programs. This manual enumerates standing Commission rules that continue to apply to the current portfolio even as subsequent decisions supersede past rules. Version 6.0 shall apply to all energy efficiency activities commencing in program year (PY) 2018 and beyond. The policy rules, terms and definitions contained herein pertain to efficiency activities funded through the following mechanisms:

- The gas public purpose program (PPP) surcharges, as authorized by §890- 900.
- Electric procurement rates, as authorized by the Commission.

The rules in this policy manual, unless specifically indicated, apply to all the following entities that are funded through the mechanisms above and include the four large investor-owned utilities (and their third party implementers and administrators), including:

  - Pacific Gas and Electric Company (PG&E),
  - Southern California Edison Company (SCE),
  - San Diego Gas & Electric Company (SDG&E) and
  - Southern California Gas Company (SoCalGas);
  - Community Choice Aggregators (CCA), and
  - Regional Energy Networks (RENs)

Chapter III focuses more specifically on the CCA and RENs:

More information on CCAs can be found here:

- https://www.cpuc.ca.gov/general.aspx?id=2567

More information on Regional Energy Networks can be found here (among other EE program administrator information):

- https://www.cpuc.ca.gov/General.aspx?id=4460

This manual does not address the following programs:

- Energy Savings Assistance Programs for low income customers,
- California Alternative Rates for Energy (CARE) for low-income customers,
- Interruptible rate or load management programs,
- Self-generation and demand-response programs developed in response to Assembly Bill (AB) 970 (§ 399.15(b)), or
- Small and/or Multijurisdictional Utilities (SMJUs).

This document, which supersedes all previous versions of the Energy Efficiency Policy Manual, provides may of the CPUC's policy rules ("Rules") stipulated in CPUC decisions and resolutions that apply on an ongoing basis to current (circa 2018) and future energy efficiency portfolios. This manual is compiled by staff and is not formally adopted by the CPUC. As such, it is intended to be a handy reference for many of the significant and/or more commonly applied efficiency portfolio Rules, but it is not an exhaustive compilation of all rules developed in CPUC decisions and resolutions that apply to the energy efficiency portfolios. In addition, while much of the CPUC's guidance referenced in this document applies specifically to IOUs who implement and administer EE programs, all program implementers (including third-party, CCA's, etc.) should seek to adhere to them as well, unless clearly exempt, and should confer with the IOU program administrators, who oversee the EE portfolio and all EE programs, for clarification as needed.

i. How to Use this Document

This document is intended to provide a high-level overview of the significant policies that impact energy efficiency programs in the State of California as determined by the California Public Utilities Commission. It does not provide in-depth detail about each policy area but provides a summary and links to the various regulatory documents that do. The purpose of this document is to provide a birds-eye view of the relevant policy rules that all energy efficiency program implementers should know while also providing them the tools and resources needed to develop more expertise in this area as they see fit. As previously noted, this document should NOT be considered a completely detailed source of information, in and of itself, but it does provide comprehensive access to all the relevant policy documents in the form of references and links. While links to all documents referenced in this

document are provided, these documents can also be found on the Commission's website by typing in the document number (all letters capitalized with no dashes) in the search bars located here:

https://www.cpuc.ca.gov/documents/#DocTypeSearches

ii. Common Terms and Definitions

Common terms and definitions will facilitate the administration and evaluation of energy efficiency activities. In particular, program definitions should be designed to facilitate to the extent possible: (1) the identification of energy efficiency activities by end-use savings potential, (2) the evaluation, measurement and verification (EM&V) of those activities based on Commission-adopted EM&V protocols, and (3) the coordination of program administration and evaluation with resource planning and procurement needs. To this end, all entities subject to these rules and all program implementers should use the definitions included in Appendix B when characterizing any proposed program activity. The burden is on them to justify any departure from those definitions.

I. Energy Efficiency Policy Objectives

1. **Energy Efficiency as a Procurement Resource.** CPUC and State energy policy, as expressed in the original 2005 Energy Action Plan (EAP) and reaffirmed in Decision (D).04-12-048, strives to make energy efficiency and demand response the IOUs' highest priority procurement resources. The 2008 EAP promotes ongoing support for the loading order and identifies energy efficiency and demand response as the State's preferred means of meeting growing energy needs. After cost-effective energy efficiency and demand response resources, we rely on renewable sources for power and distributed generation.[1] This is also consistent with Pub. Util. Code § 454.5(b)(9)(C),[2] which requires IOUs to first meet their "unmet energy resource needs through all available energy efficiency and demand reduction resources that are cost effective, reliable, and feasible." In order to promote the resource procurement policies articulated in the Energy Action Plan and by this CPUC, demand-side energy efficiency activities funded by ratepayers should offer programs that serve as alternatives to supply-side resource options (demand-side energy resource programs). By keeping energy resource procurement costs as low as possible through the deployment of a cost-effective portfolio of resource programs, over time all customers will share in the resource savings from energy efficiency. An additional type of EE program are non-resource demand-side programs

[1] http://docs.cpuc.ca.gov/word_pdf/REPORT/51604.pdf

[2] Hereafter all references to code sections are to the Public Utilities Code unless otherwise noted.

designed to promote market sector specific approaches that indirectly reduce energy usage (ex: marketing, education, and outreach programs)

2. **Energy Savings Goals**. One of the CPUC's objectives is to pursue all cost-effective energy efficiency opportunities over both the short and long term. The CPUC established electricity and natural gas savings goals, pursuant to Pub. Util. Code § 454.55 and 454.56. In D.04-09-060, the CPUC first provided numerical goals for electricity and natural gas savings by utility service territory. The CPUC-adopted energy savings goals are expressed in terms of Gigawatt hours, million-therms, and peak Megawatt load reductions. These goals are informed by periodic Energy Efficiency Potential and Goals Studies, and historically were updated in D.08-07-047, D.09-05-037, D.09-09-047, D.12-05-015, D.12-11-015,and D.17-09-025. Thee most recent goals decision; D.19-08-034 established goals for 2020 – 2030. Energy Efficiency goals shall continue to be updated periodically by the CPUC. The IOUs should develop their energy efficiency program portfolios so that they will meet or exceed these savings goals. The CPUC's intent is for goals to:

   (1) be appropriately aggressive; [3]

   (2) support long-term procurement planning; [4]

   (3) encourage a focus on long-term savings; [5] and

   (4) be based on the best available information. [6]

   In D.17-09-025, The *Decision Adopting Energy Efficiency Goals for 2018 – 2030*, the CPUC adopted energy savings goals for ratepayer-funded energy efficiency program portfolios for 2018 and beyond based on an assessment of economic potential using the Total Resource Cost test, the 2016 update to the Avoided Cost Calculator, and a greenhouse gas adder that reflects the California Air Resources Board Cap-and-Trade Allowance Price Containment Reserve Price. The CPUC also deferred the adoption of cumulative goals until the California Energy CPUC develops a method for calculating savings persistence and CPUC staff assesses the viability of that method for the purpose of EE goals.

---

[3] D.04-09-060 at 3

[4] D.04-09-060 at 35

[5] D.07-10-032 at 5

[6] D.08-07-047 at 18-19

Goals for the 2018 - 2030 portfolio cycle will be applied on the following basis:

a. Energy savings goals are based on achieving 100 percent of incremental market potential identified in the most recent Potential Study for both gas and electric savings.[7]

b. Separate energy savings goals were adopted for IOU Codes and Standards (C&S) advocacy. The C&S advocacy category represents the estimated energy savings forecasted for the Title 20 and 24 updates and federal appliance standards that can be attributed to the IOUs'

C&S advocacy program (D.12-11-015, pp. 56-58).

c. Energy savings goals are set on a "net basis." (D.16-08-019, p. 19).

d. The CPUC intends to develop a better understanding of the sustained impact of the utility programs (including decay and market transformative effects) to encourage programs that will have lasting impacts and to hold IOUs accountable for long-term savings in future portfolios. (D.12-05-015 at 95.)

3. **Implementation of the California Long-Term Energy Efficiency Strategic Plan.** D.07-10-032 established a broader framework for statewide coordination on energy efficiency program design, in order to overcome market barriers to more widespread adoption of energy efficiency and to capture longer-term savings. The decision directed the IOUs to work with CPUC staff and market participants to prepare the California Long-Term Energy Efficiency Strategic Plan (Strategic Plan). Adopted in D.08-09-040, the Strategic Plan set forth a roadmap for energy efficiency in California through 2020 and beyond, by articulating a long-term vision and goals for each market sector and identifying specific near-term, mid-term and long-term strategies to achieve the goals. (The Strategic Plan can be viewed at http://www.cpuc.ca.gov/NR/rdonlyres/D4321448-208C-48F9-9F62-1BBB14A8D717/0/EEStrategicPlan.pdf).

[7] The Potential Study can be viewed at http://www.cpuc.ca.gov/PUC/energy/Energy+Efficiency/Energy+Efficiency+Goals+and+Potential+Studies.htm

D.08-09-040 and the subsequent October 30, 2008 Ruling in A.08-07-021 directed the IOUs to align their programs with Strategic Plan goals by clearly identifying utility actions for all Strategic Plan near-term strategies and action steps, where a utility role is important, and to provide programs that reflect the Strategic Plan short-term steps and milestones. (D.08-09-040, ordering paragraph 2.)

i. Among the market strategies identified as necessary to achieve market transformation, the Strategic Plan established three long-term goals for energy efficiency:

- All new residential construction in California will be zero net energy by 2020;
- All new commercial construction in California will be zero net energy by 2030; and
- The Heating, Ventilation, and Air Conditioning (HVAC) industry will be reshaped to ensure optimal equipment performance

ii. The Strategic Plan expanded the CPUC's objectives for the energy efficiency portfolios to also pursue market transformation, which was defined as "long-lasting sustainable changes in the structure or functioning of a market achieved by reducing barriers to the adoption of energy efficiency measures to the point where continuation of the same publicly-funded intervention is no longer appropriate in that specific market. Market transformation includes promoting one set of efficient technologies until they are adopted into codes and standards (or otherwise adopted by the market), while also moving forward to bring the next generation of even more efficient technologies to the market." (D.09-09-047 at 354.)

4. **Energy Efficiency Program Design.** D.15-10-028 established a "Rolling Portfolio" process for regularly reviewing and revising portfolios. Central to the rolling portfolio cycle framework is the rolling portfolio schedule. This schedule is described in Attachment 5 and 6

in D.15-10-028. [8] IOUs, CCAs, and RENS must use the same process for program design. For example, program related business plans must be submitted for CPUC review and approval and revised if prompted by certain triggers as described in D.15-10-028. p. 56-57. Existing plans (prior to the adoption of D.15-10-028) do not need a new application until they have one year of funding left for the corresponding program. The IOUs should implement statewide programs in order to achieve economies of scale and employ industry best practices.[9]

5. **Program Portfolio Development, Balance and Management.** The most appropriate program design and balance of program funding across market sectors (e.g., residential, industrial, commercial) should be based on maximizing cost-effective long-term savings. D.07-10-032 directed the IOUs to work with stakeholders, including the CPUC and the California Energy Commission (CEC) staff as well as market participants, to encourage the application of best practices, portfolio diversity and innovation. IOUs are expected to coordinate to develop and manage statewide programs, in order to avoid duplications of efforts and promote innovation and good program management. IOUs should also include a selection of non-resource programs such as statewide marketing and outreach programs, information and education programs, workforce education and training, emerging technologies programs and other activities in their proposed portfolios that support the CPUC's short-term and long-term energy savings goals. Non-resource programs also help in achieving Strategic Plan objectives. Lastly, the IOUs have been directed by the CPUC to utilize a percentage of their program funding for third party designed and implemented programs. D.18-01-004, modified by D.18-05-041 requires the IOUs to use at least 25 percent of their program funding for third parties by PY 2020, 4 percent by PY 2021, and 6 percent by 2023.

6. **Integrated Demand Side Management.** In order to achieve maximum savings while avoiding duplication of efforts, reducing transaction costs, and diminishing customer confusion, the IOUs are required to integrate customer demand side programs, such as energy efficiency, self-generation, advanced metering, and demand response in a coherent and efficient manner. Integrated demand side management (IDSM) is identified in the Strategic Plan as an overarching strategy to promote customer-side energy management and achievement of zero net energy goals.[10] In Ordering Paragraph (OP) 10 of D.18-05-041, the CPUC directed that a set amount of the IOUs' IDSM budget shall focus on the integration between energy efficiency and demand response. The CPUC also has related work on

[8] 2013-14 Portfolio cycle program guidance provided in D.12-05-15 and D.12-11-015 for RENs, and D.14-01-033 for CCAs

[9] In D.07-10-032 at 31

[10] D.09-09-047, p. 214

Integrated Distributed Energy Resources (IDER) with more information available at https://www.cpuc.ca.gov/IDER.

7. **The Emerging Technologies Program (ETP).** ETP supports EE program uptake of cost-effective new and underutilized commercial technologies. In order to filter this uptake, ETP is primarily engaged in technology evaluation with a focus on achieved savings and cost-effectiveness via the ETP Technology Assessment subprogram. In this capacity, ETP both identifies suitable technologies for program inclusion and eliminates unsuitable technologies from consideration. Technologies with positive evaluation results are then recommended for inclusion into the portfolio and passed off to EE resource programs for workpaper development. To support the technology intake process, the ETP Technology Development Support subprogram works with technology development actors to support their engagement with ETP and IOU programs and gather information about current and upcoming technology innovations. ETP also holds annual or semi-annual ET Summits to encourage discussion and knowledge sharing. The Technology Introduction Support subprogram engages in work intended to smooth the transition of technologies into EE programs and subsequently into the market. D.18-05-041, Attachment A, requires the IOUs to initiate Technology-focused Pilots, which will be ETP's first efforts at accelerating high-priority technologies into the market by identifying technology-specific market barriers and initiating market barrier breakdown activities. Along with this expanded scope, ETP is expanding its role as a technology communications hub spanning from R&D to C&S in California with several tools, including the Technology Priority Maps and an updated dissemination website (https://www.etcc-ca.com/).

8. **Codes and Standards (C&S).** In order to ensure that energy efficiency programs support the adoption of higher efficiency standards rather than compete with them, the IOUs shall implement programs to advocate for the adoption of higher codes and standards. D.12-05-015 established separate goals for codes and standards and affirmed that 100 percent of verified net savings shall count toward meeting these goals. The baseline for gross savings should be the previous standard or the prevailing market practice. The purpose of Codes and Standards goals is to give the IOUs credit for their specific contributions to new energy savings via their Codes and Standards advocacy work, which should not include naturally occurring savings or the advocacy work of other entities.

9. **Marketing Outreach and Education (ME&O).** In the CPUC's Proceeding A.12-08-007 directs the IOUs to implement the statewide Marketing, Education, and Outreach program called "Energy Upgrade California", which encourages Californians to save energy, and informs them about time-of-use rates. For more information go to https://www.energyupgradeca.org/ .

10. **Competitive Bidding for Third Party (3P) Programs.** Competitive solicitations help to identify innovative approaches or technologies for meeting savings goals with improved performance that might not otherwise be identified during the program planning process, and can take advantage of the unique strengths that third parties bring to the table. The IOUs shall propose a portfolio of programs that reflects the continuation of successful IOU and non-IOU designed and implemented programs. As part of that process, the IOUs will solicit competitive bids from third parties for the purpose of soliciting innovative ideas and proposals for improved portfolio performance. Please see section IX for a more detailed description of the CPUC adopted rules associated with IOU third party solicitations.

11. **Local Government and Institutional Partnerships.** Local Government Partnerships (LGPs) are partnerships between an IOU and a Lead Local Partner (LLP), which could be a city, county or region for the purpose of engaging local governments to promote demand side management (DSM) activities. Specifically, LGPs are designed to generate energy and demand savings within their own facilities and in their communities through joint utility-local government program designs that incorporate utility offerings and local government leadership, take actions that support the California Energy Efficiency Strategic Plan, leverage their local government role/authority, and provide DSM outreach in the community. Pursuant to D.12-05-015, beginning in the 2013-2014 cycle, new candidate partners must also adhere to deep retrofit criteria, as defined in the IOUs' program implementation plans.

12. **Pilot Programs.** Pilot programs should be designed to create the measures and program delivery mechanisms of the future, enabling EE programs to achieve deeper savings and market transformation. The pilots should be limited in scope and duration so that results are available in a specified time frame and limited in budget so that unsuccessful programs have a minimal impact on the overall portfolio. All results of pilot programs must be shared widely with the other program implementers and with the stakeholders in the sector impacted by the pilot. There should be a specific plan and timeframe to move successful pilot programs into statewide use (if applicable), or other more significant program efforts.

Each proposed pilot should contain the following elements[11]:

[11] D.09-09-047 at 48-49

i. A specific statement of the concern, gap, or problem that the pilot seeks to address and the likelihood that the issue can be addressed cost-effectively through utility programs;

ii. Whether and how the pilot will address a Strategic Plan goal or strategy and market transformation;

iii. Specific goals, objectives and end points for the project;

iv. New and innovative design, partnerships, concepts or measure mixes that have not yet been tested or employed;

v. A clear budget and timeframe to complete the project and obtain results within a portfolio cycle - pilot projects should not be continuations of programs from previous portfolios;

vi. Information on relevant baselines metrics or a plan to develop baseline information against which the project outcomes can be measured;

vii. Program performance metrics (see Section 4.6.3);

viii. Methodologies to test the cost-effectiveness of the project;

ix. A proposed EM&V plan; and

x. A concrete strategy to identify and disseminate best practices and lessons learned from the pilot to all California IOUs and to transfer those practices to resource programs, as well as a schedule and plan to expand the pilot to utility and hopefully statewide usage.

II. Funding Guidelines for IOUs

These guidelines provide the IOUs with ways to be compensated for their energy efficiency programs.

1. **Energy Efficiency Funds from Electric Procurement Rates and Gas Public Purpose Program (PPP) Surcharges.** Pursuant to § 381, 381.1, 399 and 890-900, gas PPP surcharge and/or electric procurement funds must be spent to deliver energy efficiency benefits to ratepayers in the IOU service territory from which the funds were collected. Gas PPP surcharge and/or electric procurement collections must fund energy efficiency programs that benefit gas and/or electric customers within an IOU's service territory, as adopted by the CPUC. However, nothing in these Rules is intended to prohibit or limit the ability of the CPUC to direct the IOUs to jointly fund selected measurement studies, statewide marketing and outreach programs,

or other EE programs and activities that reach across service territory boundaries that serve statewide energy efficiency efforts.

2. **Cost Caps and Targets.** All IOUs shall reflect all costs associated with the delivery of their energy efficiency programs in their submissions in the EE portfolio annual budget advice letters (ABAL) as stated in D.18-05-041 and shall note, where applicable, when the costs are recovered in other proceeding. Costs shall reflect the caps and targets defined in D.09-09-047 and clarified in D.12-11-015 (D.09-09-047, pg. 49). Administrative cost definitions are further delineated in Appendix C of this manual.

    i. **Administration** – Administrative costs for utility EE programs (excluding non-IOU third party and/or government partnership budgets) are limited to 10 percent of total EE budgets. These costs shall be inclusive of any energy efficiency-related costs authorized and collected in other proceedings. These costs should also reflect the fully-loaded personnel costs of delivering EE programs and shall also note where the costs have been or will be recovered elsewhere to avoid double counting of costs. Administrative costs shall be consistent across IOUs and can only be shifted into other cost categories subject to the fund shifting rules as described in D.15-10-028. The IOUs shall not reduce the non-utility portions of government partnership and third-party implementer administrative costs without following authorized fund shifting guidelines subject to the fund shifting guidelines in Appendix A. (D.09-09-047, pg.369.)

    ii. **Marketing, Education, & Outreach (ME&O)** – ME&O cost targets for energy efficiency are set at 6 percent of total adopted EE budgets, subject to the fund-shifting rules in Rule II.3 and Appendix A.

    iii. **Direct Implementation Non-Incentive (DINI) --** DINI costs are defined in Appendix C as resource program delivery support costs and shall have a target value set at 20 percent of the total adopted energy efficiency budgets.[12] The IOUs are required to minimize their non-incentive budgets as much as possible to achieve savings targets (D.12-

[12] This target was adopted for 2010-12 cycle in D.09-09-047 at 6, at 74, and OP 13c and re-iterated for the 2013-14 cycle. D.12-11-015 at 98 states "This provision of D.09-09-047 is still in effect and has not been superseded, though the target is also not met by the proposed portfolios. We find that such a target is still reasonable for 2013-2014."

11-015, pg. 101).

iv. **Local Government Partnerships and Third Party Programs** – The utilities will seek to limit administrative costs of third party and local government partnership direct costs to 10 percent, striving for an entire cost cap of 10 percent. This amount is separate from utility costs to administer these programs (D.09-09-047, pg. 63).

v. The utility PAs shall ensure that their EE portfolios contain third party designed and implemented programs funded as a percentage of each IOU's overall EE budget utilizing the following schedule and budget amount by the end of each given year: 25 percet by 2019, 40 percent by 2020, and 60 percent by 2022. These PAs shall file a Tier 2 advice letter for each third party contract, or a batch of third party contracts, that is valued at $5 million or more and/or with a term of longer than three years for Commission review (D.18-01-004, pg.61, and D.18-05-041).

3. **Fund Shifting Rules.** D.15-10-028 modifies prior fund-shifting rules established in D.12-11-015, the December 22, 2011 Assigned Commissioner's Ruling (ACR) in R.09-11-014, D.09-09-047, D.09-05- 037, D.07-10-032, D.06-12-013, and D.05-09-043 to apply to the current funding cycle. Each energy efficiency program administrator (PA) must file a Tier 2 advice letter highlighting the next calendar year's budget, all fund shifting activity, annual spending, and cost-effectiveness statements (D.15-10-028,p.123).

   In D.15-10-028, the CPUC also eliminated prior requirements that EE PAs must file advice letters to obtain authorization to shift funds among EE programs. However, if CPUC Staff or stakeholders identify fund-shifting activities that substantially depart from CPUC policy direction or, in the opinion of CPUC Staff or stakeholders, are not in the best interest of ratepayers and/or the efficiency portfolios, they may raise their concerns in a protest to the PA (D.15-10-028, pg.127).

4. **Funding Business Plans.** Each PA will file an initial business plan for new programs as an application to receive EE funding. Business plans will explain at a relatively high level how PAs will effectuate the strategic plan and correspond with their more detailed implementation plans. PAs will organize business plans into market sectors and subsectors as discussed below. After the initial filing, PAs *must* file revised business plans only when a "trigger" event happens; PAs *may* also file revised business plans whenever they choose to do so. Business plan filings will

generally be untethered to the calendar except that PAs will need to apply for an extension of funding – that is, a restarting of the ten-year clock -- no less than one year before funding is set to end. (D.15-10-028, pg. 123).

Business plans will be considered as part of a stakeholder process and shall contain the following:

a) Portfolio summary and description of applicable intervention strategies;

b) A chapter for each of six sectors (residential, commercial, industrial, agriculture, public, cross-cutting) providing;
    a. A description of each PA's overarching goals, strategies and approaches; near-, mid- and long-term strategic initiatives;
    b. Sector-specific intervention strategies;
    c. Descriptions of how each sector approach advances the goals, strategies and objectives of the strategic plan;
    d. Descriptions of which and how strategies are coordinated statewide and regionally among PAs and/or with other demand-side options;
    e. Descriptions of how cross-cutting "sectors" are addressed;
    f. Descriptions of leveraging of cross-cutting activities for success for particular customer groups;
    g. Descriptions of work to minimize redundancy;
    h. Descriptions of efforts voiding working at cross purposes with other PAs;
    i. A description of any pilots contemplated or underway for the sector.
    j. A chapter for each of six sectors (residential, commercial, industrial, agriculture, public, cross-cutting) providing a statement of evaluation.

Utility program administrators shall not opt out of funding statewide programs and must fund at levels consistent with their proportional share based on load, unless specifically approved by the CPUC for a deviation by means of a new business plan (D.18-05-041, pg.186). In a rolling portfolio, where budgets are annualized rather than in a multi-year (portfolio cycle) period, if the program calendar year ends before disposition of the advice letter with the budget for the next calendar year, the prior year's budget shall remain in place until disposition of the pending

advice letter. IOUs shall continue to recover costs, and make transfers to CCAs and RENs, based on the prior year's authorized budget (D.15-10-028, OP 5).

5. **Shared Funding and Funding for EM&V** - The utilities shall file a Tier 1 advice letter to propose a mechanism for shared funding of statewide programs detailing proportional amounts and discrepancies or issues (D.18-05-041, pg.187). Energy efficiency PAs shall fund the coordinating committee (as created via D.15-10-028, p. 70) budget pro-rata based on their share of the overall authorized annual energy efficiency spending, filed through a Tier 1 advice letter (D.15-10-028 pg.125-126). Evaluation budgets will remain at four percent of the total portfolio, with at least 60 – 72.5 percent reserved for CPUC staff evaluation efforts and from 27.5 and up to 40 percent for program administrators, to be further divided proportionally among utilities, community choice aggregators, and regional energy networks by appropriate utility service area, with the exact amounts to be finalized during the collaborative process between program administrators and CPUC staff. (D.16-08-019, pg. 3.)

6. **Treatment of Unspent Funds from Prior Portfolio Cycles.** At the beginning of each portfolio cycle, IOUs should apply prior cycle(s) unspent funds to the new portfolio, including any associated interest collected, to offset revenue requirements in the new portfolio cycle as approved by the CPUC through the IOUs' EE applications (D.12-11-015, pg. 93). Committed funds are defined as those associated with individual customer projects and/or are contained within contracts signed during a previous program cycle and associated with specific activities under the contract. Committed funds are not considered "unspent funds," and need not be spent during that particular program cycle so long as there is an expectation that the activities will be completed and that the committed funds are spent to complete the activities for which they were committed. Savings will be counted in the cycle in which the project is completed (D.12-11-015, pg. 92).

7. **Program Cancellation**. IOUs shall not eliminate any energy efficiency program or sub-program except through the energy efficiency portfolio application or an Advice Letter seeking such a change. (D.12-11-015)

III. Regional Energy Networks & Community Choice Aggregators

This section provides information on the option for local government entities to apply with the CPUC to directly administer and report of energy efficiency related programs. This section also

includes compliance requirements for Regional Energy Networks (RENs) and Community Choice Aggregators (CCAs) administering Energy Efficiency programs.

1. **Regional Energy Networks.** In D.12-11-015, the CPUC authorized the formation of RENs, to enable local government entities to plan and administer energy efficiency programs independent from the IOUs. RENs are distinguishable from other local government partnerships (LGPs) by the fact that they have applied to the CPUC to become a REN vs. LGPs that propose to and are selected by the IOUs. RENs are intended to be additional to and not in replacement of design or budget of LGPs contracting to IOUs. The RENs will have the independent ability, within the confines of CPUC approval, to manage, deliver, and oversee their own programs independently, without utility interference or direction as it relates to the design and delivery of their programs. Within California there are three RENs; 1) The Bay Area Regional Energy Network, 2) The Southern California Regional Energy Network, and 3) The Tri-County Energy Network. The IOUs will serve as fiscal managers responsible for all usual fiscal and management functions including fiscal oversight and monitoring, such as providing the day-to-day contract management functions and disbursement of ratepayer funds (D.12-11-015, pg. 10). The CPUC retains the authority to direct changes to the REN energy efficiency portfolio. The RENs and IOUs are required to submit Joint Cooperation Memorandum advice letters (D. 18-05-041, OPs 38-39). These memos ensure coordination between the Program Administrators with overlapping service territory. The memos identify program offerings that are distinct and similar. Where programs are similar, the RENs and the IOUs state their plan for seamless program offerings and to avoid customer confusion. Finally, D.16-08-019, page 11 reaffirmed the RENs as "pilots" and that they should be evaluated on an equal basis as the IOUs and that the RENs should continue to directly apply to the CPUC for funding.

   On December 5, 2019, the CPUC approved D.19-12-021 which adopted Frameworks for RENs and Market Transformation. The language in this decision authorizes the continued operation of the RENs and "invites new REN proposals as business plans to be filed with the Commission" so long as they meet specific criteria laid out in the proposed decision.[13] Reiterates that the RENs have no cost-effectiveness threshold given that they exist to fill gaps in California's energy efficiency portfolio of programs and serve hard-to-reach (HTR) customers. Allows some geographic overlap among more than one REN and other program

[13] The new criteria for RENs in D.19-12-021 include that they must represent more than local government entity (pg 22); coordinate with existing program administrators in their geographic area prior to filing a business plan (pg 22); vet their proposal with stakeholders through the California Energy Efficiency Coordinating Committee (CAEECC) (OP 2); explain their governance structure in the business plan filing (OP 2); A description of its new and unique value to contribute to California's energy, climate, and/or equity goals (OP 2); and a proposed set of metrics and savings targets (OP 2).

administrators, with appropriate coordination and requires that all PAs file JCMs to avoid duplication (D.19-12-021, pgs 25-26). Finally, the decision re-designates the RENs as program administrators instead of pilots, requires that the RENs business plans demonstrate a value add, in addition to filling gaps and serving HTR customers, and does not limit them to any specific sector or program area (D.19-12-021).

2. **Community Choice Aggregator (CCA).** Community Choice Aggregators (CCAs), are an alternative to the investor owned utility energy supply system in which local entities in California can aggregate the buying power of individual customers within a defined jurisdiction in order to secure alternative energy supply contracts. In 2010 the first CCA, Marin Clean Energy (MCE) launched. The passage of AB 117 (Midgen, 2002) which allowed formation of CCAs as an alternate load serving entity also created the option for CCAs to administer EE programs under Public Utility Code (PUC) § 381.1 by allowing a CCA to "apply to administer" ratepayer funded EE programs. This act was later modified by Senate Bill (SB) 790 (Stats. 2011, Ch.599, Leno) which allowed another route for CCA's to offer ratepayer funded EE programs through "electing to administer" and D.14-01-033 provided further clarity for CCAs choosing either approach. CCAs "applying to administer" EE programs must file an application with their Business Plan which must comply with the CPUC's prior decisions and resolutions per PUC § 381.1(a-d). Additionally, CCAs shall submit their plans factoring in cost effectiveness approved by their governing board, then the CPUC. CCAs "electing to administer" programs can only offer only EE services to their own customers pursuant to Section 381.1(e-f). A formula that sets the maximum funding the electing CCA can request (D.14-01-033, pg. 22). CCAs elect to administer through filing a proposed plan via a Tier 3 advice letter (D.14-01-033, pg. 54).

Compliance Requirements for Regional Energy Networks and Community Choice Aggregators:

3. **Business Plans.** CCAs were encouraged apply to be non-IOU program administrators of energy efficiency programs and local governments were allowed to submit regional pilots for the CPUC to review in D.12-05-015, COL 50 and the applications of BayREN, MCE and SoCalREN were later approved in D.12-11-015, OPs (8-11). RENs and MCE submitted their applications, which were proposed in Business Plans, to the CPUC in January of 2017. Each year, after approval of the overall business plans, MCE and RENs' annual budget advice letters are to be shared with stakeholders by leveraging the California Energy Efficiency Coordinating Council (CAEECC) prior to submission to CPUC, a process endorsed in D.15-10-028 (16-08-019, OP 1 and OP 2). All EE PAs, including the RENs and MCE are subject

to the triggers for refiling their business plans per OP 2 of D.15-10-028.[14] However, RENs are not required to meet a cost-effectiveness threshold and do not have assigned savings targets through the ED led Potential and Goals Study.[15] MCE is required to meet the same cost-effective threshold as the IOUs, but also do not have assigned savings targets through the ED led Potential and Goals Study).[16] To ensure that MCE and the RENs are more accountable to meeting a saving threshold, D.18-05-041 stated that RENs and MCE forecasted energy savings goals must meet or exceed the annual energy savings targets included in their business plan as a criteria for approval of their ABALs.[17] However, MCE and the RENs each submitted budget and savings true-up tables in their PY 2019 ABALs. These true-up tables reflected more accurate and updated planning assumptions and forecasts, for each program year through 2025, than their business plans. Thus, D.19-08-034 stated that for each year MCE and the RENs request energy efficiency funding authorization via an ABAL, they shall meet or exceed the annual savings forecasts presented in their true-up tables as submitted in their prior year's ABALs.[18]

4. **Implementation Oversight and Reporting Requirements**. The RENs and CCA's who implement EE programs are subject to the same periodic reporting requirements to the CPUC as the IOUs are required to submit. The IOUs will receive attribution toward their portfolio goals for REN and CCA energy savings (D.12-11-015, pg. 11). Additionally, RENs and CCAs will submit monthly narrative reports, which enable CPUC staff to track and perform approved EE activities. These reports are found on the CEDARs (https://cedars.sound-data.com/). The CCAs and RENs shall conduct financial and management audits of its energy efficiency programs and provide a copy of the audits to the CPUC (D.12-11-015, pg.10).

---

[14] Each energy efficiency program administrator must file an application with a revised business plan when a "trigger" event happens. Triggers are:

1. A Program Administrator (PA) is unable to adjust its portfolio in response to goal, parameter, or other updates to:

    a. meet savings goals,

    b. stay within the budget parameters of the last-approved business plan, or

c. meet the Commission-established cost effectiveness (excluding Codes and Standards and spillover adjustments)

2. The Commission calls for a new application as a result of a decision in the policy track of the proceeding (or for any other reason);

[15] D.19-08-034, pg 28.

[16] Ibid

[17] D.18-05-041, pg. 134.

[18] D.19-08-034, pg 28.

5. **Threshold of Review.** D.19-12-021 revised the criteria that the CPUC will consider in approving new or renewed REN business plans. Specifically, the decision states new RENs must show also new or unique value to the CPUC's energy, climate, and/or equity goals. In addition, to qualify for consideration, a REN program activity must meet one or more of the following criteria to be considered for approval:

   - Activities that utilities or CCA program administrators cannot or do not intend to undertake.
   - Pilot activities where there is no current utility or CCA program offering, and where there is potential for scalability to a broader geographic reach, if successful.
   - Activities serving hard-to-reach markets, whether or not there is another utility or CCA program that may overlap (D.19-12-021, pg 32).

6. **Program Cost-Effectiveness Threshold**. D.14-01-033 required the CCA's portfolios to meet the same cost-effectiveness tests as IOUs, with an exception in the three years following their first application where a TRC of 1.0 is permitted (pg. 50). Regional Energy Networks are not required to hit a cost-effectiveness threshold, but D.16-08-019 did "encourage RENs to manage their programs with an eye toward long-term cost-effectiveness" (D.16-08-019, pg 12).

7. **CCA and REN Funding.** CCA's submitting applications to administer programs pursuant to Section 381.1 shall receive funding only for electricity savings programs (D.14-01-033, pg. 54). For the three RENs, Southern California Edison Company, Southern California Gas Company, and Pacific Gas and Electric Company remain the fiscal managers for their contracts without exercising control over program design or program changes (D. 14-10-046, pg.162). If funding year ends prior to CPUC disposition of program administrator budget via their annual budget advice letter, RENs and CCAs will continue to receive prior years funding (15-10-028, OP5, pg. 124).

8. **Evaluation, Measurement and Verification Requirements**. CPUC staff shall include CCA -administered programs under PUC § 381.1 (a)-(d) within the scope of its EM&V activities (D.12-11-015, pg. 51). REN evaluations, including impact and process evaluations should be managed by CPUC staff. CPUC Staff shall retain an accounting consultant using EM&V funds to cover the cost both to review prior cycle reporting and to develop a proposal to rationalize accounting practices for energy efficiency going forward (D. 14-10-046, pg.162). In OP 16 of D.16-08-019, CCAs and RENs funding for evaluation shall be set

on a proportional basis, based on total program budget, from among the up-to-40 percent allocation within the relevant utility service territory.

IV. Cost-Effectiveness

This section provides the rules and policies governing cost effectiveness analysis for the purposes of measuring the performance of program administrator programs and ensuring that public purpose funds are responsibly allocated. This section also provides details regarding program performance metrics as another metric to measure the performance of programs and portfolios.

1. **Standard Practice Manual (SPM).** The cost-effectiveness indicators referred to in these rules are described in the *California Standard Practices Manual: Economic Analysis of Demand-Side Management* (D.12-05-015, p. 28). Cost-effectiveness analyses must be performed in a manner consistent with the indicators and methodologies included in the SPM, with clarifications indicated in CPUC decisions relating to this subject.

2. **Total Resource Cost Test (TRC).** This CPUC relies on the Total Resource Cost Test (TRC) as the primary indicator of energy efficiency program cost effectiveness, consistent with our view that ratepayer-funded energy efficiency should focus on programs that serve as resource alternatives to supply-side options. The TRC measures net costs as a resource option based upon the total costs for the participants and the utility. The benefits are the net present value of avoided costs of the supply-side resources avoided or deferred. The TRC costs encompass the net present value of the net costs to participants for installed measures over the measure life plus all the costs incurred by the program administrator. The net benefits and net participant costs exclude the benefits derived from and costs paid by free-rider participants (D.07-09-043, p. 157). The net cost to participants is the actual costs minus any rebates[19] from the program administrator. The net present values are calculated using a discount rate that

[19] Per SPM and Decisions including D.08-01-006, rebate amounts used to reduce participant costs are defined to include only dollar benefits such as rebates or rate incentives (monthly bill credits) paid by the program administrator to a participating customer (ratepayer). These costs are included in the program administrator total cost so must not be counted twice. Rebates paid to free-rider participants are included as TRC costs in the program administrators cost.

reflects each utility's after-tax weighted average cost of capital (WACC), based on the most recent cost of capital decision.[20]

3. **Program Administrator Cost Test (PAC).** The Program Administrator Cost (PAC) test of cost-effectiveness should also be considered in evaluating program and portfolio cost-effectiveness. Under the PAC test the program benefits are the same as used in the TRC test. The costs include only the net present value of all costs incurred by the program administrator while excluding the costs incurred by the participating customers. As in the TRC test, the net present values for the PAC are calculated using a discount rate that reflects each PA's after-tax weighted cost of capital, based on the most recent cost of capital decision.

4. **Application of the TRC, RIM and PAC Tests.** Though TRC is the primary cost effectiveness test used by the CPUC, also considering the RIM and PAC test supplemental to the TRC appropriately acknowledges the dual-cost issue unique to energy efficiency investments (D.19-05-019, p. 24). Since it is expected that incentives offered for the installation of a measure will not exceed the incremental cost of the measure, activities that pass the TRC test normally will also pass the PAC test.[21] However, if deployment of the program requires rebates or financial incentives to participants that exceed the measure cost, then the program may pass the TRC test, but fail the PAC test. Incentives or rebates that exceed the TRC cost for a measure must be justified in workpaper submissions that are approved by CPUC Staff.[22] The RIM test provides information on the rate impacts. Therefore, all determinations based on the cost-effectiveness analyses of distributed energy resources should include a written description of the results of the TRC, PAC, and RIM (D.19-05-019, p. 25).

   D.18-05-041 modified the portfolio requirements to include a 1.25 ex-ante TRC by 2023, with an ex-ante TRC of 1.0 during the ramp years of 2020-2022 (p.72). The decision did not

[20] D.12-05-015, p. 38 contains a table of the current IOU WACC values and OP 2 directs the use of the after-tax Weighted Average Cost of Capital as the discount rate. D.12-12-034 provides the latest review of utility cost of capital. Further historical data is provided at http://www.cpuc.ca.gov/General.aspx?id=12056.

[21] D.06-06-063, p. 72 recognizes only "limited instances for program design purposes where the cash rebate to the customer exceeds the measure installation cost"

[22] Originally defined in D.92-09-080, the dual test was last modified in D.05-04-051

modify that the evaluation of portfolios take into consideration passing both the TRC and PAC tests for each service territory and for the entire approved portfolio, including RENS (p.161). However, the TRC will not exceed the PAC unless incentives exceed incremental measure costs.[23]

5. **Overall Cost-Effectiveness of IOU, REN, and CCA Portfolios.** It is the responsibility of the CPUC to approve the total portfolio- which includes both utility and REN proposals- and ensure that it is cost-effective overall, because the IOUs are not in control of the REN proposals and therefore cannot make the cost-effectiveness tradeoffs within their portfolio. The CPUC therefore applies the dual test for overall portfolio cost effectiveness, taking into consideration passing both the TRC and PAC tests for each utility service territory portfolio without the RENS, as well as entire approved portfolio that includes the RENs (D.12-11-015, p. 18). The CPUC emphasized in D.18-05-041 that RENS ought to focus in filling gaps in IOU energy efficiency portfolios, piloting different approaches, and targeting hard-to-reach customers. Due to challenges associated with RENs diversifying portfolios, the CPUC did not adopt specific cost effectiveness requirements for RENs (p.95)

6. **Avoided Costs and Other Inputs**. TRC and PAC benefits should be computed using the avoided cost methods and input assumptions, including avoided greenhouse gas emissions related cost[24] that have been developed for the evaluation of energy efficiency programs in the Standard Practice Manual and in Proceeding R.14-10-003. As set forth in D.16-06-007, data for the avoided cost calculator shall be updated on an annual basis, and shall be conducted through the CPUC Resolution process (D.16-06-007, p. 6 and OP 2, p. 26).

7. **Cost Effectiveness Adjustments for Free-Ridership and Market Effects.** Net to Gross (NTG) ratios are used to estimate and describe the "free ridership" that may be occurring within energy efficiency programs, that is, the degree to may be occurring within energy efficiency programs, that is, the degree to which customers would have installed the program

---

[23] D.06-06-063, p. 72 recognizes only "limited instances for program design purposes where the cash rebate to the customer exceeds the measure installation cost"

[24] D.17-08-022 adopted a series of values based upon the California Air Resources Board Cap-and-Trade Allowance Price Containment Reserve Price as an interim greenhouse gas adder value for use in the avoided cost calculator when analyzing the cost-effectiveness of distributed energy resources. Resolution E-4942 incorporates the update of these values set forth in D.18-02-018 for use in the IDER proceeding and any other proceedings that rely on assumptions about the avoided GHG costs of DERs for evaluating cost effectiveness.

measure or equipment even without the financial incentive (e.g., rebate) provided by the program. Cost-effectiveness of the portfolio shall be calculated as net of free riders, or on a "net savings basis" for the purpose of establishing budget levels that meets the legislative requirement in § 454.5.[25]

a. CPUC Staff has the responsibility to perform research on free ridership and market effects and to use the results of that research to develop updated NTG values for use in portfolio planning and utility reporting. This research often involves interviews with customers and others who participate in the utility programs. The IOUs are required to cooperate and facilitate this research. Utility customers are required cooperate with CPUC staff in this research as a condition of receipt of energy efficiency funds. The IOUs must respond to CPUC Staff's request for evaluation data in a timely manner to facilitate this research so as to improve the reliability of NTG results (D.12-05-015, p.51). Our adopted DEER is the repository of the NTG values to be used for planning and reporting. CPUC Staff shall strive to update DEER with uniform statewide NTG values that represent typical expected results (p. 54 and OP 6).

b. The "default" NTG values shall be used when there is a lack of research on the NTG value for the program or delivery mechanism. This may apply to new or existing measures (or if a proposed delivery mechanism has deviated substantially from past related program activities).[26] When new measures or programs are proposed, CPUC staff may utilize the results of previously completed research produced during similar program or measure piloting activity to set an appropriate NTG value (D.12-05-015, p. 339). Alternatively staff may determine that no piloting research is required and accept proposed use of default or other appropriate NTG values.

c. For measures added to the portfolio as a direct result of Emerging Technology Program activities (Emerging Technology measures) the IOUs may request in their non-DEER work paper submissions that a measure be assigned a NTG value at or above 0.85. CPUC Staff shall have the authority to accept or reject a utility Emerging Technology measure classification and

[25] Definition and calculation of Net-to-Gross adjustments to TRC test were described in Attachment 9 of D.07-09-043.

[26] D.12-05-015 adopted DEER NTG table. D.15-10-028 adopted the DEER update process through the rolling portfolio cycle schedule which includes the update of default and prescribed NTG values.

to set any Emerging Technology measure NTG value at or above 0.85 as it deems appropriate (D.12-05-015, p. 62 and OP 14 and OP 15).

d. For all projects undertaken by schools, and for programs targeting specific transmission, distribution, or generation constrained areas (other than bottoming-cycle combined heat and power projects), for purposes of determining net savings, default ex ante lockdown rules apply, except that a Net-to-Gross ratio of .85 (before spillover effects) is "locked down" for all above code projects. Eligibility includes requirements that customer incentives shall be the higher of 75 percent of incremental measure cost, or what is available under prior policies (D.14-10-046, pp. 163-164).

e. For custom projects the adopted ex ante review process provides CPUC Staff with the ability to review and update ex ante values including NTG for those projects (OP 149). The IOUs are expected to respond to CPUC staff reviews by taking steps to improve NTG results. Utility programs should strive to push customers to augment projects to include action that would not occur without incentive support or redesign the incentive structure to encourage deeper and more comprehensive activities as well as aligning the incentive amounts to be commensurate with the level of savings that can be attributed to the program (p.61 and OP 12).

f. Market effects are defined as additional energy savings that occur as a result of the energy efficiency programs, but that are not included in the utility savings claims. The CPUC acknowledges that market effects occur. However, in D.12-11-015 the CPUC determined that there were not sufficiently current or technically rigorous market effects studies to base market effect estimates on, and instead determined to apply a portfolio-level "market effects adjustment" of 5 percent, ex-post, across all resource programs for the entire cost effectiveness calculation (D.12-11-015, p. 49). This 5% market effect adjustment shall be applied to increase TRC and PAC benefits as well as to increase TRC participant costs (excluding the deduction of program rebates or incentives paid to participants).

8. **Portfolio Filing of Prospective Cost Effectiveness**. A prospective showing of cost-effectiveness using for the TRC test (with consideration also given to PAC) for the entire portfolio of ratepayer-funded energy efficiency activities and programs (i.e., individual programs, plus all costs not assignable to individual programs, such as overhead, planning,

evaluation, measurement verification and administrator compensation and performance, if applicable) is a consideration when authorizing ratepayer funds.

This consideration applies to each of the following: (1) the service- territory wide program portfolios offered by each IOU and CCA Program Administrator, excluding: 1) RENs, 2) emerging technologies programs, and (3) On-Bill Financing loans (D.09-090-47, p.288). IOU program administrators must demonstrate that the first threshold requirement is met on a prospective basis in their program funding applications to the CPUC. IOUs must also demonstrate that the proposed level of electric and natural gas energy efficiency program activities are expected to meet or exceed the CPUC-adopted electric and natural gas savings goals, by service territory.[27]

a. The CPUC adopted several safeguards against certain risks that the annual portfolios would not achieve their forecasted TRC estimates. As the basis for determining cost-effectiveness of proposed program portfolios, IOU Program Administrators omit codes and standards (C&S) advocacy costs and benefits, and spillover effects. The CPUC also sets a higher prospective TRC threshold of 1.25 (D.12-05-015, p. 100 and D.18-05-041, pp. 54-55), to hedge against eventual reductions in savings as determined by evaluations.[28]

b. To support comparisons of all resources in the IOUs' procurement portfolio, the program administrators are required to also provide levelized unit cost estimates at the portfolio, end-use and measure level consistent with the methods described in the SPM. This information should be submitted with the program administrators' compliance filings.

[27] Per D.04-09-060, p.2 savings from LIEE programs will also count towards these goals.

[28] D.18-05-041 established the ramp period, program years 2019-2022, in the context of third party solicitations, setting up the statewide administration framework, and affording the PAs an opportunity to improve portfolio cost-effectiveness. Forecasted TRC must meet or exceed 1.25 in the ABAL, except during program years 2019 – 2022, when the forecasted TRC must meet or exceed 1.0.

If a Program Administrator's prospective showing of cost effectiveness does not meet the threshold set-forth by the CPUC[29], the PA will need to file an application with a revised business plan for CPUC approval.[30]

9. **Common Sector-level Metrics.** Metrics should be designed to be valuable to implementers as well as other stakeholders to improve the chances of longevity of the metric and associated perspective of measuring it over time.[31] Program administrators shall set sector-level metrics in the business plans and will set more granular, program level metrics in implementation plans (D.15-10-028, p. 53)[32] In addition to sector-level metrics developed by program administrators, CPUC Staff has developed common sector-level metrics to be reported annually in the annual report by all program administrators to (1) consolidate metrics around common problems identified by most program administrators for each sector, (2) enable consistent tracking and progress assessment for the whole sector, (3) enable comparisons across and within sectors, and (4) enable tracking of high-level portfolio progress over a period of time.[33] Attachment A of D.18-05-041 provides a listing of the minimum set of common metrics to be reported. PA's can submit additional metric (fields) within the Annual Budget Advice Letters, and submit associated data in their annual report.

10. **Cost Sharing and Cost-Effectiveness Across Utility Service Territories.** Energy efficiency statewide program costs are shared between utilities on an upfront pre-set basis, then trued up based on customer participation (D.16-08-019, p.110) Though costs are shared upfront, program cost-effectiveness is still evaluated by utility area, considering just the program costs and benefits relevant to the customers in that area (D.16-08-019, p. 55). The budget for each statewide program in each utility territory shall be counted toward the cost-effectiveness of each utility's energy efficiency portfolio and each utility shall be given energy savings and Energy Savings Performance Incentive credit consistent with their customers' funding and program participation (D.16-08-019, p. 110, OP 7).

---

[29] D.18-05-041 at pp. 133-134 further set annual budget advice letter approval criteria for IOU, CCA, and REN program administrators.

[30] D.15-10-028, OP 1 identifies the trigger events which require a program administrator to file a revised business plan. The development of business plan filings are described in D.16-08-019.

[31] D.18-05-041 dictates that a metric includes a baseline and a target or targets (short, medium, or long term). An indicator does not include baselines or targets.

[32] Guiding principles for business plan metrics are laid out in Table 2 of the May 10, 2017 Administrative Law Judge's Ruling Seeking Comment on Energy Efficiency Business Plan Metrics.

[33] Administrative Law Judge's Ruling Seeking Comment on Energy Efficiency Business Plan Metrics, May 10, 2017, p. 5-6 and D.18-05-041, pp. 22-23.

11. **Cost Effectiveness Requirements for Fuel Substitution Programs / Measures/ Projects.** Fuel substitution programs/projects may offer resource value and environmental benefits. Fuel-substitution programs should reduce the need for supply without degrading environmental quality. For purposes of applying these tests, fuel substitution proponents must compare the technologies offered by their program/measure/project with the baseline technology determined in the same manner as for other measures in the energy efficiency portfolio (namely, using code baseline, industry standards practice, or existing conditions depending on the circumstances of the measure installation). The burden of proof falls on the party sponsoring the analysis to show that the baseline comparison adheres to this requirement. D.19-08-009 (OP 1, p.57) updates the Fuel Substitution Test as follows. Retrofit measures in fuel-substitution programs/projects must pass the following Fuel Substitution Test:

    a. The program/measure/project must not increase source- British Thermal Unit (Btu) consumption when compared with the baseline comparison measure available utilizing the original fuel, as currently defined by the baseline policies in D.16-08-019 and Resolution E-4939, Attachment A.

    b. The program/measure/project must not adversely impact the environment compared to the baseline measure utilizing the original fuel. This means that the use or operation of the measure must not increase forecasted CO2 equivalent greenhouse gas (GHG) emissions.

    The Fuel Substitution test does not apply to new construction applications. Program Administrators proposing fuel substitution measures must provide all assumptions and calculations for CPUC review, and utilize the most recent versions of the Avoided Cost Calculator, Cost-Effectiveness tool, and other fuel substitution documents available at the time the measure is proposed.

    D.19-08-009 also directed CPUC staff to issue technical guidelines for fuel substitution measures, including, but not limited to, guidance on calculation of source energy savings and environment offsets for fuel substitution measures. Fuel Substitution Technical Guidance for Energy Efficiency is a 'living' document, whose first version was released on September 2019.

12. **Mid-Cycle Funding Augmentations.** Costs and energy savings from mid-budget cycle funding additions for programs other than Energy Savings Assistance Programs (ESAP) shall be counted when calculating portfolio cost-effectiveness and shall count towards the IOUs' energy efficiency goals for resource planning purposes.

13. **References.** See the following references below for further information on cost effectiveness.

    a. CPUC Cost Effectiveness page – http://www.cpuc.ca.gov/General.aspx?id=5267

    b. CPUC Standard Practice Manual – http://www.cpuc.ca.gov/uploadedFiles/CPUC_Public_Website/Content/Utilities_and_Industries/Energy_-_Electricity_and_Natural_Gas/CPUC_STANDARD_PRACTICE_MANUAL.pdf

    c. CPUC Online Tool - https://cedars.sound-data.com/

V. Implementation Oversight and Reporting Requirements

The CPUC requires program administrators to both report on annual program achievements as part of its regular reporting requirements and file budget requests for subsequent program year based on prior-years' performance.

1. **Reporting Requirements**. CPUC staff is directed to develop and update reporting requirements to ensure that the types of data and the format of the information presented in the IOUs', RENs' or CCAs' filings and reports are as consistent as possible. The IOUs, RENs and CCAs (except as modified for RENs and CCAs in Rule III.3) are required to follow the CPUC's Energy Efficiency Reporting Requirements Manual for the current program cycle. Please refer to the California Energy Data and Reporting System (CEDARS) at (http://www.eestats.cpuc.ca.gov) for the most current reporting templates and Energy Division guidelines. The following regularly occurring reports are required:

    a) Monthly Reports on expenditures and savings
    b) Quarterly Reports on budgets and expenditure caps
    c) Utility Tracking data to report program accomplishments, evaluation sampling and cost effectiveness calculations

d) Common Sector Metric Annual Reporting - per D.15-10-028, program administrators were relieved of reporting requirements laid out in Resolution E-4385. Program administrators will report on metrics approved in D.18-05-041 in their Annual Budget Advice Letter (ABAL) filings due September of each year and in the May 1 annual reports
e) Energy Efficiency Program Annual Reports[34]
f) Annual Budget Advice Letters[35]
g) Other reports as required by the CPUC.

2. **Business Plans and Annual Budget Advice Letters.** IOUs, RENs and CCAs are no longer required to submit Program Implementation Plans, as they were associated with previously three-year program cycle applications. As of January 1, 2017, IOU, REN and CCA program administrators are required to submit Business Plans, which provide a 10-year high-level description of a program administrator's respective portfolio in terms of sectors, budgets and strategies, as well as Annual Budget Advice Letters (ABALs), which are filed each year in September and present the program administrator's budget request for the subsequent program year.[36] The Business Plans do not have a formal template; program administrators work with CPUC staff to ensure relative similarity across the various program administrators filed plans.

Implementation Plans – As of January 1, 2019, IOU program administrator portfolios are transitioning to a larger role for third party administrators. By 2023, at least 60 percent of the IOUs' respective portfolios (by budget) must be bid out to third party implementers, who will be solely responsible for proposing, designing, implementing, and delivering programs for utility program administrators. Consequently, the next few years will see a mix of program-level implementation plans for existing programs that may continue as well as implementation plans for new programs designed as part of the third-party expansion. (The program implementation plan (PIP) addendum process required by D.04-12-048 is no longer in force.)

[34] Pursuant to Attachment C of ALJ Ruling Adopting Annual Reporting Requirements for Energy Efficiency and Addressing Related Reporting Issues, dated August 8, 2007

[35] As required by D. 15-10-028.

[36] Initial Business Plans were filed January 17, 2017 and subsequently approved via Commission Decision 18-05-041 in June 2016. Program administrators may file a subsequent business plan of their own accord or in the instance that they fail to meet specific portfolio review criteria as laid out in D. 18-05-041, including a failure to: meet energy savings goals; be cost-effective; or maintain a budget under the authorized cap.

Implementation plans for *existing programs* that will be continued by the IOUs during the third-party process will be posted to the California Energy Data and Reporting System (CEDARS) on http://www.eestats.cpuc.ca.gov) after a brief public review opportunity via CAEECC.

Implementation plans for *new programs,* developed as part of the third-party process, will be reviewed subsequent to a contract signed between an IOU and a third-party implementer and within the sector-specific Peer Review Group for that contract.[37]

Implementation plan updates are likely to follow guidance provided in D.18-01-004, which recognizes that implementation plans will be initially posted at the conclusion of the third party solicitation process and requires IOU program administrators' implementation plans to be "developed and posted, consistent with the requirements of D.15-10-028, within 60 days after contract execution." As of January 2019, the timing and nature of updating implementation plans that flow from successful third-party solicitation(s) has yet to be determined. However, the IOU program administrators, CPUC staff, and stakeholders, as part of the third-party Procurement Review Group(s) overseeing solicitations, are developing process that will guide implementation updates.

If a REN or CCA desires to modify an existing implementation plan, it should notify the appropriate utility and CPUC staff, and document the changes on the EEStats website, utilizing the same process by which the IOUs make changes to their implementation plans.

3. **Counting of Savings.** The reporting of ex ante savings estimates in the compliance filings is subject to Rule VI on ex ante review. When estimating ex ante savings values for either portfolio planning or accomplishment reporting the IOUs, RENS and CCAs shall use values and methods from the most recent version of Database for Energy Efficient Resources (DEER) if the measure values are available. If DEER values and methods are not available, the IOUs, RENs and CCAs may propose new values for staff review and approval, subject to Rules VI 4-6. The protocols for developing ex post savings estimates are provided in the California Energy Efficiency Evaluation Protocols,[38] updated in D.09-05-037, and through DEER updates.

[37] See "Energy Efficiency Programs Implementation Plan Template" at Implementation Plan Template on EEStats

[38] April 16, 2006 ALJ Ruling in R.01-08-028

The definition of peak megawatt load reduction contained in the most recently adopted DEER shall be used to estimate and verify peak demand savings values. The DEER method utilizes an estimated average grid level impact for a measure between 2 p.m. and 5 p.m. during a "heat wave" defined by three consecutive weekdays for weather conditions that are expected to produce a regional grid peak event.[39] The new DEER peak timeframe of 4 p.m. to 9 p.m. will replace the existing hours on January 1, 2020 (Resolution E-4952).

VI. Ex ante Savings and Review

This section explains the annual timeline of the Rolling Portfolio process to determine ex ante values, and the role of CPUC staff, IOU's and stakeholders in arriving at those values.

1. **CPUC Oversight of Ex Ante Values.** The estimated energy savings values for energy efficiency measures used for planning and reporting accomplishments for energy efficiency programs, referred to as the ex ante values, are subject to the review and approval of CPUC staff. The ex ante review process must be managed by CPUC staff because it involves judgments that can influence both the development of performance targets and the measurement of program achievements (D.05-01-055, p.120). Due to the conflict-of-interest concerns the IOU Portfolio Managers would not be the appropriate entities to manage or directly contract for the ex ante review process (D.05-01-055, p.121).

2. **DEER and non-DEER measures and workpapers –** Non-DEER workpapers must use DEER assumptions, methods and data

   IOUs are instructed to use DEER values as starting points and/or apply the DEER methodologies for estimating the non-DEER parameter value for cases in which any of the specific parameters of an IOU installation differ from the assumptions that form the basis of a DEER measure. The utilities cannot replace DEER assumptions and values with their

[39] D.06-06-063 OP 1. The DEER version adopted in D.12-05-015 utilizes a 3-day "heat wave" that occurs on consecutive days in June through September such that the three consecutive days do not include weekends or holidays, and where the heat wave is ranked by giving equal weight to the peak temperature during the 72-hour period, the average temperature during the 72-hour period and the average temperature from noon – 6pm over the three days.

preferred values unless the CPUC Staff agrees with their proposal for such replacements (D.12-05-015, p.331). Non-DEER values may not be used without CPUC Staff approval.

DEER measures are located in the official Ex Ante database (EAdb). Non-DEER workpapers are typically new measures that have values from sources other than what is in the DEER ex ante database. These may use some values in the DEER ex ante database but the energy savings are determined externally and do not just adopt an energy savings value in DEER.

Workpapers must use DEER assumptions, methods, and data in the development of non-DEER values when available/appropriate and shall follow CPUC Staff direction relating to the appropriate application of DEER to non-DEER values. Any proposed workpaper measure definitions that are different from DEER definitions should be calculated using DEER reference impacts (Statewide Deemed Workpaper Rulebook v.2.0, p.18). DEER is updated on an annual basis. Workpapers must use the appropriate DEER version based on their program implementation year.

If DEER values and methods are not available, new values may be proposed for CPUC Staff review and approval. For non-DEER measures, DEER values should be used as the starting point. In cases where any of the installation parameters differ from the assumptions for the DEER measure, the Implementer should apply DEER methodologies for estimating the non-DEER parameter value. Non-DEER values may not be used without CPUC Staff approval. Direct replacement of DEER measures is not allowed in workpapers (Statewide Deemed Workpaper Rulebook). Workpapers can be found at www.deeresources.net.

3. **Freezing of Ex Ante Values.** The Rolling Portfolio schedule for review and approval of ex ante values was established in D-15-10-028 (see Appendix F here; Appendix 6 in the Decision). The Decision sets a "January 1 deadline for IOU's to update their workpapers to reflect changes in DEER values adopted by the CPUC earlier in September of the previous year. These set of workpapers are also referred to as *Phase 1 workpapers*. Workpapers for new measures, and workpapers that do more than just update values to conform with revised DEER values, can be submitted by IOU's at any time or on the first and third Monday, respectively (D.15-10-028, p.84) and are referred to as Phase 2 workpapers. Upon approval by CPUC staff, the ex ante values are frozen until the workpaper is superseded by a revised workpaper or if the measure expires by virtue of the guiding disposition . This freeze of *ex ante* energy savings values applies both to energy efficiency measures contained in the DEER and non-DEER measures covered by workpapers which are developed by IOUs and other program implementers. Unreviewed non-DEER workpapers are granted interim approval

(D.12-05-015, p.334). Interim approval indicates that all values and approaches have been approved until a formal review occurs. If a formal review of an interim approved work paper requires significant changes to be made, then those significant changes are applied prospectively from the time of the completed review and the new values are then frozen and entered into the non-DEER database. In the case of an error such as using the wrong parameter values, the changes will be made retroactively. All active workpapers are posted at the workpaper website (www.deeresources.net).

4. **Mid-year updates of Ex Ante Values.** Ex ante values should be adopted and held constant throughout the year. However, mid-year updates of ex ante values are warranted if newly adopted codes or standards take effect during the year. These changes are known at least one year ahead of their effective date. The IOUs shall make appropriate adjustments to their participation and incentive calculation rules as well as update their ex ante value calculations in response to codes and standards changes (D.12-05-015, p.324). IOUs, RENs and CCAs are expected to update non-DEER workpapers with the latest Codes and Standards updates. CPUC staff may perform mid-year review of any non-DEER workpapers with interim approval and require revisions to those workpapers. Mid-year workpaper review shall follow the Phase II review process outlined in the Rolling Portfolio schedule in D.15-10-028, Appendix 5; p.2).

5. **Ex-Ante Review of Non-DEER Measures.** For non-DEER measures, the IOUs are instructed to use DEER values as starting points and/or apply the DEER methodologies, where appropriate, for estimating the non-DEER parameter value for cases in which any of the specific parameters of an IOU installation differ from the assumptions that form the basis of a DEER measure. D.12-05-015 directed the IOUs to update their WPs with all applicable updated DEER values (D.12-05-015, p.290). The current process allows only Program Administrators (PAs) to submit workpapers for review, a Third Party must submit a workpaper through a PA. The PAs do not have the option to replace DEER assumptions and values with their preferred values unless the CPUC Staff agrees with their proposal for such replacements (D.12-05-015, p.326). Additionally, PAs must utilize the latest information available, including the CPUC's most recently available evaluation results, when updating or developing new workpapers (D.12-05-015, p.332). Current and past evaluation results are available at https://pda.energydataweb.com. All ex ante values are to be updated or developed in consideration of the latest information available, including Unit Energy Savings (UES), Effective Useful Life (EUL), Installation Rate (IR), NTG and Cost. CPUC staff reviews all utility proposed non-DEER assumptions and values. PAs work with CPUC Staff, following the workpaper and non-DEER workpaper submittal, review and approval process that was originally issued in the November 18, 2009 ruling and updated in D.10-12-054,

D.11-07-030, D.12-05-015, and D.15-10-028.[40] CPUC Staff's review of "interim approval" workpapers or new workpapers submitted mid-year adheres to the Phase 2 workpaper review process, including the dispute resolution process described in Appendix D.

6. **Installation Rate for DEER and non-DEER Measures.** All deemed measures have an installation rate, which is the ratio of the number of verified installations of that measure to the number of claimed installations rebated by the utility during a claim period (D.11-07-030, p.22). The installation rate is reported separately in claims and not included in the reported savings for the measure. For any measures not listed in the DEER database, the installation rate is be assumed to be 1.0. In their workpapers, PA's include the proposed installation rates for the measure covered by a workpaper. The Gross Savings and Installation Adjustment (GSIA) is a DEER adjustment factor that combines the Realization Rate and Installation Rate. It is dependent on both the measure technology and how the measure is delivered. The GSIA table can be accessed at www.deeresources.com. [41]

7. **Establishment of Baseline for use in Establishing TRC Savings and Costs. T**he approach to establish a baseline for ex ante gross savings values requires the review of the evidence related to one of the three baseline choices: (1) new equipment that is normal replacement, turnover or replacement due to normal retrofit and remodeling activities , and new construction (NC); or (2) the pre-existing equipment used in the program-induced accelerated replacement (AR) case. For new equipment choices that are selected under the NR and NC cases and are subject to existing regulations, codes or standards, the baseline equipment is determined by the regulation, code, or industry standard. The customer's reason for equipment replacement could alter the baseline choice, depending on whether compelling evidence demonstrates that the replacement was a program induced accelerated replacement (D.11-07-030, p. 40, Appendix I to Attachment B). Resolution E-4818 provides measure level baseline assignment and guidance to establish eligibility for an accelerated replacement baseline treatment.

   a. In the cases when there is no regulation, code, or standard that applies, which would normally set the baseline equipment requirements, the baseline must be established using

[40] November 18, 2009 ALJ Ruling in A.08-07-021. D.09-09-047 OP 4 states that, "Review of completed IOU work papers regarding ex-ante savings estimates are subject to Commission Staff review and approval, as set forth in an ALJ Ruling of November 18, 2009 in Application 08-07-021, et al. Each IOU shall cooperate with Commission Staff to allow upfront consultation regarding such work papers.

[41] Log in to the READI portal accessed through www.deeresources.com. Then select either the official ex-ante database (EAdb) or the preliminary ex ante review database (PRdb). Then click on the tabs: Support Table, Cost Effectiveness and GSIA value.

a "standard practice" choice. For purposes of establishing a baseline for energy savings, we interpret the standard practice case as a choice that represents the typical equipment or commonly-used practice. Resolution E-4939 establishes the standard practice baseline definition and baseline selection process.

b. For the case of program-induced accelerated replacement, the remaining useful life (RUL) of the existing equipment is to be used as the starting assumption for the period of accelerated retirement. To establish the period of accelerated retirement, we recommend using one-third of the effective useful life in DEER as the remaining useful life until further study results are available to establish more accurate values (see Summary of effective useful life (EUL)-RUL Analysis for the April 2008 Update to DEER, p.2). CPUC staff has been given flexibility to utilize alternative remaining useful life values, based upon compelling project or technology specific evidence (D.12-05-015, p.348).

c. The measure or project cost utilized in an early-retirement case is the full cost incurred to install the new high-efficiency measure or project, reduced by the net present value of the full cost that would have been incurred to install the standard efficiency second baseline equipment at the end of the remaining- useful-life period. Thus, the early-retirement cost in the cost effectiveness calculation is higher than the incremental cost used in a normal-replacement case (previously referred to as replace-on-burnout), only by the time value of the dollar amount of the standard equipment full installed cost, using the adopted cost-effectiveness discount rate to calculate that time valuation.

d. A "dual baseline" must be utilized for program-induced accelerated replacement measures. The dual baseline reflects the difference between the savings that should be credited for the initial years of installation based upon the pre- existing or replaced equipment versus the savings credit in later years that should be based upon an eventual pre-existing equipment replacement assumed to occur if the measure had not been installed as part of the program. At the later date, when the pre-existing equipment would have been replaced due to normal turnover for reasons such as imminent failure or remodeling, an alternate equipment efficiency baseline should be utilized. This "dual baseline" requires two savings calculation periods:

- The remaining useful life (RUL) which DEER establishes as

  one-third of the expected useful life (EUL) for the equipment type (which may reflect the EUL of the new equipment rather than the replaced equipment). During the RUL period ("first baseline"), savings is calculated

using the full reduced energy use between the measure and the pre-existing condition. The measure cost for this period is the full cost of equipment, including installation, for the measure.

- The period between the RUL and EUL defines the second baseline calculation period. For this period, the savings are calculated based on the difference between the measure and code/regulations or industry standard practice baseline technologies. The measure cost for this period is the full cost of equipment, including installation, for the second baseline equipment measure. As discussed above, the TRC cost for an ER measure is calculated by subtracting this value discounted by the RUL number of years at the adopted discount rate from the measure cost utilized for the measure equipment in the initial baseline period.

8. **Custom Projects**. The adopted process for CPUC staff's review of custom projects is provided in Attachment B of D.11-07-030 (p.40). The Program Administrators (PA) shall follow the custom project ex ante value review process set forth in Attachment B (OP 7). Section 381.2 of the Public Utilities Code (Senate Bill 1131), effective July 1, 2019, requires the review of a proposed project to conclude within 30 business days of the CPUC receiving the complete project documentation for review. The "CPUC Staff Selection and Response Timing Protocol For Energy Efficiency Custom Projects Review" guidance document operationalizes the timing of communication on custom project document review and feedback between the PA and CPUC staff to meet this strict review timeline. This guidance document and other custom projects review guidance documents are available on the Energy Efficiency Custom Project Review Guidance Document webpage at:

   https://www.cpuc.ca.gov/General.aspx?id=4133

   The other guidance documents include:

   - Energy Efficiency Savings Eligibility at Sites with non-IOU Supplied Energy Sources
   - Statewide Custom Project Guidance Document, version 1.0
   - Statewide Project Feasibility Study template, version 1.1
   - Statewide Post Installation Report template, version 1.0
   - Industry Standard Practice, version 2.0

- Project basis as Early Retirement (ER)/Replace-on-burnout (ROB)/Normal Replacement (NR)/New Construction (NC)/Add-on Retrofit (Ret) and remaining/Effective useful Life (RUL/EUL), and Preponderance of evidence

.

9. **Heating, Ventilation, and Air Conditioning (HVAC) Interactive Effects.** Measures, such as lighting and refrigeration, have a secondary impact on heating and cooling loads and thus heating and cooling energy consumption. These "interactive effects" are appropriate for incorporation into DEER. [42] The gas and electric IOUs shall include those effects in non-DEER workpapers and custom measures and projects calculations. In its review of IOUs' workpapers and custom measures and projects, CPUC Staff shall ensure the IOUs include these effects when Staff deems that inclusion has a significant impact on the savings estimate.

10. **Persistence of Savings.** Until EM&V results inform better metrics, the IOUs may apply a conservative deemed assumption that 50 percent of savings persist following the expiration of a given measure's life (D.09-090-47, OP 49).

11. **Gross Realization Rate.** The gross realization rate (GRR) is a multiplier that addresses the likely reality that not all CPUC-approved projects undertaken by IOUs will come to fruition. Based on studies from past years' outcomes, a GRR value of 0.90 shall be applied as a conservative value to account for the difference between projected and actual energy savings for unreviewed custom projects (D.11-07-030 p. 38, OP 6).

12. **Statewide workpapers.** The CPUC in Decision D.12-05-015, p.54 states that "similar measures delivered by similar activities should have single statewide values unless recent evaluations show that a significant variation between utilities and that difference is supported by a historical trend of evaluation results".

[42] D.09-05-037, OP 3 denied the IOUs' proposal to eliminate HVAC interactive effects from DEER.

The Program Administrators (PAs) will begin submitting statewide consolidated workpapers for PY2020 in November 2018. The PAs have hired California Technical Forum (CalTF) to consolidate multiple WPs for the same measure to a single, statewide workpaper.[43]

Only one workpaper may be submitted for each set of programs/measures which are adopted by more than 1 program administrator; such workpapers have been termed "statewide workpapers" and program administrators have been directed to collaborate on such efforts.[44]

Prior to 2018, workpapers were submitted separately by PG&E, SoCalGas, SDG&E and SCE for the same or similar efficiency measures. The CPUC instructed the IOUs to submit one consolidated workpaper for each measure. The IOUs hired CalTF to consolidate their four individual workpapers. These consolidated workpapers have been submitted from the November 2018 through and through calendar year 2019. These workpapers will become effective on January 1, 2020.

VII. Evaluation, Measurement and Verification (EM&V)

The CPUC is responsible for evaluating energy efficiency programs and provides annual savings estimates to ensure that ratepayer dollars are spent cost-effectively and in accordance with the achievement of the state's energy efficiency goals.

1. **Purpose of EM&V.** The development of energy efficiency programs that deliver reliable energy savings for California's ratepayers depends on well-designed policies and methods of portfolio performance evaluation, measurement and verification (EM&V). Rigorous and strategically focused EM&V practices are required to gauge the performance of IOUs, RENs, CCAs, and Implementers, verify energy savings, improve the design and success of future energy efficiency programs and enhance the reliability of forecasted savings for resource planning purposes.

   In D.05-04-051 the CPUC ordered portfolio evaluation efforts to be structured such that they can:

[43] Ex Ante 2018-2019 Workpaper Workplan, p. 2

[44] 2017 Workpaper Guidance Memo

1) inform the program selection process,

2) provide early feedback to program implementers,

3) produce impact evaluations at the end of the funding period, and

4) feed the planning process for future program cycles.

D.07-10-032 and D.10-04-029 further updated the EM&V process.

D.16-08-019 described how the evaluation budgets for EM&V may shift and updated the schedule requirements for EM&V studies.

2. **IOU and ED Collaboration on EM&V Plan.** Per D.09-09-047, D.10-04-029, and D.12-11-015, the IOUs and CPUC staff are expected to jointly prepare an EM&V Plan in order enhance timeliness, transparency and consistency across EM&V work products and to streamline EM&V processes. The IOUs and CPUC staff are expected to adhere to the plan. D.10-04-029 set out the roles and relationships among the CPUC staff, IOUs, and stakeholders regarding Evaluation, Measurement and Verification (EM&V) of energy efficiency programs for 2010 through 2012. In D.12-05-015, the CPUC indicated that guidelines for collaboration, cooperation, and dispute resolution adopted by D.10-04-029 will continue to apply to the 2013-2014 EM&V activities.

3. **Energy Division Role in EM&V Administration.** D.05-01-055 adopts an approach to EM&V administration whereby Energy Division has management and contracting responsibilities for all EM&V impact-related studies that will be used to:

    1. Measure and verify energy and peak load savings;
    2. Generate data for savings estimates, cost-effectiveness inputs, and the CPUC's adopted performance basis; and
    3. Evaluate whether portfolio goals are met.

Additionally, in D.10-04-029 the CPUC determined that the ED is permitted to manage evaluations that may be considered process or formative evaluations. ED may, on a case by case basis, use program implementers as a vehicle for collecting EM&V data when this would clearly be more efficient.

4. **IOU Role in EM&V Administration.** D.05-01-055 adopts an approach to EM&V administration whereby IOUs may directly contract for (and serve as technical lead in managing) early EM&V, process and program design evaluations as well as market assessment studies. Managing these studies assists IOUs in selecting and managing a portfolio of programs to meet the CPUC's objectives as well as provide them with access to information on a real-time basis to improve program delivery. While soliciting input from CPUC staff, the IOUs should also take the lead in allocating CPUC-authorized funding for this category of EM&V across individual studies, develop the scope of work for each study and prepare the RFPs when needed. In their program plan applications, the IOU should also describe each type of study (including general scope of work) that they plan to manage and/or directly contract for in this category. All interested parties should have an opportunity to consider whether any of those proposed studies would create a conflict of interest if the IOU or program implementers managed and directly contracted for them.

   The EM&V budget is set at four percent of the total portfolio budget per D.12-05-015 and is split between the program administrators and Energy Division, with the program administrators responsible for 27.5 percent and Energy Division responsible for 72.5 percent. While the IOUs and Energy Division are responsible for setting budgets for the evaluation work they respectively oversee, the IOUs administer the overall budget in that they are responsible for paying evaluation contractor invoices. The program administrators' portion of the budget may be increased to a maximum of 40 percent, however an increase above 27.5 percent is subject to discussions through the EM&V planning process, as outlined in D.16-08-019.

5. **ED Role in IOU EM&V Studies.** CPUC staff's role for approval and involvement in IOU EM&V projects shall be as set forth in Attachment 2 of D.10-04-029.

   a. An IOU shall seek approval from CPUC staff before initiating EM&V ex-ante studies, or EM&V process and formative evaluations. The EM&V ex ante studies referred to here are studies conducted by an IOU to develop energy savings estimates in specific cases where there is no existing ex-ante estimate or an existing estimate is out of date and needs testing, and for which CPUC staff is not already conducting or planning to conduct a project to develop estimates for the same measure (regardless of the funding dollars). The IOU management role for developing ex-ante savings estimates or EM&V process or formative evaluations shall be under the oversight of CPUC staff, who shall have the authority to deny approval of IOU proposed projects. This authority is limited to situations where there is a conflict of interest with a contractor the IOU wishes to hire, where there is duplication or significant overlap with studies

already planned or carried out by Energy Division, or where CPUC staff can specify why a study is unnecessary or inappropriate. Energy Division's approval process for IOU's ex-ante studies, or EM&V process or formative evaluations, is limited to no more than two weeks. Any CPUC staff denial of approval shall be in writing to the IOU requesting approval. If the proposed IOUs study is not approved within the two-week timeframe, then it will be approved by default.

b. If CPUC staff expects to take three months or more to complete an ex ante study, an IOU may request to develop the ex-ante study in order to ensure more timely information. The CPUC staff may approve, or reject the request by providing the IOU, within two weeks of the IOU's request, with a written statement indicating that such rejection is due to duplication of a study that will also be completed within 3 months, conflict of interest or other specific rationale.

c. CPUC staff may make case-by-case exceptions to the CPUC-adopted firewall policy regarding program implementers in order to collect data needed for EM&V.

6. **IOU Role in Energy Division managed EM&V Studies.** All EM&V related projects undertaken by the IOUs and Energy Division, regardless of funding source, shall adhere to the same policies and procedures adopted in D.10-04-029 as EM&V-funded projects, except that such EM&V policies and procedures do not apply to projects not previously considered to be in the EM&V category. The process for the IOUs involvement in ED's EM&V studies shall supersede the process adopted in D.05-01-055, and shall be as follows:

a. CPUC staff and the IOUs will convene publicly-noticed meetings among their staff, EM&V contractors, and stakeholders to share key results and EM&V findings that might lead to improvements in the portfolio and identify best practices and possible improvements to evaluation methods. Such meetings will take place sometime around the middle of the program cycle or at such time when significant results from various EM&V projects are available. If asked by parties or stakeholders, ED or IOUs, or both, should hold short informal meetings with groups or individual organizations, to discuss EM&V work progress and results.

b. CPUC staff and IOUs will convene ad hoc meetings (approximately quarterly) among CPUC staff, EM&V contractors, IOU EM&V staff and IOU program managers to discuss work progress and results. These meetings are to provide for timely feedback to program design and implementation. The IOUs can request meetings with ED to discuss work progress and results at any time.

c. When significant results are produced by the EM&V work, and a technical report is not immediately pending, the CPUC staff and/or the IOUs will provide informal written summaries of the results to the IOUs and other stakeholders. These written summaries will be posted on the same website used for posting EM&V work plans and comments.

7. **Dispute Resolutions.** A party may file a "Motion for Evaluation, Measurement and Verification Dispute Resolution" (EM&V Motion) with the assigned Administrative Law Judge for resolution of an EM&V matter. The EM&V Motion must include a statement from CPUC staff giving its side of the dispute and documentation of an attempt at informal dispute resolution. The Administrative Law Judge may issue a Ruling to resolve the dispute. The filing party or the CPUC staff may ask that the matter be resolved by the assigned CPUC or the full CPUC. In that case, the Administrative Law Judge (ALJ) will consult with the assigned Commissioner to determine the appropriate course of action. In this situation, the assigned Commissioner or ALJ may issue a Ruling to resolve the dispute. If the assigned Commissioner determines the matter should be brought before the full CPUC, the ALJ or assigned Commissioner shall issue a Proposed Decision and allow for comment under Rule 14 of the CPUC's Rules of Practice and Procedure. An EM&V motion filed pursuant to D.10-04-029 may be used for the following purposes only:

   - Dispute over selection of an EM&V contractor;
   - Disputes about project-specific final EM&V work plans;
   - Disputes over results of EM&V studies or reports (except for Energy Division Verification Reports, which are issued via draft resolutions per D.08-12-059);
   - Disputes regarding final EM&V technical reports; and
   - Disputes concerning public vetting of EM&V projects.

8. **Public Vetting Process.** ED shall determine which EM&V projects should be publicly vetted and shall follow the process laid out in the Energy Division Straw Proposal, pages 8-11, issued by Ruling in Proceeding A.08-07-021 on July 7, 2009. CPUC staff should coordinate with other pertinent state agencies wherever such coordination enhances the State's overall energy policy goals. ED should weigh the value of public input on EM&V studies versus the extra time such input would entail.

9. **EM&V in the Rolling Portfolio.** The adoption of the Rolling Portfolio in D.15-10-028 also laid out an updated approach to ED-led impact evaluation studies. While market and process evaluations are not tied to any evaluation schedule other than that in their respective

research plan(s), impact evaluations of uncertain measures are conducted within the Rolling Portfolio schedule on an annual basis. Each year features a list of "bus stops" that are deadlines for the critical steps in the portfolio update process. Bus stops set a "reliable, regular schedule for future updates, so that any new information that 'misses a bus' can get on board when the bus rolls around to the stop the following year." The annual evaluation "bus stop" schedule flows first from the annual EM&V plan update, which is expected to be completed at the end of each year and reflect studies planned for the following year. In addition to the timeline for impact evaluation studies, the bus stop process includes deadlines for IOU workpaper updates as well as ED-determined DEER updates. D.15-10-028 as well as the EM&V Plan (will be hyperlinked when updated) provide specific information on the bus stop schedule and ongoing evaluation planning.

The EM&V funds for RENs and CCAs should be proportional to the program budgets implemented by those administrators. Additionally, EM&V budget allocation to program administrators may be increased to 40 percent on an approved and as-needed basis.

VIII. Shareholder Incentive Mechanism

This section outlines the Energy Savings and Performance Incentive (ESPI) Mechanism established in D.13-09-023, as modified through D.15-10-028 and D.16-08-019, to promote achievement of energy efficiency goals through programs. This new mechanism supersedes the Risk/Reward Incentive Mechanism (RRIM) originally adopted in D.07-09-043 and subsequently modified through a series of later decisions.

The ESPI Mechanism applies to EE program activities that began effective January 1, 2013, and will continue in effect for subsequent cycles until further notice or direction. Relevant supplemental documentation related to the ESPI include Resolutions E-3497, E-3510, E-4807, E-4897, and E-5007 which have approved IOU incentive awards for program years 2013, 2014, 2015, 2016, and 2017.

1. **Incentive Mechanism Criteria**. The ESPI mechanism complements, integrates with, and promotes EE programs and policy goals as adopted in D.12-11-015 (in Proceeding A.12-07-001 et al). The following criteria inform the design of the incentive mechanism. The incentives offered must:

- **Be effective** in spurring the utilities to a commitment to capture all cost-effective energy savings as the first priority in the loading order by fostering innovation in approaches to capture energy savings.
- **Value longer-lasting and deeper savings**. The mechanism should value efforts that achieve deeper, more comprehensive, and longer-lasting savings. The mechanism should maximize GHG reductions and encourage both market transformation and resource acquisition programs.
- **Rely on accurate, transparent, and timely** EM&V to ensure clear, fair, and timely implementation.
- **Prudently use customer funds to** ensure that customers are better off when utilities invest in efficiency instead of supply-side alternatives (D.13-09-023, p. 19).

2. **Energy Savings and Performance Incentive (ESPI) Categories.** The ESPI mechanism shall incorporate opportunities for performance incentives in the following categories:

   a. Energy Efficiency Resource Savings:

   An incentive is offered to encourage energy efficiency resource savings, paid as a combination of ex ante "locked down" and ex post verified units of savings results, according to the level of uncertainty of the measures for which savings are being claimed. The methodology for measuring resource savings is modified from previous cycles to focus on net lifecycle savings. Incentives for EE resource savings are capped at 9 percent of resource program budgets, minus funding dedicated to administrative activities, codes and standards programs, ME&O, On Bill Financing, EM&V, and CCA/RENs.

   The energy savings performance award is split between ex-ante (i.e., estimated savings pre-implementation) and ex-post (i.e., evaluated savings post implementation) savings values. IOUs may file for incentive payments for ex-ante savings in the year following the program year (PY+1) and for ex-post savings two years following the program year (PY+2). Ex-post savings values will apply to custom measures and deemed measures on the ESPI Uncertain Measure List for the corresponding year. Ex-ante values will apply to deemed measures not on the ESPI uncertain measure list for the corresponding year (Resolution E-4897, p. 5).

   b. Ex-Ante Review Process Performance:

   For performance in implementing the lock down of ex ante parameters, a performance award shall be paid based on the scoring of performance metrics in accordance with the protocol set forth in Section 7 of D.16-08-019.

The ex-ante review performance award is the product of the final IOU score and the earnings cap for the component. Each IOU's score is based on an evaluation of their respective ex-ante review activities in accordance with the metrics below (further detailed in Section 7 of D.16-08-019:

Metric Category	Adopted Weighting
1. Timing and Timeliness of Submittals	10%
2. Content, Completeness, and Quality of Submittals	30%
3. Proactive Initiative of Collaboration	10%
4. Program Administrator's Due Diligence and Quality Assurance/Quality Control Effectiveness	25%
5. Program Administrator's Responsiveness to Needs for Process and Program Improvements	25%

The award is capped at 3 percent of approved resource program expenditures. Administrative costs, On-Bill Financing Loan Pool budget, and IOU Direct Implementation Non-incentive (DINI) expenditures incurred beyond 20 percent of resource program expenditures are subtracted from the authorized resource program expenditures before calculating the 3 percent award. In case the IOU expenditures exceed the authorized budget for resource programs, the approved annual budget for the resource program category is used for calculating the caps. In that case, administrative costs, On-Bill Financing Loan Pool budget, and IOU Direct Implementation Non-incentive (DINI) expenditures incurred beyond 20 percent of resource program expenditures are subtracted out from the approved program budget.

c. Codes and Standards (C&S) Program Management Fees:

An incentive for savings from building C&S advocacy is paid as a management fee equal to 12 percent of approved C&S program expenditures, not to exceed authorized expenditures, and excluding administrative costs.

d. Non-Resource Program Management Fees:

For performance in implementing non-resource programs (which support savings based programs but in which there are no direct savings), a management fee shall be paid equal to 3 percent of non-resource program expenditures, not to exceed authorized

expenditures for these programs exclusive of administrative costs (D.13-09-023, pp. 19-20)

Incentive caps are specific to each component. If a utility does not earn up to the cap of one component, those incentives are not available to be earned under a different incentive component (D.13-09-023, p. 95, OP 3).

3. **Scaling Incentive Earnings Potential for Resource Savings.** It is the intent of the mechanism to award incentive based on net savings goals, adjusted for the effects of "free riders" and "spillover"(D.13-09-023, p. 36). For purposes of designing incentive performance metrics, incentive earnings potential are scaled in relation to the appropriate level of resource savings goals (D.13-09-023, p. 33-34). Savings incentive earnings accrue as a function of: (a) a pre-determined level of earnings potential, and (b) designated efficiency savings goals (D.13-09-023, p. 32).

The following formula derives net lifecycle goals (in units of energy savings) (D.13-09-023, p. 37):

Annualized Goals *	Target Effective Useful Life *	Target Net-to-Gross % =	Lifecycle
(in kWh, MW, MMth)	(in years)	(in %)	Net Target Goal

Earnings rate coefficients shall be calculated as the amount that correlates incentive earnings potential for resource savings with a cap of 9 percent of the approved resource program budget for each savings type, excluding funding for administrative activities, Evaluation, Measurement and Verification, codes and standards programs, On Bill Financing Loan program budgets, Marketing Education and Outreach program budget, and the Regional Energy Network/Community Choice Aggregation programs not administered by the utilities (D.13-09-023, p. 97, OP 13). The coefficient (i.e., earnings per unit of resource savings) that correlates incentive earnings with EE Net lifecycle goals is calculated based on the following formula (D.13-09-023, p. 33):

(Total incentive earnings potential) / (Net Lifecycle units of resource savings)

= Incentive Earnings Per Unit of Savings

Target EUL values of 12 years for electric measures and 15 years for gas measures, and a target NTG of 0.8 for both electric and gas measures shall be utilized in calculating lifecycle goals to emphasize the importance of challenging the IOUs to stretch their capabilities to reach higher standards of performance over time (D.13-09-023, p 37).

4. **Ex Ante Review Performance Scoring.** Energy Savings Performance Incentive scores for deemed and custom activities shall be weighted for the utility program administrators based on the proportion of deemed savings and custom measures in each utility's portfolio. The annual scores for deemed and custom activities be weighted by the fraction of portfolio annual net lifetime savings kWh and therm claims, as reported in the utility annual advice letter filed in September of each year. Combined electric and gas utilities would additionally weight their electric and gas net lifetime claims by the total incentives paid for gas versus electricity.[45]

5. **Uncertain Measures.** For custom projects and for specific "deemed" measures with ex ante parameters that are identified as highly uncertain, CPUC Staff shall require ex post evaluations as the basis for calculating savings incentive payments. The savings award for the remaining "deemed" measures will be calculated based on the locked down ex ante parameter values, and only the claimed measure count will be subject to ex post adjustment for these measures (D.13-09-023, p. 50).

   By October 31 of each year prior to the program year, CPUC Staff will identify deemed measures, in the DEER or in an IOU-submitted non-DEER workpaper, for which one or more savings parameters are sufficiently uncertain that the savings claim should be subject to ex post verification in order to be included in the incentive payment. For ESPI purposes, "sufficiently uncertain" measures are defined as those measures for which the CPUC believes the net lifetime savings of the current DEER or non-DEER savings estimate may be as much as 50 percent or more under- or over-estimated (D.13-09-023, p. 51). The resulting list is called the 'Uncertain Measure list.'

[45] D.16-08-019, p, 113, OP 19. Adopts the weighting methodology provided in the June 8, 2016 Administrative Law Judge's ruling seeking comment on Evaluation, Measurement, & Verification and Energy Savings Performance Incentive issues, p. 12.

6. **Calculating Resource Savings Incentive Awards.** Efficiency Savings and Performance Incentive awards for resource savings shall be derived as the sum of the following components that increase as a linear function up to the earnings target for each respective savings type (D.13-09-023, p. 96, OP 9):

--For savings of electric consumption:

(Units of kWh Savings) * (Earnings Rate Coefficient)

--For reduction of peak electric demand

(Units of mega-watt (MW) Reductions) * (Earnings Rate Coefficient)

--For savings of natural gas consumption:

(Units of MMTherm Savings) * (Earnings Rate Coefficient)

7. **Verification of Expenditure and Claims Data.** In order to verify Codes and Standards and non-resource program expenditures for the purposes of awarding these management fees, CPUC Staff will rely upon public versions of the CPUC's Utility Audit, Finance and Compliance Branch reports. Upon completion, the CPUC's Utility, Audit, Finance and Compliance Branch shall serve on the service list in this proceeding (or its successor) a notice of availability of the public copy of its audit report detailing its review of annual expenditures for the Energy Efficiency programmatic activity of the respective program year(s) (D.13-09-023, p. 98, OP 17).

   To avoid data discrepancy across various submissions, the IOUs must use their final official program year tracking data as the basis for all their submissions that include data associated with that specific program year. IOUs may not make any changes to the data after the final submission, save for the following provision: if an IOU discovers any errors in the data after the final tracking data is submitted, then the IOU must update its tracking data in CEDARS and notify the Energy Efficiency Branch Program Manager; the Utility Audit, Finance and Compliance Branch Program Manager; and all parties to the active energy efficiency proceeding (i.e., Proceeding R.13-11-005 or its successor) of any such changes (D.18-05-041, pp. 131-132).

8. **Resource Savings Claim and Expenditure Eligibility.** IOUs should only include savings for measures installed (the year the measure has been physically installed and became

operational to deliver savings) in the same year they are claiming incentives for.[46] IOUs should indicate the measure installation date in their data submissions.

9. **Approval of Incentive Claims.** In accordance with the schedule set forth in Attachment 6 of D.15-10-028, an annual Tier 3 advice letter shall be filed for approval of incentive claims in accordance with the schedule adopted in this decision. The first annual advice letter will occur beginning in 2014, and continuing annually thereafter, to claim recovery of Efficiency Savings and Performance Incentive (ESPI) incentive elements in the following sequence (D.13-09-023, pp. 95-96, OP 4):

   Claims for ESPI awards covering the first program year (PY) of each cycle shall be made during the first following year (PY +1) for the following ESPI elements:

   - Non-Resource program management fee
   - Codes and Standards program management fee
   - Ex ante performance award
   - Preliminary ex ante locked down deemed measure savings award

   Claims covering the first program year of each cycle shall be made in the second following year (PY +2) for the following ESPI elements:

   - Custom projects
   - Ex post verified deemed measure savings
   - True up of preliminary ex ante lockdown award based on verified counts.

10. **Dispute Resolution of Ex Post Evaluations.** If necessary to resolve disputes over ex post results, and only after other more informal efforts at resolution have been exhausted, parties may invoke the dispute resolution process established in D.10-04-029, in accordance with the process set forth in Attachment 4 of D.13-09-023.[47]

---

[46] The annual installation date based claims requirement was introduced in D.04-09-060 (at 33 and Findings of Facts 14) , clarified and reiterated in D.05-04-051 (at 55, Findings of Fact 36-42, Conclusion of Law 3, Ordering Paragraph 17), D.05-09-043 (at 84) and again in Resolution G-3510 (at 13), Resolution E-4807 (OP.10), and Resolution E-4897 (at 15-16) .

[47] D.13-09-023, p. 96, OP 9.

11. **References.** See the following attachments and references below for further information on the ESPI process.

    a. http://www.deeresources.com/index.php/espi

    b. http://www.cpuc.ca.gov/General.aspx?id=4137

IX. Third Party Solicitation Process

Senate Bill (SB) 350 increased reliance on pay-for performance strategies and meter based energy savings evaluation for energy efficiency programs in California. These requirements increase the reliance on third party energy efficiency program and delivery which are inherently performance based. This legislation resulted in the following:

- The CPUC adopted D.16-08-019 setting a minimum target of 60 percent of the utility's total budgeted portfolio, including administrative costs and EM&V, (up from the previously target of 20 percent) to be third-party designed and delivered by the end of 2022 via a stepped approach (see below). The rationale for this requirement reflects the CPUC's view that the utility role should focus more on the design and management of the energy efficiency portfolio overall, and less on individual program design and implementation.

  D.16-08-019 emphasized that third party design and implementation should become the default for much of the portfolio, unless the utilities can justify why use of utility personnel should continue. This same decision defined third-party as a program primarily designed and presented to the utility by a third party, in addition to delivered under contract to a utility (p. 69 – 70). Specifically the Decision stated; "A program must be proposed, designed, implemented, and delivered by non-utility personnel under contract to a utility program administrator." This direction requires clear solicitation protocols amid a likely increase in third-party IOU program administration contracts. Solicitation efforts aim to reach the 60 percent third-party target, using the new third-party definition adopted in D.16-08-019. via a phased approach (D.18-05-041) of minimum percentages of 25 percent by December 19, 2019; 40 percent by December, 31, 2020; and 60 percent by December, 31, 2022.

- In January of 2018 the CPUC adopted D.18-01-004. This decision addresses the required process for third party solicitations in the context of pre-existing rolling portfolio structure for energy efficiency programs overseen by the investor-owned utility (IOU) program administrators (PAs); The CPUC adopted D.15-10-028 in October of 2015, which established a "Rolling Portfolio" process for regularly reviewing and revising energy efficiency program administrators' portfolios.

1. **Two-Stage Solicitation Process:** A two-stage process should be used unless there is a specific -schedule related- reason that a shortcut must be used where the first stage is a short request for abstract and the second stage is a full request for proposals. The first stage is the Request for Abstract (RFA) Stage. In this stage, third-party implementers would provide a short abstract summarizing their proposed program, approach, qualifications and experience, and indicative pricing. If there was a robust response, the IOUs would then issue a request for proposal (RFP) soliciting detailed offers from qualified bidder respondents. RFP responses would then be evaluated with qualitative and quantitative criteria and would also utilize inperson- interviews. The most competitive participants would then be notified that they are short-listed and would proceed to the contract negotiation phase. D.18-01-004, p. 7

2. **Scoring Solicitations:** Once participant submit their abstracts in the RFA phase described above, "[t]he IOUs would then select potentially qualified respondents following scoring and evaluation of the abstracts including the viability and usefulness of the programs proposed in the RFAs." The RFA shortlist results are not required to be shared among PAs. Doing so may not only be impractical, but also may violate expectations of confidentiality on the part of bidders and it is not clear what benefits would override those considerations. Each PA is ultimately responsible for its own solicitation process, while as much informal communication and coordination among the PAs as possible is encouraged (D.18-01-004, p. 48). A separate scoring process will be developed and implemented in the Request for Proposal (RFP) phase of the solicitation process.

   D.18-01-004 also established a stakeholder advisory groups known as a "Procurement Review Group" (PRG) comprised of Energy Division staff and eligible non-market participants to consult with the IOUs in the design of the RFP and the evaluation of bids on a quarterly basis (see Section X.2. below for more information on the PRG).

3. **Solicitation Schedule:** Implementation plans for third party programs will necessarily be developed and posted after solicitations have concluded. However, the timely and up--to-date- posting of those implementation plans as soon as practical, but no later than 60 days

after contract execution, is still required. For programs that will be bid out in later rounds of the solicitation schedule, posting of implementation plans is still required after the CPUC's decision on the business plans, to reflect programs available to customers in the interim before additional third-party solicitations are scheduled to take place.

4. **Energy Division Review of Solicitations:** Any contract that has a value of $5 million or greater and/or a term of more than three years, must be submitted to the CPUC for approval via a Tier 2 advice letter. Contracts may be submitted in batches, at the discretion of the contracting utility. CPUC staff should ensure the contracts filed by advice letter comply with the utility's approved business plan, all CPUC decisions and direction, are not the result of a biased solicitation process, and do not thwart the intentions of successful program design, delivery, and realized savings, for some or all sectors and subsectors of customers. CPUC staff always can review any contract informally at any time, including those that do not meet the dollar or length thresholds identified above for required submittal by advice letter.

   In addition to the advice letter process described above for contracts valued at $5 million or greater and/or a term of more than 3-years, CPUC staff will also serve on the PRG utilized for general solicitation review…"Each utility will have at least one PRG, and at its discretion, may utilize more than one PRG, if the IOU prefers to tailor the PRGs for specific market segments or other purposes. The PRGs shall consist of non-financially interested- parties, representing diverse stakeholder interests, as well as CPUC staff, including ORA." D.18-01-004, p. 35

5. **Independent Evaluator's (IEs) Role in Solicitation Process:** In D.18-01-004, p. 2, 9, 33, and 36-38 the CPUC requires the IOUs to utilize Independent Evaluators to support the solicitation process. More specifically, the Decision directs the IEs utilized by the utilities for these energy efficiency third party solicitations to be hired specifically for this purpose and to possess energy efficiency expertise. The role of the IEs is designed to lend arms length- expertise evaluating the fairness of the conduct and results of the solicitation process by the IOUs. In addition, IOUs should consult with Energy Division staff during the selection process and the Energy Division director should have final approval over the pool of IEs selected by each utility.

   "…The IEs monitor the entire solicitation process and provide a written report at the end that is delivered formally to the CPUC as part of the contract evaluation and approval process." Because not all third party contracts will be submitted for formal approval by the CPUC, a formal IE report will accompany only those contracts required to be submitted via a

Tier 2 advice letter (i.e., those contracts valued at $5 million or more and/or with terms of longer than three years), (D.18-01-004, p. 37).

The IEs provide recommendations on all solicitations which shall be submitted to the members of the PRGs. The IEs should also monitor the entire process from RFA design to contract execution for all solicitations and contracts, not only those required to be submitted to the CPUC for approval. For the entire solicitation process the IE will serve as a consultant to the PRGs by participating in PRG meetings and shall also provide assessments of the overall third party solicitation process and progress on at least a semi-annual basis to the CPUC via reports filed in the relevant energy efficiency rulemaking. The CPUC may, as this process progresses, see a need for a stronger IE function. The CPUC therefore reserves the right, at any point in the future, to hire an IE or multiple IEs itself, as part of our evaluation and oversight functions. (D.18-01-004, p. 38)

6. **Workforce Standards**: The workforce standards are applied to non-residential HVAC and lighting projects for both existing utility programs and 3P solicitation starting July 1, 2019. These are intended as a starting point for potentially more far-reaching requirements in the future. Incentivized projects of $3,000 for HVAC and $2,000 for lighting will have specific criteria requirements of installation technicians[48]. (D.18-10-008, pg. 76-77)

With respect to third party contracts for the workforce, the utilities will propose a set of requirements for the contract among the modifiable terms with specific recommendations for each market or sector to identify the applicable workforce installer standards that would reduce the risk of lost energy savings from poor installation of energy efficiency measures including any specific skills certification requirements and/or broader occupational training and experience requirements (such as journeymen and apprenticeship requirements). D.18-01-004, p. 40 - 41, in OP 9, all EE program administrators shall define "disadvantaged worker," for purposes of their

[48] Requirements of installation technician doing work onsite. For Lighting: California Advanced Lighting Controls Training Program (CALCTP) certification. For HVAC: Completed or enrolled in a California or federal accredited HVAC apprenticeship; Completed at least five years of work experience at the journey level as defined by the California Department of Industrial Relations and passed a practical and written HVAC system installation competency test and received credentialed training specific to the installation of the technology being installed; or Has a C-20 HVAC contractor license from the California State Contractor's Licensing Board.

EE portfolios and tracking metrics or indicators associated with them, as an individual that meets certain criteria[49] (D.18-10-008, pg. 79).

X. Advisory Groups

The CPUC's approach to policy making and practicing administrative law relies on a combination of formal and informal public input that support the development of a record in an administrative proceeding.

For energy efficiency proceedings, the CPUCs continues to promote informal advisory group opportunities for obtaining stakeholder input:

1. **California Energy Efficiency (EE) Coordinating Committee (CAEECC):** In D.15-10-026, (p. 71 - 72) the CPUC established a statewide coordinating committee. Per this decision, "There is no need for Program Administrator (PA)-specific Program Advisory Groups (PAGs), as the PAs all deal with a similar set of issues. The focus now can be on how the PAs incorporate the ideas and concepts developed by the coordinating committee into their specific portfolios.

   A single coordinating committee should facilitate greater statewide coordination and harmonization of statewide programs across PAs. As we said in D.05-01-055, "we expect the PAs to ensure that statewide residential and nonresidential program offerings take advantage of best practices and avoid customer confusion by being as uniform and consistent as possible…Subcommittees should be along sector lines, not separated by PA.

   a. Scope of Work for CAEECC:
      i. Provide input into development of business plans prior to and throughout the drafting process (see notes below re scope of input and timing);
      ii. Provide input into development of implementation plans, again, prior to and throughout the drafting process;

[49] Disadvantaged Workforce Criteria: Total household income is below 50 percent of AMI; is a recipient of public assistance; lacks a high school diploma or GED; has history of incarceration of more than one year; is a custodial single parent; is chronically unemployed; was in the foster care system; has limited English proficiency; or lives in a high unemployment ZIP code that is in the top 25 percent of only the unemployment indicator of the CalEnviroScreen Tool.

iii. Provide input into development of annual budget advice letters, again, prior to and throughout the drafting process; and,

iv. Provide input into development and revision of metrics for inclusion in business plans and implementation plans as part of i and ii.

v. Provide a clearinghouse for discussion of the scope and schedule of other stakeholder processes.

In this same decision, the CPUC acknowledged, "the Coordinating Committee will obviate the need for some current stakeholder processes. From a practical perspective, some current processes will have to give way, as stakeholders and CPUC Staff have time for only so many processes…(We) repeat here the admonition we gave in D.05-01-055: we provide general guidance and expectations for the [stakeholder] group structure, but purposefully do not specify every implementation detail."

D.18-05-041 directed the PA's Annual Budget Advice Letter (ABAL) proposals be shared with CAEECC. Additionally, this same decision stipulated, "…the program administrators shall host a forum for stakeholder input on implementation plan development for new programs either through the California Energy Efficiency Coordinating Committee or another workshop hosted by the program administrators following the issuance of this decision."

D.18-10-008 which established EE related workforce requirements and third-party contract terms and conditions also directed the CAEECC to convene a stakeholder process, no later than July 1, 2020, to consider further application of workforce standards beyond those adopted in this decision including any additional lighting controls certification. This will allow time for consideration of experience with the standards required herein.

For more detailed information about the CAEECC including role of the PAs vs. the Coordinating Committee, Energy Division Staff participation on the Committee, sub-committee guidance, and meeting schedule / agenda development, etc. please see: D.15-10-028. For more information about the CAEECC's roll in reviewing PA Rolling Portfolio submissions please see: D.18-05-041

2. **Procurement Review Group (PRG):** In D.02-08-071, p. 24, the CPUC established stakeholder advisory groups known as "Procurement Review Groups (PRGs) comprised of eligible non-market participants to consult with the IOUs in the design of the RFP and the evaluation of bids on a quarterly basis; "In order to ensure that interim procurement contracts entered into by the utilities are subject to sufficient and expedited review and pre-approval, we will require each utility

to establish a PUC-authorized "Procurement Review Group" whose members, subject to an appropriate non-disclosure agreement, would have the right to consult with and review the details of, and assess proposed contracts and provide written comments to the IOUs before they submit contract(s) to the CPUC."

Over the years the usefulness and purpose of these stakeholder groups became questionable given the changing regulatory landscape and competition for stakeholder engagement resulted in limited stakeholders for these purposes. In D.18-01-004, Section 3.4 the concept of the PRG was resurrected again, "We agree there is value in continuing the PRGs, which have existed in some form for some time. The PRGs are a useful vehicle for following the solicitation processes and providing feedback to the PAs. Continuing the PRGs balances the goals of oversight and transparency, as well as timely feedback, with the desire to have an expeditious solicitation process."

Each utility has at least one PRG, and at its discretion, may utilize more than one PRG if the IOU prefers to tailor the PRGs for specific market segments or other purposes. The PRGs shall consist of non--financially interested- parties, representing diverse stakeholder interests, as well as CPUC staff, including ORA. In terms of the PRG's ultimate responsibilities, we expect the PRGs to be involved at all levels in the solicitation process, including:

- Draft RFA review
- Review of RFA bids and shortlist
- Draft RFP review
- Review of RFP bid selection criteria
- RFP shortlist and selected contractor review
- Review IE evaluations of all solicitations.

D.18-05-041 requires PAs to "…consult the new energy efficiency PRG and present its proposal to meet the Annual Budget Advice Letter (ABAL) review criteria in future program. For more information about PRGs including direction related to PRG composition, meeting, the PRG Handbook and meeting minutes please see:

https://www.caeecc.org/third-party-solicitation-process

XI. Affiliate and Disclosure Rules

1. **Transactions with IOU Affiliates.** To avoid anti-competitive behavior and cross- subsidies between IOUs and their affiliates, all transactions between the IOU administrator and any implementer that is an affiliate of PG&E, SCE, SDG&E or SoCalGas are banned (D.05-01-055).

2. **Treatment of Energy Efficiency Service Providers.** The IOUs, RENs and CCAs will not provide preferential treatment to any provider of an energy efficiency service that uses energy efficiency program funds.

3. **Conflict of Interest.** Bidders for EM&V contracts, including program design evaluation and market assessment studies, shall provide full disclosure of any potential conflicts of interest, including all current non-energy efficiency related contracts with IOUs, RENs, CCAs and program implementers. Each utility should have at least one PRG, with members who are not financially interested in solicitation results and represent diverse stakeholder interests, to provide feedback during the third party solicitation process. The PRGs should be involved at all stages of the solicitation process participants should be eligible for intervenor compensation (D.18-01-004, pg. 57).

XII. Process and Procedural Issues

1. **Energy Efficiency Policy Manual Disclaimer**. This Policy Manual is a summary of CPUC rules for energy efficiency. It does not supersede any CPUC Decision. IOUs, RENs and CCAs are required to meet the orders of previous CPUC decisions regardless of whether or not they are included in this policy manual. If there is any conflict between this Policy Manual and a CPUC decision, the CPUC's decision controls.

2. **Modifications to Policy Manual and Related Rules.** Energy Division will update this manual as needed based on significant changes related to Energy Efficiency policy. Due to the unknown frequency of policy changes, and potential lag time in updating this manual, interested parties are encouraged to use other sources to receive the most up to date information keeping in mind that some references to older decisions in this manual may have been superseded by more recent CPUC guidance. It is the responsibility of the reader to ensure the most recent policies, pertinent to their policy related questions, are referred to.

3. **Complaints and Dispute Resolution.** Any program proposal for energy efficiency funding must describe a dispute resolution process to be used in dealing with complaints from end-use gas or electric consumers participating or attempting to participate in the program. In programs where the IOUs, RENs, and CCAs hold contracts with third parties, those contracts will also be required to include dispute resolution provisions.

APPENDIX A: ADOPTED FUND SHIFTING RULES

As modified by D.12-11-015, 12/22/2011 ACR (R.09-11-014), D.09-09-047, D.09-05-037,D.07-10-032, D.06-12-013, andD.05-09-043

Fund Shifting Category	Shifts Among Budget Categories, Within Program	Shifts Among Programs, Within Category	Shifts Among Categories
Statewide Program (except ET, ME&O, and C&S)	No formal Commission review/approval required	No formal Commission review/approval required	Advice letter required for shifts >15% between statewide program categories in either direction (based on each category funding level) per annum. See rules below for shifting away from ET, ME&O, and C&S.
Third Party Programs (competitively bid) (See Notes Below)	No formal Commission review/approval required	No formal Commission review/approval required	Advice Letter required for shifts >15% between statewide and Third Party (competitively bid) program categories in either direction (based on total category funding level) per annum. Advice Letter is required if allocation to competitively bid programs falls below 20% of total portfolio funding.
Local Government and Institutional Partnerships (See Notes Below)	No formal Commission review/approval required	No formal Commission review/approval required	Advice Letter required for shifts >15% between statewide and Local Government and Institutional Partnership program categories in either direction (based on category funding level) per annum.

Notes

a) Any fund shifting will be shown on the quarterly fund shifting report which will be provided to the Energy Division beginning 7/1/13 (and every 90 days thereafter).

b) No program or sub-program shall be eliminated except through the Advice Letter process.

c) For adding new programs, except those chosen during a competitive process, an Advice Letter must be filed.

d) "Third Party Programs" include any third-party programs that are competitively bid and count towards the percentage competitive bidding requirement. In aggregate, these programs constitute a twelfth category (in addition to the 11 statewide program categories), subject to the 15 percent fund-shifting rule requiring an Advice Letter if the amount transferred from this category is greater than 15 percent in either direction. Fund-shifting of any amount within this twelfth program category is allowed without an Advice Letter.

e) "Local Government and Institutional Partnerships." In aggregate, these programs constitute a thirteenth category (in addition to the 11statewide program categories, and third-party programs), subject to the 15 percent fund-shifting rule requiring an Advice Letter if the amount transferred from this category is greater than 15 percent in either direction. Fund-shifting of any amount within this thirteenth program category is allowed without an Advice Letter.

f) "Other Programs" include local programs and any other programs not capture in the aforementioned categories. In aggregate, these programs constitute a fourteenth category (in addition to the 11statewide program categories, third-party programs, and local government and institutional partnerships), subject to the 15 percent fund- shifting rule requiring an Advice Letter if the amount transferred from this category is greater than 15 percent in either direction. Fund-shifting of any amount within this fourteenth program category is allowed without an Advice Letter.

g) The 15 percent fund-shifting rule, requiring an Advice Letter if the amount transferred from this category is greater than 15 percent in either direction, is applied to the category funding level in the authorized budget adopted in the compliance filing pursuant to the most recent authorizing decision (or the decision itself, if there is no compliance filing).

h) Utility program administrator may carryover/carryback funding during the current program cycle without triggering a review/approval process.

i) Changes to incentive levels or modifications to program design (such as changes to customer eligibility requirements) will not trigger Energy Division or formal CPUC review. Program administrators will notify the CPUC of all incentive level changes that take place through the Program Implementation Plan Addendum process.

j) Advice letters are subject to General Order (GO) 96B.

k) Marketing Education & Outreach and EM&V programs are subject to overall caps adopted in D.09-09-047 OP 13. Program administrators may request fund shifting augmentations if they wish to increase budget caps. In addition, the fund shifting changes adopted in D.09-09-047 are not intended to change Rule II.2 of the Energy Efficiency Policy Manual V.5 as applied to EM&V and ME&O spending below the adopted caps, nor to change the fund shifting rules for C&S or Emerging Technologies programs.

APPENDIX B: GLOSSARY

COMMON ENERGY EFFICIENCY TERMS AND DEFINITIONS

Adopted Program Budget

The program budget as it is adopted by the CPUC. Inclusive of costs (+/-) recovered from other sources.

Advanced Technologies

Measures or processes which exceed the efficiency or thermodynamic performance of standard energy using equipment or processes.

Affiliate

Any person, corporation, utility, partnership, or other entity 5 percent or more of whose outstanding securities are owned, controlled, or held with power to vote, directly or indirectly either by an administrator or any of its subsidiaries, or by that administrator's controlling corporation and/or any of its subsidiaries as well as any company in which the administrator, its controlling corporation, or any of the administrator's affiliates exert substantial control over the operation of the company and/or indirectly have substantial financial interests in the company exercised through means other than ownership. For purposes of these Rules, "substantial control" includes, but is not limited to, the possession, directly and indirectly and whether acting alone or in conjunction with others, of the authority to direct or cause the direction of the management of policies of a company. A direct or indirect voting interest of five percent (5 percent) or more by the administrator, its subsidiaries, or its affiliates in an entity's company creates a presumption of control.

Avoided Costs

Avoided costs refers to the incremental costs avoided by the investor-owned utility when it purchases power from qualifying facilities, implements demand-side management, such as energy efficiency or demand-response programs, or other wise defers or avoids generation from existing/new utility supply-side investments or energy purchases in the market. Avoided costs also encompass the deferral or avoidance of transmission and distribution-related costs. (D.08-01-006, Footnote 2)

Baseline Data

The state of performance and/or equipment that what would have happened in the absence of the program induced energy efficiency.

California Energy Efficiency (EE) Coordinating Committee (CAEECC)

In D.15-10-026, (p. 71 - 72) the CPUC established a statewide coordinating committee whose role is to facilitate greater statewide coordination and harmonization of statewide EE programs across program administrators (PAs).

Coincident Peak Demand

The metered or estimated demand of a device, circuit, or building that occurs at exactly the same time as the system peak for a given year and weather condition.

Community Choice Aggregators

Organizations created by local governments pursuant to Assembly Bill 117 for the purpose of procuring power and administering energy efficiency programs on behalf of local citizens.

Competitive Solicitation

The process whereby parties are requested to submit bids offering innovative approaches to energy savings or improved program performance.

Conservation

Reduction of a customer's energy use achieved by relying on changes to the customer's behavior which may result in a lower level of end use service.

Conservation Measures

Activities and/or behaviors aimed at reducing energy consumption.

Conservation Programs

Programs which are intended to influence customer behavior as a means to reduce energy use.

Cost Effectiveness

An indicator of the relative performance or economic attractiveness of any energy efficiency investment or practice when compared to the costs of energy produced and delivered in the absence of such an investment.

Cost-Effectiveness Tool

Avoided Cost Calculator Tool

Cream Skimming

Cream skimming results in the pursuit of a limited set of the most cost-effective measures, leaving behind other cost-effective opportunities. Cream skimming becomes a problem when lost opportunities are created in the process.

Cross Subsidization

Benefits enjoyed by one group, such as a customer class, which are funded by another group.

Custom Measures/projects

Energy efficiency efforts where the customer financial incentive and the ex ante energy savings are determined using a site-specific analysis of the customer's facility (D.11-07- 030 page 31).

Customer

Any person or entity that pays an electric and/or gas bill to an IOU or CCA and that is the ultimate consumer of goods and services including energy efficiency products, services, or practices.

Cumulative Savings

As clarified in D.07-10-032, cumulative savings represent the savings in that year from all previous measure installations (and reflecting any persistence decay that has occurred since the measures were installed) plus the first-year savings of the measures installed in that program year.

Deemed Measure

A prescriptive energy efficiency measure.

Delayed Installation

Products which are claimed as installed in a specific quarter but are likely to be installed at a later date (D.11-07-030, page 21).

Dual Test

The requirement that an energy efficiency activity pass both the TRC and the PAC cost-effectiveness test.

Effective Useful Life (EUL)

An estimate of the median number of years that the measures installed under the program are still in place and operable.

Electricity Savings

Reduced electricity use (or savings) produced by either energy efficiency investments which maintain the same level of end use service or conservation actions which usually reduce energy use by reducing the quantity or quality of the baseline energy services demanded.

Emerging Technologies

New energy efficiency technologies, systems, or practices that have significant energy savings potential but have not yet achieved sufficient market share (for a variety of reasons) to be considered self sustaining or commercially viable. Emerging technologies include late stage prototypes or under-utilized but commercially available hardware, software, design tools or energy services that if implemented appropriately should result in energy savings.

Emissions Reductions

The CPUC requires annual reporting of reduced emissions of carbon dioxide (CO2), sulfur oxides (SOx), nitrous oxides (NOx), and particulate matter (PM10) as a result of energy efficiency savings. The IOUs use the E3 calculator to compute the annual electric and natural gas emissions reductions, which are the units implemented in the year times the annual emission reduction for a

particular measure. The E3 calculator calculates values of CO2 in tons per kWh or therms; NOx and PM10 are in pounds per kWh or therms.

The following equations are from the "E3 Calculator Tech Memo" found at the following web link:

https://www.ethree.com/wp-content/uploads/2017/02/E3_Calculator_TechMemo_6d.docx

Electric Reductions: CO2 tons per year *(Emission[E][CO2])*

$$Emission[E][CO2]_y = \sum_{Q=1+(y-1)*4}^{y*4} \left(IN_{M,Q} * kWh\_wtd\_A_M * NTG_M * ER[CO2]_M \right) * IR_M * GRR_M$$

Where

y	=	year of consideration. First year of program cycle = 1.
Q	=	Quarter of the year.
INM,Q	=	# of incremental of measures implemented in quarter Q.
NTGM	=	Net–to-Gross ratio for energy for measure M, adjusted for market effects.
ER[CO2]M	=	Emission rate of CO2 in tons per kWh of measure M.

NOX and PM-10 equations are the same. Just replace [CO2] with the appropriate indicator. Note that CO2 emission rate is in tons per kWh. NOX and PM-10 are in pounds per kWh.

Gas Reductions: CO2 tons per year *(Emission[G][CO2])*

$$Emission[G][CO2]_y = \sum_{Q=1+(y-1)*4}^{y*4} \left(IN_{M,Q} * Th\_wtd\_A_M * NTG_M * ER[CO2]_{GCT} \right) * IR_M * GRR_M$$

Where

y	=	year of consideration.
Q	=	Quarter of the year.
INM,Q	=	# of incremental of measures implemented in quarter Q.
NTGM	=	Net–to-Gross ratio for energy for measure M, adjusted for market effects.
ER[CO2]GCT	=	Emission rate of CO2 in tons per therm, based on the gas combustion type (GCT) specified on the input sheet for the measure.

NOX and PM-10 equations are the same. Just replace [CO2] with the appropriate indicator. Note that CO2 emission rate is in tons per Therm. NOX and PM-10 are in pounds per Therm.

Energy Efficiency Groupware Application (EEGA)

The IOUs post reports to the EEGA webpage, which is accessible to the public: http://eega.cpuc.ca.gov.

End Use

1) The purpose for which energy is used (e.g. heating, cooling, lighting).

2) A class of energy use that an energy efficiency program is concentrating efforts upon. Typically categorized by equipment purpose, equipment energy use intensity, and/or building type.

Energy Efficiency

Activities or programs that stimulate customers to reduce customer energy use by making investments in more efficient equipment or controls that reduce energy use while maintaining a comparable level of service as perceived by the customer.

Energy Efficiency Measure

An energy using appliance, equipment, control system, or practice whose installation or implementation results in reduced energy use (purchased from the distribution utility) while maintaining a comparable or higher level of energy service as perceived by the customer. In all cases energy efficiency measures decrease the amount of energy used to provide a specific service or to accomplish a specific amount of work (e.g., kWh per cubic foot of a refrigerator held at a specific temperature, therms per gallon of hot water at a specific temperature, etc). For the purpose of these Rules, solar-powered, non- generating technologies are eligible energy efficiency measures (D.09-12-022, OP 1).

Energy Efficiency Programs

Programs that reduce customer energy use by promoting energy efficiency investments or the adoption of conservation practices or changes in operation which maintain or increase the level of energy services provided to the customer.

Energy Efficiency Savings

The level of reduced energy use (or savings) resulting from the installation of an energy efficiency measure or the adoption of an energy efficiency practice, subject to the condition that the level of service after the investment is made is comparable to the baseline level of service. The level of service may be expressed in such ways as the volume of a refrigerator, temperature levels, production output of a manufacturing facility, or lighting level per square foot.

Evaluation, Measurement and Verification (EM&V)

Activities that evaluate, monitor, measure and verify performance or other aspects of energy efficiency programs or their market environment.

Evaluation Project Budget

The project level evaluation budget as it is defined by the program administrators or Energy Division for internal program budgeting and management purposes. Inclusive of direct and allocated overhead and costs (+/-) recovered from other sources.

Ex Ante (Forecast) Values

Estimated savings values calculated based on assumptions prior to the evaluation of the portfolio cycle. These savings reflect the IOU reported savings, which are trued up with final evaluation.

Ex Ante (Forecast) Review

The review process that occurs before savings for a measure or project savings claim is "frozen" to verify that the ex ante values used to calculate the reported savings are reasonable and based on best available information.

Financial Incentive

Financial support (e.g., rebates, low interest loans, free technical advice) provided to customers as an attempt to motivate the customers to install energy efficient measures or undertake energy efficiency projects. (See Rebate)

Free Drivers

A free driver is a non-participant who adopted a particular efficiency measure or practice as a result of a utility program. (From April 2006 EM&V Protocols)

Free riders (Free Ridership)

Program participants who would have installed the program measure or equipment in the absence of the program.

Fuel Substitution

Programs which are intended to substitute energy using equipment of one energy source with a competing energy source (e.g. switch from gas furnaces to electric resistance heating).

Funding Cycle

Period of time for which funding of energy efficiency programs have been approved by the CPUC.

Gas Savings

Reduced natural gas usage (or savings) produced by either energy efficiency investments which maintain the same level of end use service or conservation actions which can reduce energy use by reducing the quantity or quality of the baseline services provided.

Gross Savings

Gross savings count the energy savings from installed energy efficiency measures

Irrespective of whether or not those savings are from free riders, i.e., those customers who would have installed the measure(s) even without the financial incentives offered under the program. Gross savings are adjusted by a net-to-gross ratio to produce net savings, that is, to remove the savings associated with free riders.

Gross Realization Rate

Gross Realization Rate (GRR) is the ratio of achieved energy savings to predicted energy savings; as a multiplier on Unit Energy Savings, the GRR takes into account the likelihood that not all CPUC-approved projects undertaken by IOUs will come to fruition.

Hard to Reach, Residential

Those customers who do not have easy access to program information or generally do not participate in energy efficiency programs due to a language, income, housing type, geographic, or home ownership (split incentives) barrier. These barriers are defined as:

Language – Primary language spoken is other than English, and/or

Income – Those customers who fall into the moderate income level (income levels less than 400 percent of the federal poverty guidelines and/or

Housing Type – Multi-family and Mobile Home Tenants, and/or Geographic – Businesses in areas other than the San Francisco Bay Area, San

Diego area, Greater Los Angeles Area (Los Angeles, Orange, San Bernardino, Riverside and Ventura counties)or Sacramento, and/or

Home Ownership – Renters

Incremental Measure Cost

The additional cost of installing a more efficient measure calculated from the price differential between energy-efficient equipment and services and standard or baseline state. These costs include any direct or indirect incremental cost that is attributable to the energy efficiency activity. This may include design assistance, surveys, materials and labor, commissioning costs, etc.

Independent Evaluator (IE)

A consultant selected by the IOUs to serve as an independent advisor to the IOUs and the PRG members involved in overseeing the third-party solicitation process as described in D.18-01-004, p. 2, 9, 33, and 36-38.

Information & Education

Information and education programs can provide a wide range of activities designed to inform or educate a customer or customer group. Generally these range from in-depth, one-on-one, on-site or centrally located classroom style instruction in topics related to energy efficiency, to programs that target information to specific types of customers, to general information provided to a wide range of customers, to short inexpensive public service announcements on FCC approved communication frequencies. Programs intended to provide customers with information regarding generic (not customer- specific) conservation and energy efficiency opportunities. For these programs, the information may be unsolicited by the customer.

Innovation Incubator

A low-cost, stand-alone program designed to grow innovative energy saving programs and processes for the larger portfolio over the long term. The incubator funds new program ideas that meet reasonable scientific scrutiny for potentially cost-effective energy savings and peak reduction.

Installation Rate

Installation Rate is the ratio of the number of verified installations of a measure divided by the number of claimed installations rebated by the utility during a claim period. Typically Installation Rates used on an ex ante basis will be based upon previous ex post evaluations.

Institutional Barriers

A type of market barrier: In this case, the internal organizational hurdles that inhibit the evaluation and or choice to take energy efficiency actions.

Least Cost/Best Fit

The procurement of cost-effective supply and demand-side resources that, regardless of ownership, meet capacity and energy deliverability requirements. Energy efficiency resources are constructed from the bottoms up approach that aggregates the demand and energy savings from various energy-saving measures and activities into applicable end-use categories such as space cooling, space heating, lighting, and refrigeration, in order to provide near- and long-term peaking, intermediate, and baseload requirements.

Levelized Cost

An estimate of the annualized cost of installing an energy efficiency measures divided by the annual energy savings. Typically calculated by multiplying the incremental cost of the measure by capital recovery factor (function of discount rate and expected useful life of the measure) and then dividing by annual energy savings.

Load Management

Programs which reduce or shift electric peak demand away from periods of high cost electricity to non-peak or lower cost time periods, with a neutral effect on or negligible increase in electric use.

Lost Opportunities

Energy efficiency measures that offer long-lived, cost-effective savings that are fleeting in nature. A lost opportunity occurs when a customer does not install an energy efficiency measure that is cost-effective at the time, but whose installation is unlikely to be cost-effective if the customer attempts to install the same measure later.

Market Effect

A market effect is a change in the structure or functioning of a market or the behavior of participants in a market that result from one or more program efforts. Typically these efforts are designed to increase in the adoption of energy-efficient products, services or practices and are causally related to market interventions. Market effects include reductions in energy consumption and/or demand in a utility's service area caused by the presence of the DSM program, beyond program related gross or net savings of participants. These effects could result from: (a) additional energy efficiency actions that program participants take outside the program as a result of having participated;

(b) changes in the array of energy-using equipment that manufacturers, dealers and contractors offer all customers as a result of program availability; and (c) changes in the energy use of non-participants

as a result of utility programs, whether direct (e.g., utility program advertising) or indirect (e.g., stocking practices such as (b) above or changes in consumer buying habits)." Participant spillover is described by (a), and non- participant spillover, by (b) and (c). Some parties refer to non-participant spillover as "free-drivers." (From EM&V Protocols, April 2006)

Market Transformation

Decision (D.)09-09-047, defines market transformation as "long-lasting, sustainable changes in the structure or functioning of a market achieved by reducing barriers to the adoption of energy efficiency measures to the point where continuation of the same publicly-funded intervention is no longer appropriate in that specific market. Market transformation includes promoting one set of efficient technologies until they are adopted into codes and standards (or otherwise adopted by the market), while also moving forward to bring the next generation of even more efficient technologies to the market.[50]"

Marketing, Education and Outreach (ME&O)

Communications activities designed to identify, reach and motivate potential customers to take actions to either learn more about or invest in energy efficiency opportunities.

Measures

1) Specific customer actions which reduce or otherwise modify energy end use patterns.

2) A product whose installation and operation at a customer's premises results in a reduction in the customer's on-site energy use, compared to what would have happened otherwise.

Net savings

The savings realized when free ridership is accounted for. The savings is calculated by multiplying the gross savings by the net to gross ratio.

Net to Gross Ratio

[50] D.09-09-047 at p.354, OP 10

A ratio or percentage of net program savings divided by gross or total impacts. Net to gross ratios are used to estimate and describe the free-ridership that may be occurring within energy efficiency programs.

Non-price Factors

Those factors included in cost effectiveness tests, other than commodity prices and transportation and distribution costs, e.g., environmental factors.

Non-Resource Program

Energy efficiency programs that do not directly procure energy resources that can be counted, such as marketing, outreach and education, workforce education and training, and emerging technologies.

Participant Test

The Participant Test is the measure of the quantifiable benefits and costs to the customer due to participation in a program. Since many customers do not base their decision to participate in a program entirely on quantifiable variables, this test cannot be a complete measure of the benefits and costs of a program to a customer. (See SPM link under Attachment A.)

Partnership

Coordinated efforts of a utility and a local government or other entity to use the strengths of both parties to achieve energy savings goals.

Peak Demand, Reported (per OP 1 of D.06-06-063 as modified by D.12-05-015)

The peak megawatt load reduction contained in the most recently adopted DEER used to estimate and verify peak demand savings values. The DEER method utilizes an estimated average grid level impact for a measure between 2 PM and 5 PM during a "heat wave" defined by a three consecutive weekdays for weather conditions that are expected to produce a regional grid peak event. DEER utilizes a 3-day "heat wave" that occurs on consecutive days in June through September such that the three consecutive days do not include weekends or holidays, and where the heat wave is ranked by giving equal weight to the peak temperature during the 72-hour period, the average temperature during the 72-hour period and the average temperature from noon – 6 PM over the three days.

Peak Demand-General (kW)

1) The maximum level of metered demand during a specified period, such as a billing month, or during a specified peak demand period.

2) Extremely high energy use, usually with reference to a particular time period.

Peak Savings- Coincident (kW)

The estimated peak (e.g. highest) demand savings (MW or kW) from a program for a specific time, date, and location coincident with the forecasted system peak for a given area and a given set of weather conditions. This estimate must also include consideration of the likelihood that the equipment is actually on at the time of coincident peak. Usage of this definition: Resource planning- for making adjustments to forecasts of peak usage for understanding reserve margins and reliability purposes.

Peak Savings- Daily Average (kW)

The average peak demand savings (kWh impacts/ # of hours in the peak rate period) for a given utility during their peak season. Example for SCE-Peak period is for summer weekdays from 12-6 PM. So - daily average savings would be the number of kWh saved/ # of kWhs saved for all weekday peak periods (= kWh/5 days/week * 12 weeks/ summer* 6 hours/day = kW average. Usage: Cost effectiveness analysis, primarily for valuing energy savings that occur during the peak period using "peak" average avoided costs.

Peak Savings –Non coincident (kW)

Estimated highest level of peak savings (kW or MW) for a given program during the peak time period for a given utility on the hottest day of a "normal" weather year. Thus if a group of measures saved 1MW at 2PM, 1.7 MW at 3PM, 1.6 MW at 4PM, 1.0 MW at 5 PM and 1.2 MW at 6 PM, the peak non coincident savings would be 1.7 MW. This savings estimate does not take into account how many of the affected devices or equipment will be operating during the peak time period. Usage: Cost effectiveness analysis and procurement.

Peer Review Group (PRG)

A subset of the Program Advisory Group consisting of non-financially interested members who will review utility submittals to the CPUC, assess overall portfolio plans, plans for bidding out pieces of the portfolio, and the bid evaluation criteria for selecting third-party programs.

Performance Uncertainties

A market barrier: refers to new technologies or systems whose efficiency or system performance levels are uncertain due to lack of experience.

Portfolio

All IOU and non-IOU energy efficiency programs funded by ratepayers that are implemented during a program year or cycle. May also refer to a group of programs sponsored, managed, and contracted for by a particular IOU.

Portfolio Reporting

Regularly scheduled reporting by the portfolio administrators directly to the CPUC. Metrics reported are: portfolio budgets and expenditures, measures installed, services rendered, and other program activity deemed relevant to Energy Division's responsibility to support the CPUC's responsibilities of quality assurance, policy oversight, and EM&V.

Pre-commercialization

A phase in the life of a product before it is readily available on the market.

Program

A collection of defined activities and measures that

- are carried out by the administrator and/or their subcontractors and implementers,
- target a specific market segment, customer class, a defined end use, or a defined set of market actors (e.g. designers, architects, homeowners),
- are designed to achieve specific efficiency related changes in behavior, investment practices or maintenance practice in the energy market,
- and are guided by a specific budget and implementation plan.

Program Activities

Any action taken by the program administrator or program implementer in the course of implementing the program.

Program Administrator

An entity tasked with the functions of portfolio management of energy efficiency programs and program choice.

Program Administrator Cost (PAC) Test

Under portfolio evaluation of cost effectiveness, the PAC test contains the program benefits of the TRC test, but costs are defined differently to include the costs incurred by the program administrator but not the costs incurred by the participating customer. (See the SPM link under Attachment A.)

Program Advisory Group (PAG)

Advisory groups for each utility service area composed of energy efficiency experts representing customer groups, academic organizations, environmental organizations, agency staff and trade allies in the energy market.

Program Cycle

The period of time over which a program is funded and implemented.

Program Implementation Plan

A detailed description of a program that includes program theory, planned program processes, expected program activities, program budget, projected energy savings and demand reduction and other program plan details as required by the CPUC, assigned ALJ, or Energy Division.

Program Implementers

An entity or person that puts a program or part of a program into practice based on contacts or agreements with the portfolio manager.

Program Strategy

The set of activities deployed by the program in order to achieve the program's objectives.

Program Year(s)

The calendar year(s) during which the program operates.

Ratepayer

Those customers who pay for gas or electric service under regulated rates and conditions of service.

Rebate

A financial incentive paid to the customer in order to obtain a specific act, typically the installation of energy efficiency equipment.

Remaining Useful Life (RUL)

An estimate of the median number of years that an measure being replaced under the program would remain in place and operable had the program intervention not caused the replacement.

Report Month

The month for which a particular monthly report is providing data and information. For example, the report month for a report covering the month of July 2006, but prepared and delivered later than July 2006, would be July 2006.

Resource Programs

Energy Efficiency programs that generate energy savings that are quantified and tracked by program administrators.

Resource Value

An estimate of the net value of reliable energy (e.g., kWh, therms) and capacity (e.g., kW, Mcfd) reductions resulting from an energy efficiency program. This includes the net present value of all of the costs associated with a program and all of the estimated benefits (both energy and capacity). The calculation of resource value and associated benefits should be consistent with the avoided costs adopted in the most recent CPUC proceeding or otherwise provided for by the CPUC.

Ratepayer Impact Measure (RIM) Test

The Ratepayer Impact Measure (RIM) test measures what happens to customer bills or rates due to changes in utility revenues and operating costs caused by the program. Rates will go down if the change in revenues from the program is greater than the change in utility costs. Conversely, rates or bills will go up if revenues collected after program implementation are less than the total costs

incurred by the utility in implementing the program. This test indicates the direction and magnitude of the expected change in customer bills or rate levels.

Savings Decay

The reduction of cumulative savings due to previous measure installations passing their Remaining Useful Life or Effective Useful Life. Per D.09-09-047 and until EM&V results inform better metrics, IOUs may apply a conservative deemed assumption that 50 percent of savings persist following the expiration of a given measure's life.[51]

Service Area

The geographical area served by a utility.

Short Term/Long Term

Planning terms referring to the timing or expected timing of program activities, program impacts, or program funding. Short term indicates program activities, program impacts, or program funding that occurs during the current program cycle. Long term indicates program activities, program impacts, or program funding that occurs beyond the current program cycle.

Source-BTU Consumption

Conversion of retail energy forms (kWh, therms) into the BTU required to generate and deliver the energy to the site. This conversion is used to compare the relative impacts of switching between fuel sources at the source or BTU level for the fuel substitution test required for fuel-substitution programs.

Standard Practice Manual (SPM)

The California Standard Practice Manual: Economic Analysis of Demand-side Programs and Projects is jointly issued by the California Public Utilities Commission and the California Energy Commission. The SPM provides the definitions for the standard cost effectiveness tests and their components used for energy efficiency programs. SPM tests are further clarified in CPUC Decisions as cited in the Cost-Effectiveness Rules in this Policy Manual.

[51] D.09-09-047 at p.334

Statewide

Energy efficiency programs or activities that are essentially similar in design and available in all CPUC regulated utility service areas in California.

Third Party/Non-IOU

Non-regulated implementers of ratepayer funded energy efficiency activities.

Total Resource Cost Test (TRC)

The TRC test measures the net resource benefits from the perspective of all ratepayers by combining the net benefits of the program to participants and non-participants. The benefits are the avoided costs of the supply-side resources avoided or deferred. The TRC costs encompass the cost of the measures/equipment installed and the costs incurred by the program administrator. (See SPM link under Attachment A.)

Two-Stage Solicitation Process

A solicitation process that includes two stages; an initial Request for Abstract and a follow-up Request for Proposal phase as described in D.18-01-004, p. 7

Unit Energy Consumption

Unit Energy Consumption (UEC) is the expected annual energy consumption of a technology, group of technologies, or process.

Unit Energy Savings

Unit Energy Savings (UES) is the estimated difference in annual energy consumption between a measure, group of technologies or processes and baseline, expressed as kWh for electric technologies and therms for gas technologies

Upstream Incentives

Incentives provided to manufacturers or retailers of high efficiency products in order to encourage their production and sales, in contrast to the more common downstream incentives, which are provided directly to customers as rebates.

Workpapers

Documentation prepared by the program administrators or program implementers that documents the data, methodologies, and rationale used to develop ex-ante estimates that are not in already fully contained in the Database for Energy Efficiency Resources (DEER) (D.10-04-029, footnote page 20).

Zero Net Energy

Zero Net Energy is defined as the implementation of a combination of building energy efficiency design features and on-site clean distributed generation such that the amount of energy provided by on-site renewable energy sources is equal to the energy consumed by the building annually, at the level of a single "project" seeking development entitlements and building code permits. Definition of zero net energy at this scale enables a wider range of technologies to be considered and deployed, including district heating and cooling systems and/or small-scale renewable energy projects that serve more than one home or business. (D.07-10-032, Footnote 42.)

(END OF APPENDIX B)

APPENDIX C: Cost Categories and Related Cap and Targets

IOU shall reflect all costs associated with the delivery of their energy-efficiency programs in their filings in the energy-efficiency portfolio applications and shall note, where applicable, when the costs are recovered in other proceedings.

The CPUC has established various (hard) caps and (soft) targets as summarized in the table below:

Budget Categories	**Cap**	**Target**
Utility program administrative costs[52]	10 %	
Third-party / Gov't partnership administrative costs[53]		10 %
Marketing & outreach costs[54]		6%
Direct implementation non-incentive (DINI) costs[55]		20 %
Evaluation, measurement & verification (EM&V) costs[56]	4 %	

The IOUs will forecast and report total Administrative, Marketing, Direct Implementation costs by program and subprogram in the cost categories and sub-categories. A detailed characterization of the specific types of costs that are allocated to each of these categories is provided below.

[52] D.09-09-047, OP 13a and p. 62

[53] D.09-09-047 at p. 63

[54] D.09-09-047, OP 13b and at p. 73

[55] D.09-09-047 OP 13c and at p. 74; D.12-11-015 at p. 101

[56] D.12-11-015 at p. 59; D.09-09-047, COL 6

Utility Administrative Costs

Administrative costs for utility energy efficiency programs (excluding third party and/or local government partnership budgets) are limited to 10 percent of total energy efficiency budgets. Administrative costs shall not be shifted into any other costs category.

Administrative costs are necessary to support energy efficiency programs but costs must be reasonable and limited to overhead, labor and other costs discusses below needed to implement quality programs with ratepayer funds.

All IOUs shall reflect all labor-related costs associated with the delivery of energy-efficiency programs, as defined at page 49 of D.09-09-047, in their energy-efficiency portfolio filings, and shall clearly delineate where any expenses or costs have been or will be recovered in proceedings other than energy efficiency applications.[57] Administrative costs include the following:[58] [59]

Overhead (G&A Labor/Materials): administrative labor, accounting support, IT services and support, reporting databases, data request responses, CPUC financial audits, regulatory filings support and other ad-hoc support required across all programs.

Labor (Managerial & Clerical): This category includes utility labor costs related to either management or clerical positions directly related to program administration. SDG&E and SoCalGas also add payroll taxes.

Human Resource Support and Development: This includes payroll taxes, payroll support, as well as pensions.[60]

---

[57] D.12-11-015 OP 39

[58] D.09-09-047, OP 13a and at p. 50; with additional detail from Attachment A to PG&E AL. 3065-G/3562-E

[59] D.09-09-047 at 50 states that these Administrative Cost categories do not include EM&V or Marketing Outreach

[60] D.09-09-047 at p. 56 says "Attachment 5-A of the December 2008 ruling [the Allowable Costs Attachment] lists payroll tax and pensions as included in the Human resources Support Category."

Travel and Conference fees: This includes labor, travel and fees for conferences.[61] This category includes utility sponsorships for energy efficiency program-specific events or activities such as including membership-based, issue-specific trade organizations that include as a component of membership benefits entry into conferences. However, utility sponsorship fees for major national energy efficiency conferences that provide company recognition or status are prohibited as energy efficiency allowable costs. Such costs shall not be funded with energy efficiency program funding.[62]

CPUC Division of Water and Audits allows travel costs, such as meeting with customers, can to be charged to the applicable program area (i.e., to DINI or to Marketing and Outreach).

Travel costs by IOU staff should be limited, but this will be achieved via the cost targets for marketing. Travel costs to EE conferences and other activities shall be charged to administrative costs with the following exceptions:

Travel costs for DINI activities and marketing can be charged to those respective cost categories

IOU sponsorships of EE conferences (i.e. "platinum" "gold" level donations) be explicitly prohibited from inclusion in energy efficient budgets as administrative costs. IOUs may join membership-benefit issue specific (i.e. HVAC) trade organizations that include as a component of membership benefits entry into conferences. Other staff travel costs to participate in energy efficiency conferences are also allowable administrative costs.

Additional activities charged to the utility administrative cost category include:[63]

Membership dues (i.e., trade organizations)

Reporting database (e.g., CRM,Track It Fast, Program Builder, SMART, etc.)

Facility-related costs

---

[61] D.09-09-047 at 50

[62]D.11-04-005 at 20, OP 2

[63]Unless otherwise noted, these details were provided in Attachment A to PG&E AL 3065- G/3562-E (2010-12 EE portfolio compliance filing).

- Supply management function activities to ensure oversight of contractors
- Administering contractor payments for services which are non-incentive related
- Utility administrative cost associated with Local Government Partnerships & Third Party Programs
- Administrative and logistical costs related to workshops on Strategic Planning issues[64]
- Utility administrative costs do not include the following:[65]
- Direct implementation (incentive costs and DINI)
- Marketing and outreach
- Evaluation, measurement and verification
- Administrative costs for third party programs / government partnerships[66]
- Program-specific IT costs charged to the DINI and M&O cost categories (e.g., on-line audit tools).[67]

Direct Implementation Non-Incentive (DINI) Costs

Direct implementation non-incentive (DINI) costs (excluding non-resource and other exempt programs and subprograms) are targeted at 20 percent of the total adopted energy efficiency budgets.[68]

As depicted in the figure below, direct implementation non-incentive (DINI) costs are a subset of direct implementation costs. Direct implementation costs are defined as "costs associated with activities that are a direct interface with the customer or program participant or recipient (e.g., contractor receiving training)."[69] Direct implementation includes two subcategories: (a) rebate and incentive costs and (b) DINI.[70]

[64] D.09-09-047, OP 14

[65] D.09-09-047 at 50, unless otherwise noted

[66] D.09-09-047 at 63

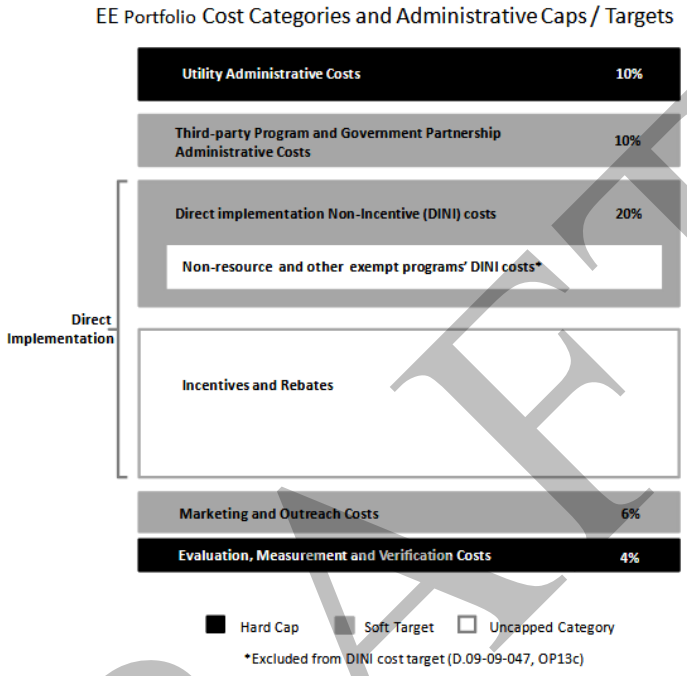
[67] Attachment A to PG&E AL 3065-G/3562-E

[68] D.09-09-047 OP 13c and at p. 74; D.12-11-015 at p. 101

[69] D.09-09-047 at p. 50

[70] D.09-09-047, Table 3, at p. 54, see notes regarding lines C1 and C2

Note: DINI costs have been referred to by the IOUs and the CPUC with various terms such as "non-resource costs,"[71] "direct implementation (non-incentives and rebates),"[72] "program delivery (non-rebates and incentives),"[73]and "implementation – customer services costs."[74]



Activities charged to cost category subject to the DINI target include:[75]

- Employees who have a direct interface with the customer (i.e. Account Executives, Auditors, Engineers, Processors, Inspectors, call center representatives)
- Processing rebate applications
- Inspecting rebated/incentive measures
- Engineering related activities
- Measurement development
- Education and training of contractors/partners/customers

[71] D.09-09-047 OP13

[72] D.09-09-047, Table 3 at p. 54

[73] D.09-09-047 Tables 5, 6 and 7 at pages 75, 77, 80, respectively

[74] D.12-11-015 at p. 101

[75] Unless otherwise noted these details were provided in Attachment A to PG&E AL 3065- G/3562-E

- Project management activities (i.e. Planning Scope of Work, working with contractors and customers, setting goals, reviewing goals, reacting to market conditions, and responding to customer inquiries (i.e. calls, emails, letters).
- Program planning, development and design
- Customer support
- Energy audits and Continuous Energy Improvement
- Market transformation and long-term strategic plan support
- Compiling and maintaining information (i.e, data, customer records) for projects
- Licensing fees or IT development cost for program specific applications for implementation (e.g., benchmarking tool or project management tool);
- Vacation and sick leave-related to direct implementation labor
- Direct-implementation specific IT costs (e.g., licensing fees or IT development cost for program-specific applications)
- Staff travel to undertake direct implementation-specific work activities (excluding conference participation)
- Program planning/design/project management and information gathering costs related to specific Strategic Plan related non-resource and resource programs[76]
- Programs or subprograms that are exempt from the DINI target include:[77]
- Non-resource programs or subprograms (e.g., Emerging Technologies, Workforce Education and Training, Lighting Market Transformation, Zero Net Energy pilots,
- Integrated Demand Side Management). [78]
- Codes and Standards Program[79]
- Financing programs, including On-Bill Financing Program[80] (excluding revolving loan amounts)

[76] D.09-09-047, OP 14

[77] See exclusion of these costs in D.09-09-47 OP 13c

[78] D.09-09-047 at p. 50

[79] D.09-09-047 Table 3, at p. 54, see notes regarding C2

[80] Ibid.

- The formula for calculating the DINI cost percentage subject to the target is as follows:

  [Total DINI cost, excluding REN and CCA programs] – [Exempt DINI program costs]
  [Total IOU budget, excluding REN and CCA programs]

Notes:

- REN and CCA programs are excluded because the IOUs do not manage and/or administer them.
- For exempt programs and subprograms, see examples above.
- Government partnership and third-party programs budgets are included in both the numerator and denominator.
- Statewide ME&O (a non-resource DINI target exempt program) budgets are included in the denominator, whether approved by separate application or not.

Marketing and Outreach Costs

Marketing and outreach costs are targeted at 6 percent of total adopted energy efficiency budgets, subject to the fund-shifting rules specified in this manual.[81] This is not a hard cap, as with administrative costs, but a budget target.[82] Activities charged to this category include:[83]

- Preparing collateral
- Distributing collateral
- Support related to outreach events
- Participating in outreach events
- Advertising, media, newspaper, website, and magazine related marketing activities
- Local government partnership marketing and outreach related to long-term Strategic planning support
- Vacation and sick leave related to marketing labor

[81] D.09-09-047, OP 13c

[82] D.09-09-047 at p. 73

[83] Attachment A to PG&E AL 3065-G/3562-E

- Marketing-specific IT costs
- Staff travel to undertake marketing-specific work activities (excluding conference participation.)

Third Party Program and Government Partnership Administrative Costs:[84]

The IOUs shall seek to achieve a 10 percent administrative cost target for third party and local government partnership direct costs (i.e., separate from utility costs to administer these programs).[85] The cost target is 10 percent of third party and government partnership budget, rather than 10 percent of the total energy efficiency portfolio (as with the utility administrative cost cap). The IOUs should not be permitted to unduly shift administrative cost cuts onto local government partnerships and third party implementers. Local government partnership and third party program M&O and DINI costs are subject to the 6 percent and 20 percent portfolio cost targets.[86]

Evaluation Measurement and Verification

The adopted EM&V budget is 4 percent of the total portfolio budget, consistent with budgets from prior portfolios.[87] Activities charged to the EM&V budget category include:

- Staff travel to participate in Strategic Plan workshops[88]
- Market, cost assessment and other studies as called for or suggested by the Strategic Plan[89]
- Benefits, payroll tax, and pensions for EM&V labor.[90]

[84] Attachment A to PG&E AL 3065-G/3562-E

[85] D.09-09-047 at p. 63.

[86] Attachment A to PG&E AL 3065-G/3562-E

[87] D.12-11-015 at p. 59; D.09-09-047, COL 6

[88] Attachment A to PG&E AL 3065-G/3562-E

[89] D.09-09-047, OP 14

[90] Allowable Costs Attachment, Attachment 5-A to December 2008 ACR in A.08-07-021 et al.. Also referenced in Attachment A to PG&E AL 3065-G/3562

APPENDIX D: Phase 2 Workpaper Review

Development, review and approval of Non-DEER workpapers has evolved through several decisions:

1. D.09-09-047 gave Energy Division authority to review and approve Non-DEER workpapers and required ED to develop a process for submittal, review and freezing of non-DEER measures.
2. A.08-07-021 provided a standardized review and approval process for Phase 2 Non-DEER workpapers including
    a. Requirements for utilizing DEER values and methods in the development of Non-DEER measures
    b. A timeline for detailed review that required CPUC staff to perform a preliminary review for additional information within 15 days and the final review within 25 days of receiving the additional review.
    c. A requirement for consideration of the latest evaluation, measurement and verification published studies in the development of ex ante values including energy impacts, cost data, EUL/RUL and NTGR.

The following paragraphs, covering Phase 2 workpaper review are from D.12-05-015[91]:

a. *If Commission Staff agrees with the parameters included in a non-DEER workpaper for a new measure provided by an IOU, Commission Staff will communicate this to the IOU via email and upload it to the Workpaper Project Area on the http://www.deeresources.info website, and the workpaper will become effective on that date.*
b. *If Commission Staff disagrees with or needs more information regarding parameters included in a non-DEER workpaper, Commission Staff will recommend revised parameter values (or request additional information) within 15 days of receipt of a work paper with all necessary information provided by the utility.*

On-line Submission: Workpapers shall be submitted to http://www.deeresources.info at in the Workpaper Project Archive under the Current Workpaper Project Archive project tree. A single file shall be submitted for each workpaper submission. If the workpaper includes additional supporting files, all files shall be archived into a single .zip or

.7z file so that they can be submitted as a single file. The file name shall include the entity's unique ID and title of the workpaper.

If staff does not take any action on a submitted workpaper, it achieves interim approval after 25 days. Staff has 15 days to do a preliminary review of a submitted workpaper and if they require additional information or clarification, they can stop the clock until the information is provided. The clock is then reset, and the staff has 25 days to issue a disposition before a workpaper achieves interim approval.

Posting of Approved Workpapers: Workpapers are posted by the program administrators to the Workpaper Project Archive (WPA). After they are approved, they are posted to www.deeresources.net. Disputes over Staff Recommendations: Submitting entities may not agree with the final staff requirement for workpaper revisions. D.12-05-015 includes a dispute resolution process to address cases where a submitting entity finds staff requirement unacceptable. If the utility finds the revised parameter values unacceptable (and/or any subsequent information exchange does not resolve the disagreements in parameter values), CPUC Staff and the IOU will hold one or more meetings to come to an agreement. If agreement on workpaper parameters is reached through this process, CPUC Staff will upload the workpaper to the Workpaper Project Area on the http://www.deeresources.info website and the workpaper will become effective on that date.

APPENDIX F: Rolling Portfolio Timeline

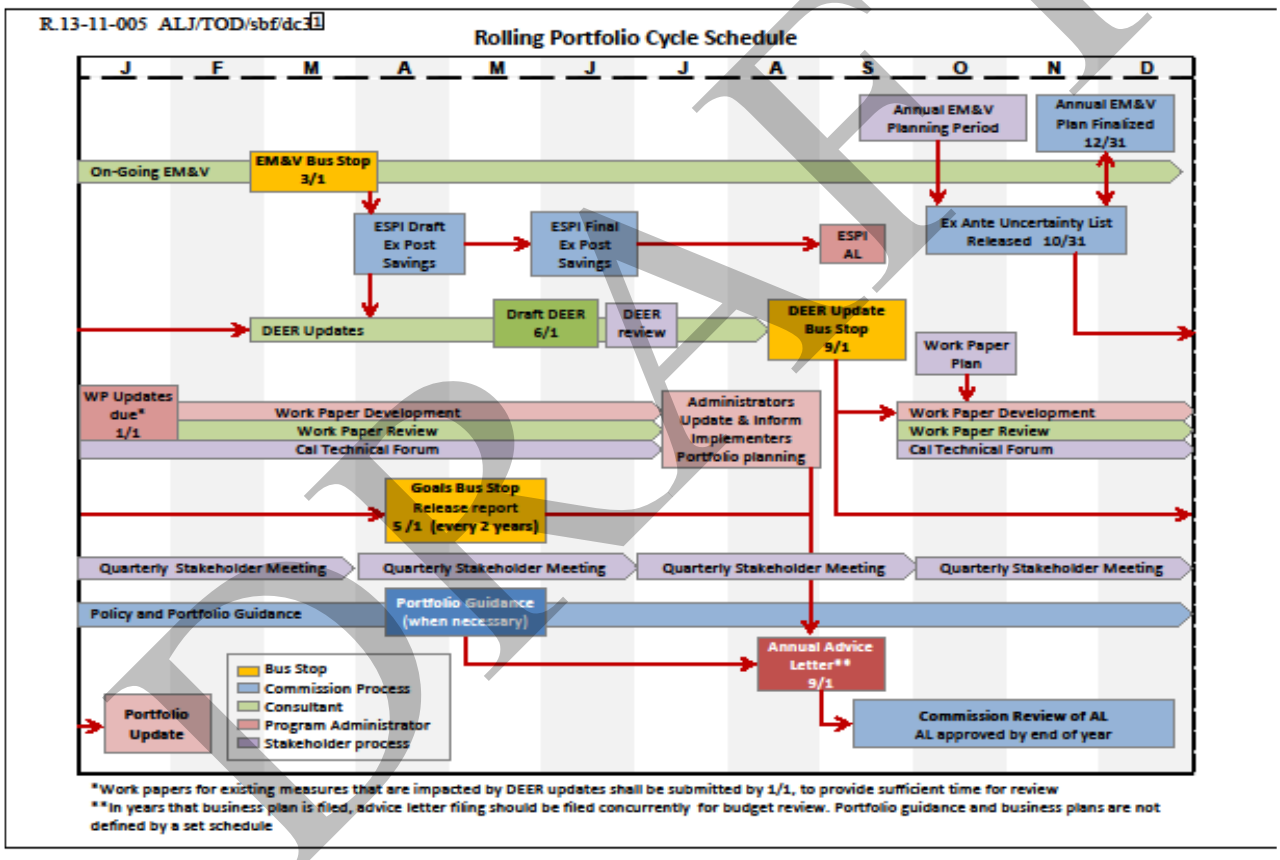


EXHIBIT G

Time & Materials Hourly Rate Schedule

Western Riverside Council of Governments (WRCOG)

	LOW*	HIGH**
Executive Director	$ 125.00	$ 300.00
Environmental Director	$ 100.00	$ 200.00
Finance Director	$ 100.00	$ 200.00
Program Manager	$ 75.00	$ 175.00
Senior Analyst	$ 50.00	$ 125.00
Staff Analyst	$ 100.00	$ 115.00
Technician	$ 85.00	$ 100.00
REN-Tern	$ 55.00	$ 85.00
Legal Counsel - Best Best & Krieger		
Partner		$ 338.00
Associate		$ 338.00

Coachella Valley Association of Governments (CVAG)

	LOW*	HIGH**
Executive Director	$144.30	$208.27
Senior Projects Manager	$57.95	$103.17
Director	$72.93	$125.57
Assistant Executive Director	$62.00	$109.23
Program Manager	$43.40	$81.40
Accounting Manager	$43.40	$81.40
Management Analyst	$36.89	$71.54
Clerk	$36.89	$71.56
Accountant	$27.91	$57.13
Program Assistant II	$25.37	$53.06
Accounting Assistant	$24.16	$51.51
Office Assistant	$22.95	$49.58
Program Assistant	$22.95	$49.58
Legal Counsel - Best Best & Krieger		
Partner		$365.00
Associate		$295.00
Paralegal		$185.00

San Bernardino Association of Governments (SANBAG)

	LOW*	HIGH**
Executive Director	$ 157.45	$ 475.50
Direction of Planning	$ 99.26	$ 299.77
Chief of AQMP	$ 80.00	$ 241.60
AQMP Management Analyst	$ 38.89	$ 117.45
I-REN Program Manager	$ 48.96	$ 147.86
I-REN Management Analyst	$ 40.28	$ 121.65
Chief Finance Officer	$ 97.57	$ 294.66
Chief of Fiscal Resources	$ 70.43	$ 212.70

Accounting Supervisor	$ 44.59	$ 134.66
Project Controls	$ 32.81	$ 99.74
REN-Tern	$ 55.00	$ 85.00
Intern	$ 16.00	$ 48.32
In-house Legal Counsel	$ 104.70	$ 316.19

Frontier Energy

Director	$ 240.00
Program Manager (Lead)	$ 148.00
Program Manager	$ 128.00
Program Consultant	$ 128.00
Program Assistant	$ 128.00

BluePoint Planning

Director	$ 175.00
Program Manager	$ 120.00

*LOW - Estimated actual hourly rate
**HIGH - Estimated fully-burdened rate

STATE OF CALIFORNIA **GAVIN NEWSOM,** *Governor*

PUBLIC UTILITIES COMMISSION
505 Van Ness Avenue
San Francisco CA 94102-3298

Western Riverside Council Of Governments
ELC (Corp ID 246)
Status of Advice Letter 1E/1G
As of March 1, 2022

Subject: Inland Regional Energy Network, Southern California Edison, SoCalGas, and Southern California Regional Energy Network 2022 Joint Cooperation Memo

Division Assigned: Energy

Date Filed: 01-21-2022

Date to Calendar: 01-26-2022

Authorizing Documents: D1805041

Authorizing Documents: D2111013

Disposition:	**Accepted**
Effective Date:	**02-28-2022**

Resolution Required: No

Resolution Number: None

Commission Meeting Date: None

CPUC Contact Information:
edtariffunit@cpuc.ca.gov

AL Certificate Contact Information:
Casey Dailey
951-405-6720
cdailey@wrcog.us

PUBLIC UTILITIES COMMISSION
505 Van Ness Avenue
San Francisco CA 94102-3298

To: Energy Company Filing Advice Letter

From: Energy Division PAL Coordinator

Subject: Your Advice Letter Filing

The Energy Division of the California Public Utilities Commission has processed your recent Advice Letter (AL) filing and is returning an AL status certificate for your records.

The AL status certificate indicates:

Advice Letter Number
Name of Filer
CPUC Corporate ID number of Filer
Subject of Filing
Date Filed
Disposition of Filing (Accepted, Rejected, Withdrawn, etc.)
Effective Date of Filing
Other Miscellaneous Information (e.g., Resolution, if applicable, etc.)

The Energy Division has made no changes to your copy of the Advice Letter Filing; please review your Advice Letter Filing with the information contained in the AL status certificate, and update your Advice Letter and tariff records accordingly.

All inquiries to the California Public Utilities Commission on the status of your Advice Letter Filing will be answered by Energy Division staff based on the information contained in the Energy Division's PAL database from which the AL status certificate is generated. If you have any questions on this matter please contact the:

Energy Division's Tariff Unit by e-mail to
edtariffunit@cpuc.ca.gov

Attachment A

Inland Regional Energy Network, Southern California Edison, SoCalGas®, and Southern California Regional Energy Network

2022 Joint Cooperation Memo

Contents

Tables

I. SUMMARY OF I-REN, SOCALREN, SCE, AND SOCALGAS PORTFOLIO COORDINATION

D.18-05-041 and D.21-11-013 require Program Administrators (PAs) to submit a joint cooperation memorandum (JCM) between Energy Efficiency (EE) PAs with overlapping service areas. Specifically, the directive states: "We will require the PAs (RENs, IOUs, and CCAs) 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."[1]

The I-REN, SoCalREN, SCE, and SoCalGas' (hereinafter referred to as the "Joint PAs") 2022 portfolio will focus on collaboration with respect to the Joint PAs' overlapping territories, as I-REN begins to contract implementers and launch its first ratepayer-funded energy efficiency programs as a new PA. As part of the Joint PAs' focused transition to performance-based and comparatively cost-effective and cost-efficient 2022 portfolios, the Joint PAs will be deepening collaboration to ensure that their respective overlapping regional programs do not result in unnecessary duplication or cause customer confusion. PAs can derive additional value by providing information and referrals to programs across all program implementers, including those outside each other's implementation focus.

[1] See D.18-05-041, p. 97

In addition, the Joint PAs will use 2022 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 collaborate between each PA, as necessary to comply with the Commission's directives, are provided below in the following section.

II. SUMMARY OF I-REN BUSINESS PLAN SECTORS

A. PUBLIC SECTOR

I-REN's public sector offerings will serve the members of the three Councils of Government (COGs) represented in I-REN, including the Coachella Valley Association of Governments (CVAG), San Bernardino Associated Governments (SANBAG), Western Riverside Council of Governments (WRCOG), and the cities, school districts, water districts, special districts, and tribal communities they represent. These regional programs will target, but not be limited to, upgrades to existing public buildings and facilities with high energy use and older equipment. While the offerings will consider all public building types, there will be a focus on community-serving buildings such as community centers, libraries, senior centers, schools, and fire and police buildings. Through energy efficiency projects in these facilities, I-REN can provide benefits that will flow to disadvantaged, low income, and other vulnerable communities. The I-REN programs will be multi-beneficial in nature, layering energy efficiency strategies with greenhouse gas reductions, community resilience and climate adaptation measures.

I-REN's local governments have limited capacity to complete energy upgrades and are challenged to maintain and upgrade these facilities due to lack of funding for capital

improvements, a lack of awareness related to energy efficiency and other energy efficiency program opportunities, limited time and staff resources, along with conflicting priorities. Further, State mandates such as building energy benchmarking (AB 802) requirements, energy code compliance, and climate adaptation planning are additional unfunded regulations and requirements on local governments and are difficult to meet given competing priorities. These challenges are exacerbated now due to the COVID-19 pandemic, the associated economic downturn and increased pressure on local government agencies to respond to a variety of issues.

To address these challenges, I-REN will leverage its existing public sector partnerships and networks across the region to offer technical assistance, implement resource program options, and improve access to financing. Implementing these initiatives will further I-REN's goals of encouraging resilience and continuous capacity building for local governments, thereby strengthening their ability to serve their community through energy efficiency projects in their own facilities, while also saving on building operations costs and contributing to local and statewide goals for energy savings, climate resilience, and greenhouse gas emissions reduction.

1. Summary of I-REN's Public Sector Program Objectives

a. Local governments have support and resources to develop and implement their strategic energy plans and energy efficiency projects.

b. Help local governments afford and finance a range of energy efficiency upgrades through innovative financing options.

B. CODES AND STANDARDS SECTOR

I-REN is proposing a dynamic and targeted set of offerings for the Codes and Standards (C&S) Sector to assist its local government agencies in better understanding and enforcing

energy building codes. The I-REN's Codes and Standards program (IREN-CS-001) will consist of two components: training and education, and technical support. In addition, I-REN will support the region's building industry to better conform to and implement these codes. This could include but is not limited to identifying gaps in training and education and code compliance, supporting enforcement, and working with the Statewide IOU C&S Compliance Improvement Team to ensure that statewide, CEC-vetted, consistent support is provided to their constituents. I-REN may also offer outreach for compliance support to non-electric IOU areas served by SoCalGas that include the City of Riverside and the Imperial Irrigation District (IID) service area. Should I-REN serve areas that are served by a single IOU, I-REN will coordinate with SoCalGas as the fiscal and contracting agent. Compliance with California Energy Code (Title 24, Part 6) and California Green Building Standards Code (Title 24, Part 11) is required for new construction of, and additions and alterations to, residential and nonresidential buildings.

The authorities having jurisdiction or "AHJs" that provide permits for these projects and enforce codes and standards are found at the city and county level and are expected to enforce the California Energy Code without additional state budget resources. Increased contractor compliance with the Energy Code, particularly related to residential HVAC, is identified as an important strategy to increase energy efficiency and home safety. The CEC has established a goal to increase compliance by 80% by 2021.[2]

Energy code enforcement has historically been difficult for local jurisdictions, particularly smaller communities with fewer resources. Conflicting priorities and a focus on life

[2] California Energy Commission, "2019 California Energy Efficiency Action Plan," December 2019, page 40.

and safety codes relegates energy code to a secondary (or tertiary) position. I-REN's service territory includes many AHJs that face significant challenges in enforcing energy codes and standards with their current resources and capacity. These jurisdictions are small in population size, geographically dispersed, challenged by extreme climate conditions, and disadvantaged by pollution and other factors. I-REN has significant opportunity to support compliance and enforcement, to ensure building department knowledge, awareness, and realization of energy-savings measures.

As an organization led by and dedicated to serving local governments, I-REN can provide flexible and adaptable solutions to help bridge the gap and assist local jurisdictions, including but not limited to jurisdictions outside of IOU service areas . I-REN's C&S initiatives will offer locally focused training, education, and tools to support codes and standards implementation, gap filling, code enforcement, and compliance activities. Locally-focused training and educational resources will be informed by and targeted specifically to address the needs of jurisdictions in the region, which will be identified during activities related to Tactic 3.3.1: Identify and address the areas of greatest need for improved code compliance, in collaboration with local governments and the building industry, as described in I-REN's Business Plan[3] approved in D.21-11-013. To ensure statewide consistency in compliance improvement support I-REN will coordinate and collaborate with the IOU C&S team.

[3] Motion of the Western Riverside Council of Governments on Behalf of the Inland Regional Energy Network (I-REN), for Approval of its Energy Efficiency Rolling Portfolio Business Plan and Budget, p. 3.20.

1. **Summary of I-REN's Codes and Standards Program Objectives**

    a) Improve the understanding of energy efficiency and fuel substitution codes and standards among local building departments and the building industry to increase implementation and compliance.

    b) Make code compliance a valuable element of the region's energy efficiency and decarbonization goal attainment with engagement regionwide.

    c) Deliver locally informed resources and tools that streamline code compliance and enforcement and increase permit closeout.

C. WORKFORCE EDUCATION AND TRAINING SECTOR

The I-REN's Workforce Education and Training program (IREN-WET-001) will consist of two components: training and education, and workforce development. Workforce Education and Training (WE&T) initiatives may now be more important than ever due to the COVID-19 pandemic the U.S. faced for the majority of 2020 and continued to face throughout 2021. As a locally-focused and locally-led advocate for economic development in the Inland Empire, I-REN is distinct in its ability to respond to this crisis and help support the region's recovery. The COGs that make up I-REN's governing agencies have direct connections to local governments and community stakeholders to make this effort as effective as possible.

Agility and collaboration will be required to mount a response to the economic devastation caused by the pandemic. I-REN, as a consortium of San Bernardino and Riverside government representatives, can effectively link to local needs, workforce providers, and employers to create a more robust environment for job creation and skills development. Employment and training are issues that have specific opportunities and challenges that need to

be addressed by those who are in the area and connected directly to the range of potential actors. This is also a long-term need that will require relationship building and trust building with underserved communities, and the existing providers.

I-REN will serve as a vital link between workforce skills and training providers such as community colleges and employers to build a more robust market and increase the number of skilled EE contractors in the Inland Empire. These activities will promote job market recovery and progress toward statewide goals regarding energy efficiency, air quality, and support for hard-to-reach (HTR), underserved, rural, tribal, and disadvantaged communities (DACs). Both Senate Bill (SB) 350 and SB 535 prioritize these communities for initiatives to improve air quality, increase energy efficiency, and address economic conditions. SB 350 emphasizes workforce development and increased project penetration in underserved communities.[4] I-REN has an opportunity to support these goals through its WE&T initiatives.

1. **Summary of I-REN's Workforce and Education Sector Program Objectives**
    a. Create a robust local network of training programs that increase capacity, knowledge, and awareness of energy efficiency as a valuable component of the building industry.

    b. Increase the number of skilled energy efficiency workers in the region.

[4] California Senate Bill 350, Sec. 8.25943.a.1;.c.7-8.

III. SUMMARY OF I-REN PORTFOLIO OF PROGRAMS OFFERED FOR 2022 AND COMPARABLE PARTNER PROGRAM ADMINISTRATORS 2022 PROGRAMS

A. PUBLIC SECTOR—TECHNICAL ASSISTANCE AND STRATEGIC ENERGY PLANNING – IREN-PUBL-001

I-REN's Public Sector Technical Assistance and Strategic Energy Planning Program will provide short-term and mid-term technical support for local governments, special districts, school districts, and tribes to increase energy efficiency in publicly-owned facilities. The program will provide additional support and technical services to design high performing, energy efficient buildings.

The program will implement a strategy of developing a regional Building Upgrade Concierge (BUC) for local governments, special districts, and tribal communities with technical guidance and tools to inform and enable priority energy improvements. I-REN will provide person-to-person support for local governments to get higher levels of assistance and support for their energy efficiency projects, through concierge-style support to help fill gaps in staff capacity and resources at these local government jurisdictions.

I-REN's technical assistance support will build local government's capacity to tackle complex projects, from helping with benchmarking to navigating options and approaches for maximizing their investments and energy savings. I-REN will offer person-to-person support to help these local governments in making efficient equipment purchases and to implement energy efficiency projects. Resulting energy bill savings will benefit local governments and contribute to both local and statewide goals for energy efficiency and greenhouse gas reduction.

I-REN will also develop or enhance strategic energy plans to connect local government goals related to climate, resilience, and economic development to energy efficiency programs and adoption. Through this tactic I-REN will assess the current state of strategic energy planning and provide technical assistance to begin the process or help move the process forward, working in collaboration with jurisdiction stakeholders.

In addition, I-REN will create resources for the public sector to tap into EE and distributed energy resources programs offered by other providers and IOUs, acting as a clearinghouse for information about energy efficiency programs available in the region for the public sector, and will create and promote tools and resources to increase energy efficiency program participation among their constituents.

1. **Summary of I-REN's Technical Assistance and Strategic Energy Planning Program Objectives**
    - **a)** Local governments have support and resources to develop and implement their strategic energy plans and energy efficiency projects.

2. **Summary of Program Differentiation**

The following table provides a summary of the PAs' respective Technical Assistance and Strategic Energy Planning programs.

Table 1: I-REN, SoCalREN, SCE, and SoCalGas Technical Assistance and Strategic Energy Planning Program Summary

Program Parameters	I-REN	SoCalREN	SCE Local Public Third-Party Program	SoCalGas
Target Audience(s)	• Counties of Riverside and San Bernardino • Cities, school districts, water districts, special districts, tribal communities • Disadvantaged, low income, other vulnerable communities • Community centers, libraries, senior centers, schools, fire and police buildings • Educational institutions	All eligible Public Agencies served by SCE and/or SCG including: Cities, counties, tribes, K–12 schools, local governments, hospitals and hospital districts, water districts, wastewater districts, sanitation districts, ports, airports, and other special districts.	The program design for SCE's Local Public Sector Third-Party Program is not yet available. The Advice Letter (AL) for SCE's Local Public Sector Third-Party Program is being submitted in Q1 2022, and is pending review and approval from the CPUC. Program design will be available upon approval of the AL.	Eligible Public Sector customers which include cities, counties, public agencies, special districts (public water districts, health districts, waste treatment/water districts, etc.), K-12 school districts, High Education (UC/CSU, Community Colleges) and federal entities (federal agencies, US military facilities and Indian tribes) DAC/HTR Communities, Low income communities
Resource or Non-Resource	Non-resource	Non-resource	Resource	Resource and non-resource
Eligible Measures	n/a	n/a	TBD	Deemed and custom measures
2022 Budget	$3,102,902	$12,240,078*	$5,181,133*	$8,278,856 *

* SoCalREN, SCE and SoCalGas 2022 budgets provided herein are estimates merely for reference only. The final budgets are subject to Commission approval of 2022-23 BBAL Advice Letter.

I-REN will offer person-to-person concierge technical support services to serve the needs of public sector customers in its territory, including but not limited to strategic energy planning

and procurement and project management assistance. I-REN will focus on underserved local governments including tribal communities with targeted non-resource efforts to drive participation to IOU programs and use information technology to help improve public sector customers' and local governments' access to energy efficiency opportunities. While the program will be open to all public building types, there will be a focus on community-serving buildings such as community centers, libraries, senior centers, schools, and fire and police buildings. I-REN will leverage its existing public sector partnerships and networks across the region to deliver personalized services through this program. Location of services in Riverside and San Bernardino counties, especially in underserved jurisdictions, and a more localized focus will differentiate I-REN's program from other comparable offerings.

The following table compares the key program parameters of PAs' public sector technical assistance and strategic energy planning programs.

Table 2: Technical Assistance and Strategic Energy Planning Program Comparison

Program Parameters	I-REN	SoCalREN	SCE	SoCalGas
Types of Public Agencies Served	• Members of the I-REN COGs, counties, cities, school districts, water districts, special districts, and tribal communities • Hard-to-reach, disadvantaged, low income, and other vulnerable communities • Public sector facilities, community centers, libraries,	All eligible Public Agencies including but not limited to: • Cities • Counties • Water/ wastewater Districts • K–12 schools • Special Districts • Tribes	• Local Governments • Federal Government • Special Districts • Tribal Governments (non-residential only) • Public and Private Education limited to: • K-12 schools, both public and private	• All eligible Public Agencies that include cities, counties, various public agencies, special districts, K-12 schools, CA State agencies and high-ed institutions (by SW Programs); federal agencies and Indian tribes • DAC/HTR Communities, Low-income customers/communities (by SoCalGas' Low Income Programs)

Program Parameters	I-REN	SoCalREN	SCE	SoCalGas
	senior centers, schools, and fire and police buildings • Educational institutions		universities, colleges, and trade schools	
Resource/ Non-resource	Non-resource	Non-resource	Resource	Resource and non-Resource
Procurement Assistance	Support public agency staff in navigating procurement and approval process	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.	TBD	
Technical Assistance	Strategic energy planning; benchmarking; technical support to assess project options;	Customized technical engineering support from project identification to completion, including investment grade audits to identify all energy saving opportunities, technical performance specifications and	TBD	Technical assistance for EE opportunities and EE project scoping and development; Benchmarking support; Engineering support

Program Parameters	I-REN	SoCalREN	SCE	SoCalGas
		provide construction management support.		
Financial Support	Provide information on I-REN financing options and other PA offerings	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.	On-Bill Financing	Support for financing and incentive application through account representatives or 3P Implementers; OBF zero-interest financing; SW Financing offerings
Access to Energy Data	Benchmarking and energy modeling support	Access to on-demand energy data and customized reports to communicate data; Benchmarking support including AB 802 compliance; Detailed facility TOU load profiles and insights.	Energy Data Request Program (EDRP); Green Button Connect My Data; CEC Building Benchmarking (Energy Star Portfolio Manager) support; Energy Atlas/CATALENA	Agency usage-level data on request; Aggregated community data on request (EDRP); Energy Star PM support; Energy Atlas/CATALENA (under development); Automated electronic bill data delivery via secure file transfer protocol
Energy Project Expertise to Implement Projects	Support public agency decisionmakers and staff with concierge-style project management support	Provides support at each stage to each participating agency through an assigned Project Manager along with access to engineering and construction support.	TBD	Technical support for EE projects; 3P Resource Program delivery; 3P Direct Install; Program management support to coordinate technical assistance, leverage available 3P program resources and

Program Parameters	I-REN	SoCalREN	SCE	SoCalGas
				engineering services
Community Marketing/Outreach	• Outreach to local jurisdictions and agencies to educate them about the program offerings • Create regionally-focused resources on public sector opportunities • Collaborate with local governments, tribes, and special districts to design and deliver messaging to the community to promote local leadership in energy efficiency	Development and sharing of tools and resources to promote regional and local energy action. Customized support to engage community stakeholders and inspire regional and local energy action; Leverages Regional Partner channels to deliver customized marketing materials adapted to unique community needs.	TBD	Regional Energy Pathways to provide focused outreach and support for all Public Agencies Customized marketing support to engage communities and educate on other EE offerings that includes leveraging Core Program and 3P Program resources 3P programs tailored to Public Sector Funneling SoCalGas Core and 3P program offerings to Public Agencies and the communities served under the jurisdiction
Sharing of Best Practices for Sustainability Efforts	• Convene stakeholders for strategic energy planning • Create local case studies to showcase achievements in the region • Create, distribute and promote regionally-focused tools and resources through e-communicators, social media,	Sub-regional peer-to-peer workshops, Energy Manager Working Groups, and trainings on relevant topics; Access to shared online resources and learning communities; Regular communication and coordination among Regional Partners and Advisory Committee	TBD	Regular communication with customers and engagement in regional events, support and coordinate with 3P programs

Program Parameters	I-REN	SoCalREN	SCE	SoCalGas
	web, and at in-person events.	members to share activities and best practices.		

3. Comparable SoCalREN Program – Public Agency Energy Efficiency Project Delivery Program (EE PDP)

The SoCalREN Public Agency Energy Efficiency Project Delivery Program (EE PDP) is a program that 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 from project start-to-finish to help agencies implement the best measures to maximize energy cost savings. The SoCalREN Public Agency EE PDP is a market support program that channels projects through utility core and third-party programs as well as SoCalREN resource programs (Metered Savings Program and Streamlined Savings Pathway). In addition, SoCalREN's EE PDP assists in the development and sharing of tools and resources through a peer-to-peer network to inspire local energy action.

Services include:

- Energy portfolio analyses and benchmarking support that help identify potential opportunities
- Start-to-finish project management support
- Facility and equipment energy audits

- Exterior lighting, interior lighting, mechanical, and envelope retrofit technical expertise
- Water and wastewater pumping and process optimization retrofits and other measures
- Retro-commissioning support
- Project financing analysis
- Development of contractor scope of work elements with EE performance specifications
- Access to competitively bid specialty contractors
- Construction management support
- Project close-out support and training
- Access to EE tools, resources & peer-to-peer learning opportunities
- Customized support to celebrate project success
- Support in access to financing, including EE financing and grant application services
- Assistance with utility incentive and rebate processing
- Application support for various grant and financing programs including but not limited to: CEC Energy Conservation Assistance Act Loan, SoCalREN's Revolving Savings Fund, CEC CalSHAPE program etc.

4. **Comparable SCE Program – Local Public Sector 3P Solicitation – SCE-13-TP-029**

The program design for SCE's Local Public Sector Third-Party Program currently under solicitation and is not yet available. However, SCE will be submitting an Advice Letter with program details in Q1 2022. This new third-party program will replace SCE's legacy local public sector programs.

5. **Comparable SoCalGas Program – Regional Energy Pathways – SCG3912**

Regional Energy Pathways is a transition from the previous Local Government Partnership (LGP) model. The Regional Energy Pathways builds on the experience and successes of LGP to further the progress in Public Sector and expand a greater reach to all Public Sector customers. The Regional Pathways will deploy more flexible and efficient approaches to engage with all public sector customers in providing valuable programs and services to all public sector customers. Regional Pathways will have assigned Program Manager for each region to maintain and expand valuable relationships with public agencies. This program is committed to providing ongoing outreach and collaboration with public sector customers as trusted resources and reliable partner. Public Sector customers will continue to be served through various Third-Party Programs as well as SoCalGas' Core Programs.

SCG3846 PUB – Small/Medium Public Sector 3P Program

SoCalGas Small/Medium Public Sector 3P Program is a Third-Party program. The 3P program provides a turnkey end-to-end solution for SoCalGas to serve small and medium Public Sector customers. The program provides direct install measures to small and medium Public Sector customers.

SCG3899 PUB – Large Public Sector 3P Program

SoCalGas Large Public Sector 3P Program is a Third Party program currently under solicitation process.

6. Coordination Protocol Between Programs

As a new PA, I-REN has not yet contracted with implementers. Within 60 days of implementer(s) being contracted for the relevant programs, the Joint PAs will reconvene to plan coordination activities. The Joint PAs will coordinate as new and launching programs are contracted and designed in order to minimize duplication of efforts. Technical assistance will be a key area of focus for coordination among the Joint PAs. Additionally, new market support and equity programs might also provide similar services, which must also be closely coordinated.

To address marketing confusion among implementers (both IOU and third-party) the Joint PAs will establish a protocol for program coordination to occur at the COG level. I-REN will invite implementers of Joint PA programs to present to COG audiences to inform and build awareness among members of EE programs. Historically, COGs have served as conveners to IOU programs. I-REN will seek opportunities to leverage existing implementer relationships and be a convener of services for COG members. Not only would this develop potential leads, but it would also bring the best solutions to the customer.

7. Coordination Between Statewide Program(s)

As a new PA, I-REN has not yet contracted with implementers. Within 60 days of implementer(s) being contracted for the relevant programs, the Joint PAs will reconvene to plan coordination activities. The Joint PAs will continue to participate in Energy Division-led Peer Coordination Groups (PCGs). The statewide PCGs enable collaborative statewide discussions regarding all programs across all PAs throughout the state, not just those in Southern California.

Coordination with statewide programs could include but not necessarily be limited to the following:

SCE_SW_IP_Colleges – SW Higher Education Program (UC, CSU. CCC)

The Statewide Higher Education Program, also known as the UC/CSU/CCC Program, is a resource program that will serve the statewide Public Higher Education Institutions such as University of California, California State University, and California Community Colleges energy efficiency needs. The three customer segments being served will be the University of California , California State Universities and California Community Colleges. The objective for this program is to have the third party offer innovative and cost-effective EE opportunities to the three customer segments listed above. This program is scheduled to launch Q3 2022.

SCE_SW_UL – Statewide Lighting Energy Efficiency Program

The California Statewide Lighting Program serves all eligible electric customers in the participating IOUs' service territories –SCE, SDG&E, and PG&E. The objective of the program is to promote the sale and installation of high efficiency lighting products through midstream (distributor) channels. The Implementation Contactor, TRC Solutions, will achieve the program's objectives through implementation of a cost-effective midstream program for the non-Residential, Commercial & Industrial market throughout the IOUs' territories.

SCE_SW_WP – Statewide Water/Wastewater Pumping Energy Efficiency Program

SCE, on behalf of itself, PG&E, SDG&E, and SCG, as the statewide lead will administer the Statewide Water/Wastewater Pumping Efficiency program through a third-party designed and delivered program. The program targets water extraction, distribution and treatment, waste

water treatment and oil and gas clear water pumping throughout each of the IOU's service territories and comply with the CPUC-established energy efficiency policies within this Solicitation's requirements, as listed in Article 3 of these Solicitation Instructions.

SCG_SW_IP_Colleges PUB-SW-Institutional Partnership: UC/CSU/CCC

The SW Institutional Partnership for UC/CSU/CCC is a SW Third Party program currently under solicitation process. The existing SW UC/CSU/CCC Partnership will continue until the SW Third Party Program launches in later part of 2022.

The University of California/ California State University/ Investor Owned Utility (UC/CSU/IOU) Energy Efficiency Partnership is a statewide program which includes California's four IOU's, PG&E, SCE, Southern California Gas Company (SCG), and SDG&E, as well as the continuation of LA Department of Water and Power (LADWP), in partnership with the UC and CSU. The program generates energy savings through the identification and implementation of energy efficiency projects and through training and education to support those projects. The Partnership consists of three main project types: retrofit, commissioning and new construction.

The California Community Colleges/Investor Owned Utility (CCC/IOU) Energy Efficiency Partnership is a unique, statewide program to achieve immediate and long-term energy savings and peak demand reduction within California's higher education system. The statewide incentive funding for the 2019 program year was utilized to maintain the Partnership program processes and framework established in previous program cycles for sustainable, comprehensive energy management at campuses served by California's four Investor Owned Utilities.

SCG_SW_IP_Gov PUB-SW-Institutional Partnership: DGS & DOC

The SW Institutional Partnership for DGS & DOC is a SW Third Party Program that targets CA State agencies. This new SW Third Party program is administered by PG&E, and is designed and implemented by AESC with support from partners serves state-owned buildings in PG&E, SCE, SoCalGas, and SDG&E service areas which include I-REN service area. The program runs through October 2026. The goal of the program is to help California State Agencies (excluding higher education) reach their Greenhouse Gas (GHG) emission reductions goals while driving towards Zero Net Energy through EE and IDSM project planning, technical support, and financial assistance.

SCG_SW_MCWH SW Midstream Water Heating

SoCalGas SW Midstream Water Heating Program is a SW Third Party program that helps business owners and building managers purchase high-efficiency commercial water heating products at reduced prices and contractors build lower-cost equipment into their bids. Distributors can receive incentives and program support for offering instant point-of-sale rebates to eligible commercial customers of SoCalGas®, Pacific Gas and Electric Company (PG&E®), Southern California Edison (SCE®) or San Diego Gas & Electric (SDG&E®). This program also serves public sector customers for the eligible water heating products.

SCG_SW_FS SW Point-of-Sale Food Service

SoCalGas SW Food Service Program is a SW Third Party program that provides instant rebates for qualifying energy efficient food service equipment through participating dealers. This program also serves public sector customers.

8. Compliance

The following table describes in further detail how I-REN's Public Sector Technical Assistance and Strategic Energy Planning Program satisfies the REN criteria in D.12-11-0115.

Table 3: I-REN's 2022 Public Sector Technical Assistance and Strategic Energy Planning Program Compliance with D.12-11-015

REN Criteria	I-REN Public Sector Technical Assistance and Strategic Energy Planning Program – IREN-PUBL-001
1. Activities IOU cannot or does not intend to undertake	• Building Upgrade Concierge with personalized end-to-end technical assistance, procurement and project management support, capacity-building, and ongoing commissioning support to ensure efficient operations and maintenance. • I-REN has strong existing relationships with, communication channels to, and support from local jurisdictions as an organization made up of local government agencies.
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	• The program is open to all public sector customers but will target underinvested jurisdictions serving hard-to-reach, DAC, underserved, and ESJ communities where I-REN can help address equity issues such as the unequal access to energy efficiency dollars, the need for additional support and commitment for small and underserved communities, ineffective programs for tribal communities, as well as overall lack of diversity. Many of these communities have been historically underinvested in and have greater needs for facility improvements, particularly community serving facilities such as libraries, community centers and the like. • By supporting energy efficiency projects in these types of facilities, I-REN can provide equitable and locally administered assistance to public sector agencies where benefits will flow directly to disadvantaged and vulnerable communities.

B. PUBLIC SECTOR—PUBLIC BUILDINGS NORMALIZED METERED ENERGY CONSUMPTION (NMEC) PROGRAM – IREN-PUBL-002

I-REN's Public Sector—Public Buildings Normalized Metered Energy Consumption (NMEC) Program is a resource program (in year two of I-REN program administration) to provide incentives and financing for savings based on NMEC achieved over three to five years, with a special focus on HVAC improvements to community-serving buildings.

1. Summary of I-REN's Public Buildings NMEC Program Objectives

a) Allow local governments to leverage an innovative approach that goes beyond code to achieve deep energy savings.

b) Help local governments afford and finance a range of energy efficiency upgrades.

2. Summary of Program Differentiation

The following table provides a summary of the PAs' respective Public Buildings NMEC programs.

Table 4: I-REN, SoCalREN, SCE, and SoCalGas Public Buildings NMEC Programs Summary

Program Parameters	I-REN	SoCalREN	SCE Public Sector Performance-Based Retrofit High Opportunity Program [SCE-13-L0031]	SoCalGas High Opportunity Projects – Metered and Performance Based Retrofits
Target Audience(s)	• Members of the I-REN COGs, counties, cities, school districts, water districts, special districts, and tribal communities	Public Agencies served by SCE and/or SoCalGas: Cities, counties, tribes, local government hospitals and hospital districts,	Public Sector	All eligible Public Sector customers

Program Parameters	I-REN	SoCalREN	SCE Public Sector Performance-Based Retrofit High Opportunity Program [SCE-13-L0031]	SoCalGas High Opportunity Projects – Metered and Performance Based Retrofits
	• Hard-to-reach, disadvantaged, low income, and other vulnerable communities • Community centers, libraries, senior centers, schools, and fire and police buildings • Educational institutions	water districts, K-12 schools, wastewater districts, sanitation districts, ports, airports, and other special districts.		
Resource or Non-Resource	Resource	Resource	Resource	Resource
Eligible Measures	Any measure that reduces energy usage including but not limited to HVAC, controls, foodservice, appliances, water heating, lighting	CMPA Methodology – includes whole building retrofits and behavioral and operational savings.	CMPA Methodology – includes whole building retrofits and behavioral and operational savings	CMPA Methodology – includes whole building retrofit and behavioral and operational savings; NMEC protocol
Budget	$3,185,292	$XXX,XXX*	$562,423*	TBD*

*SoCalREN, SCE and SoCalGas 2022 budgets provided herein are estimates merely for reference only. The final budgets are subject to Commission approval of 2022-23 BBAL Advice Letter.

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

Table 5: I-REN, SoCalREN, SCE, and SoCalGas Public Buildings NMEC Program Comparison

Program Parameters	I-REN	SoCalREN	SCE Public Sector HOPPs Program	SoCalGas
Eligible Facilities	• Buildings and non-facilities (e.g., exterior lighting) • Special focus on community centers, libraries, senior centers, schools, and fire and police buildings	Eligible facility types per the most recent version of the CPUC NMEC Guidelines	Buildings	Public Sector buildings and non-building facilities or systems
Eligible Agencies	Counties, cities, school districts, water districts, special districts, and tribal communities	• Public Agencies served by SCE and/or SoCalGas: Cities, counties, tribes, local government hospitals and hospital districts, water districts, K-12 schools, wastewater districts, sanitation districts, ports, airports, and other special districts. • Focus on DAC, rural, and low-income communities.	All Public Sector	All Public Sector customers
Eligible Measures	Any measure that reduces energy usage including but not limited to HVAC, controls, foodservice, appliances, water heating, lighting	Any measure that reduces energy usage	Any measure that reduces energy usage, must include at least one retrofit	Any measure that reduces energy usage to achieve 20% savings and a minimum of 7,000 Therms and suitable for NMEC feasibility
Technical Assistance	Project scope development, procurement assistance, project	Modeling and M&V Plan, post implementation training, performance	Modeling, M&V Plan, Project Management, Financial Analysis &	M&V Plan, facility audit, EE education related to retrofits, performance tracking

Program Parameters	I-REN	SoCalREN	SCE Public Sector HOPPs Program	SoCalGas
	management, operations and commissioning	tracking and savings persistence	Services	and savings persistence
Measurement	TBD	CMPA (IPMVP Option C)	CMPA (IPMVP Option C)	CMPA (IPMVP Option C) or other applicable options
Baseline	Existing conditions	Existing conditions.	Existing condition	Existing conditions
Performance Payment	Incentive payment based on energy savings achieved over 3-5 years	Incentives provided post-implementation measurement and verification of savings on scheduled intervals	Monetary Incentives provided on post-implementation measurement of energy savings based on meter data	Incentive provided on a post-implementation measurement of energy savings based on meter data
Resource or Non-Resource	Resource	Resource	Resource	Resource
Approval Process	TBD	Streamlined Process within CPUC NMEC Guidelines that will go through the CMPA	CPUC HOPPS Guidelines	CPUC HOPPs Guidelines
2022 Status	New/launching	In the market as of April 2019; incentives offered upon approval of the 2022 BBAL	Not accepting new projects	TBD

3. Comparable SoCalREN Program – Public Agency NMEC Program – SCR-PUBL-B3

Under the Public Agency NMEC Projects Program, SoCalREN employs a NMEC framework and targets projects that are identified by the SoCalREN EE PDP or SoCalREN DER DAC program are limited by support and incentives through existing EE resource programs. This Program provides an alternative to the existing utility and third-party programs, while pursuing

stranded potential in public agency facilities and buildings. This Program is a resource program, so EE savings from these projects contribute to SoCalREN program goals and cost-effectiveness calculations. The program targets DAC, rural, and low-income communities by offering increased incentives for these equity communities.

SoCalREN targets agencies who are enrolled in the EE PDP and DER DAC EE PDP and have facilities that have not recently participated in utility programs. Participating agencies 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, application technical review, staff training, and facility savings reports to ensure persistence of savings while adhering to CPUC NMEC Guidelines that go through the CMPA process. The SoCalREN Public Agency NMEC Program differs from the IOUs NMEC programs by providing staff training, regular savings reports post installation, and a focus on equity through the provision of enhanced incentives for equity communities.

4. Comparable SCE Program – Public Sector Performance-Based Retrofit High Opportunity Program – SCE-13-L-003I

SCE's Public Sector Performance-Based Retrofit High Opportunity Program, an NMEC program, is ending this year However, there will be a pipeline of projects in development and/or implementation throughout 2022.

5. Comparable SoCalGas Program – HOPPs Program – SCG3710

The program design for the new/launching SoCalGas HOPPs Program under SCG3710 Calculated Incentives is not yet available.

6. Coordination Protocol Between Programs

The Joint PAs will coordinate as new and launching programs are contracted and designed in order to operationalize coordination, with an understanding that new market support and equity programs might also provide similar services. As a new PA, I-REN has not yet contracted with implementers. Within 60 days of implementer(s) being contracted for the relevant programs, the Joint PAs will reconvene to plan coordination activities.

7. Coordination Between Statewide Program(s)

As a new PA, I-REN has not yet contracted with implementers. Within 60 days of implementer(s) being contracted for the relevant programs, the Joint PAs will reconvene to plan coordination activities. The Joint PAs will continue to participate in Energy Division-led Peer Coordination Groups (PCGs). The statewide PCGs enable collaborative statewide discussions regarding all programs across all PAs throughout the state, not just those in Southern California.

8. Compliance

The following table describes in further detail how I-REN's Public Sector NMEC Program satisfies the REN criteria in D.12-11-0115.

Table 6: I-REN's 2022 Public Sector NMEC Program Compliance with D.12-11-015

REN Criteria	I-REN Public Buildings NMEC Program – IREN-PUBL-002
1. Activities IOU cannot or does not intend to undertake	n/a

REN Criteria	I-REN Public Buildings NMEC Program – IREN-PUBL-002
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	• The program is open to all public sector customers but will target underinvested jurisdictions serving hard-to-reach, DAC, underserved, and ESJ communities where I-REN can help drive equity outcomes. • Program outreach will focus initially on public gathering spaces and community-serving facilities such as community and neighborhood centers, health and recreation centers, senior centers, teen centers, and libraries. • Upgrades and retrofits to HVAC and lighting equipment both interior and exterior will improve comfort and safety at facilities that benefit vulnerable populations such as children, elders, and low income, disadvantaged, and underserved communities.

C. WORKFORCE EDUCATION AND TRAINING – TRAINING AND EDUCATION PROGRAM – IREN-WET-001

For its Cross-cutting Sector Workforce Education & Training (WE&T) Training and Education Program, I-REN will assess the current training marketplace in the Inland Empire and work with local providers, including higher education providers, high schools, adult schools, and professional training companies to tailor content to be relevant to the region's needs and ensure that disadvantaged communities are a focus. I-REN will collaborate with training providers to improve access to a broad spectrum of training opportunities in person, online, and in the field.

1. Summary of I-REN's Training and Education Program Objectives

a) Create a robust local network of training programs that increase capacity and knowledge related to energy efficiency in the building industry.

2. Summary of Program Differentiation

The following table provides a summary of the PAs' respective workforce education & training programs.

Table 7: I-REN, SoCalREN, SCE, and SoCalGas WE&T Training and Education Program Summary

Program Parameters	I-REN	SoCalREN	SCE	SoCalGas
Target Audience(s)	• Local providers, including higher education providers, high schools, adult schools, and professional training companies • Disadvantaged communities (DACs)	• Architects, designers, engineers, contractors, building operators, technicians, craft/tradesmen, customers, youth, classified disadvantaged workers, and building owners • SWMDVBE that can potentially support IOU resource program sectors and local public agencies sustainability projects. • Homeless (i.e., at-risk transition youth) • In-school youth, youth classified disadvantaged workers, and homeless (i.e., at-risk transition youth). • Targets Disadvantaged communities	Workers who are in or are pursuing occupations in the energy efficiency and other related professional fields that provide the technical capabilities that are needed to support the attainment of CAs and IOU Energy Saving and sustainability targets	Workers in, or pursuing careers and occupations in energy efficiency, gaining and providing professional and technical capabilities, specifically useful for achieving CA-IOU energy savings targets.

Program Parameters	I-REN	SoCalREN	SCE	SoCalGas
		(DACs) and Hard to Reach.		
Resource or Non-Resource	Non-resource	Non-resource	Non-resource	Non-resource
Eligible Measures	n/a	n/a	n/a	n/a
Budget	$1,012,949	$375,000*	$8,696,114*	$4,250,000*

* SoCalREN, SCE and SoCalGas 2022 budgets provided herein are estimates merely for reference only. The final budgets are subject to Commission approval of 2022-23 BBAL Advice Letter.

With location and a more localized focus being the main differentiator across PAs, I-REN will focus largely on entry-level offerings in San Bernardino and Riverside counties. I-REN will help to raise the value of energy efficiency training and career paths within high schools, community colleges, and universities. These focus areas differentiate I-REN from other PAs' WE&T Training and Education offerings. SoCalREN's WE&T Program offerings now emphasize a robust regional workforce education and training approach that supports underserved Disadvantaged Workers (DAW) -including at risk youth, Hard to Reach (HTR) and small, women, minority, and disabled veteran owned business enterprises (SWMDVBE). SoCalGas supports entry-level job seekers and workers but is moving to more career paths. SCE's focus is geared towards incumbent skill building.

The following table compares the key program parameters of PAs' WE&T training and education programs.

Table 8: WE&T Training and Education Program Comparison

Program Parameters	I-REN	SoCalREN	SCE	SoCalGas
Target Audience	• Local providers, including higher education providers,	• Targets the most underserved and disadvantaged	Workers who are in or are pursuing occupations in the	Workers in, or pursuing careers and occupations in

Program Parameters	I-REN	SoCalREN	SCE	SoCalGas
	high schools, adult schools, and professional training companies • Disadvantaged communities (DACs)	workers (DAW) and Hard to Reach (HTR) Architects, designers, engineers, contractors, building operators, technicians, craft/tradesmen, customers, youth, classified disadvantaged workers, and building owners • SWMDVBE that can potentially support IOU resource program sectors and local public agencies sustainability projects. • Homeless (i.e., at-risk transition youth) In-school youth, youth classified disadvantaged workers, and homeless (i.e., at-risk transition youth). • Targets Disadvantaged communities (DACs) and Hard to Reach.	energy efficiency and other related professional fields that provide the technical capabilities that are needed to support the attainment of CAs and IOU Energy Saving and sustainability targets.	energy efficiency, gaining and providing professional and technical capabilities, specifically useful for achieving CA-IOU energy savings targets.
Location of Training	• In field/on-the-job • Online	In field, on-job and online.	• Energy Education Centers (Irwindale/Tulare) • Alternative training sites (On	In-person (Energy Resource Center, vendor sites) and Online

Program Parameters	I-REN	SoCalREN	SCE	SoCalGas
			Location) • Virtual (Live Instructor Led) • On-Demand	
Training Types	• In-person • Online	• In-person • Online	• In-person • Online	In-person (Energy Resource Center, vendor sites) and Online
Statewide/Local	Local	• Local • Regional	Local	Local
Partner Organizations	• Educational institutions • Trade associations • Industry and non-profit organizations • Certification organizations • Government agencies	• Public Agencies • Nonprofit organizations • High schools • Community Colleges • 3rd party implementers • Workforce centers	• Other IOUs • Industry associations • Post- secondary education • Business networks • Regional workforce services • Non-profit Organizations	• Educational institutions • Trade associations • Industry and non-profit organizations • Certification organizations • Government agencies

3. Comparable SoCalREN Program – Workforce Education & Training Program – SCR-WET-D1

SoCalREN has historically utilized policies and instruments for local hiring and workforce partnerships while developing infrastructure for small and minority contractors to access clean energy investments. SoCalREN's WE&T Program offerings emphasizes a robust regional workforce education and training approach that supports underserved Disadvantaged Workers (DAW), Hard to Reach (HTR)and small, women, minority, and disabled veteran owned business enterprises (SWMDVBE). The primary goal of this Program is to provide the ability to build capacity within the EE industry with a local regional approach. Similar to its other non-resource programs, the SoCalREN WE&T Program leverages public agencies to reach and

engage communities while simultaneously building its underserved workforce, thus providing long term workforce supply in the EE industry. The SoCalREN WE&T Program provides: 1) comprehensive regional workforce education, training, and resources for DAW/HTRs and SWMDVBE contractors of all skill levels; 2) entry-level workforce skills training for in-school youths 3) SWMDVBE contractors' local government public agency training and capacity building in regard to sustainability projects and RFPs; and 4; and 2) a green career pathway for classified at-risk and or homeless individuals, such as transition age at-risk foster youth.

4. Comparable SCE Program – Integrated Energy Education & Training Program – SCE-13-SW-010A

The SCE WE&T Integrated Energy Education & Training Program (IEET) offers resources and training programs that are aimed at shaping the current and future energy workforce through a series of occupational, employer, and technology-focused workshops and seminars, combined with workplace-based and hands-on technical training. This program aims to provide technical upskill and pathways certifications and credentials in energy efficiency-related industries that also support California's clean energy objectives.

In addition to the training courses offered, SCE maintains a Foodservice Technology Center where they conduct training, standards-based equipment testing, and evaluations that further enhance the commercialization of emerging energy efficient technologies and programs. These services are delivered with technical integrity and scientific rigor 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 and conduct technical tours and consultations, all of which are available at no-cost to the customer.

5. Comparable SoCalGas Program – WE&T Integrated Energy Education Training (IEET) – SCG3729

The SoCalGas WE&T Integrated Energy Education Training (IEET) subprogram will offer both technical and foodservice workforce education, training and outreach events that can leverage I-REN local contacts to inform and equip workforce talent with skills to assist in meeting the State's energy and climate goals.

The WE&T Program contributes to the investor-owned utilities' (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. Because these market actors have the potential to shape a building's energy use, WE&T teaches them how to recognize energy savings and balanced energy solutions to address GHG-reduction, and then provides them skills, tools, and resources to act upon those opportunities. Additionally, WE&T supports Post-secondary institutions that are training future generations of the energy workforce by providing them energy efficiency, sustainability, and green career awareness classes, internships, materials and resources

6. Coordination Protocol Between Programs

I-REN is in communication with other PAs operating in the region to identify areas of potential coordination for WE&T activities. As a new PA, I-REN has not yet contracted with implementers. Within 60 days of implementer(s) being contracted for the relevant programs, the Joint PAs will reconvene to plan coordination activities.

I-REN will ensure its activities are differentiated and avoid duplication of effort, while maintaining cooperation with other PAs to improve access to relevant training opportunities

across the I-REN counties. An opportunity that I-REN will explore is to support the critical connection to workforce entry for entry-level youth, which may include outreach to employers and work to get them involved. There is opportunity to create pathways to move from high school to non-college routes. They will work collaboratively to feed those entry-level specialists who are prepared for a higher training level into IOU programs.

Time is a critical issue in the education and training of the EE workforce. More than ever, it is vital for employees within the EE industry to stay up to date with emerging technologies and trends. The Joint PAs will work together to establish relevant training curriculum, especially for community colleges.

7. Coordination Between Statewide Program(s)

As a new PA, I-REN has not yet contracted with implementers. Within 60 days of implementer(s) being contracted for the relevant programs, the Joint PAs will reconvene to plan coordination activities. With PG&E as the statewide administrator for the Career and Workforce Readiness (CWR) and Career Connections WE&T subprograms, the Joint PAs will collaborate to leverage those statewide programs. I-REN will stay abreast of developments pertaining to these statewide programs and coordinate with PG&E to the extent possible to engage with the implementation vendor to discuss a coordination strategy. The Joint PAs will take advantage of opportunities for greater coordination and communication with other PAs as needed with regard to statewide programs.

8. Compliance

The following table describes in further detail how I-REN's WE&T Training and Education Program satisfies the REN criteria in D.12-11-0115.

Table 9: I-REN's 2022 WE&T Training & Education Program Compliance with D.12-11-015

REN Criteria	I-REN WE&T Program – IREN-WET-001
1. Activities IOU cannot or does not intend to undertake	• I-REN's WE&T program activities will center on supporting and leveraging local resources who are ideally positioned to deliver locally-focused, relevant, accessible training opportunities. • Offering training at familiar, nearby locations makes it easier for job seekers and workers to attend. I-REN can use its connections and experience to help ensure training opportunities are accessible throughout the region. • The I-REN governing agencies have existing partnerships with local colleges and community colleges, successfully providing instructional energy efficiency classes and events at local campuses where they have typically achieved high participation rates.
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	I-REN's WE&T program activities will drive market support and equity outcomes for HTR, underserved, DAC, and ESJ communities by partnering with and building capacity among local community-focused training providers to improve quality of and access to relevant training opportunities.

D. WORKFORCE EDUCATION AND TRAINING – WORKFORCE DEVELOPMENT PROGRAM – IREN-WET-001

I-REN will convene and collaborate with state, regional, and local stakeholders, including workforce investment boards (WIBs) and economic development departments to develop a unified mission around the region's energy efficiency workforce, highlighting pathways for job seekers to enter the green jobs market and to increase access for disadvantaged communities. I-REN will facilitate identifying opportunities for employers and local workforce partners to network and connect.

With its governing agencies' existing networks of contractors and training providers, I-REN is well positioned to help bridge the gap between the energy industry and the workforce. I-REN is building partnerships with local community colleges, local universities and local WIBs to establish a comprehensive network of WE&T offerings.

I-REN also brings close connections with local government planning and building departments across the region. I-REN's proposed WE&T initiatives offer important opportunities for collaboration across other sectors through its work in the Public Sector and Codes & Standards (C&S) --both of which are important drivers of energy efficiency and advanced energy activity and employment in the region.

1. **Summary of I-REN's Workforce Development Program Objectives**

   a) Increase the number of skilled energy efficiency workers in the region.

2. **Summary of Program Differentiation**

The following table provides a summary of the PAs' respective workforce development programs.

Table 10: I-REN, SoCalREN, SCE, and SoCalGas WE&T Workforce Development Program Summary

Program Parameters	I-REN	SoCalREN	SCE	SoCalGas
Target Audience(s)	• State, regional, and local stakeholders, including workforce investment boards (WIBs) and economic development departments • Job seekers,	• Targets the most underserved and disadvantaged workers (DAW) and Hard to Reach (HTR) Architects, designers, engineers, contractors, building	Those workers who are in or pursuing occupations in the energy efficiency and other related fields that provide professional and technical capabilities needed to support the	Workers in, or pursuing careers and occupations in energy efficiency, gaining and providing professional and technical capabilities, specifically useful

Program Parameters	I-REN	SoCalREN	SCE	SoCalGas
	including students; individuals who are unemployed, or underemployed; job seekers looking to enter the energy efficiency and advanced energy industry; and job seekers currently working in the industry who seek to make lateral career moves or advance in their fields.	operators, technicians, craft/tradesmen, customers, youth, classified disadvantaged workers, and building owners • SWMDVBE that can potentially support IOU resource program sectors and local public agencies sustainability projects. • Homeless (i.e., at-risk transition youth) In-school youth, youth classified disadvantaged workers, and homeless (i.e., at-risk transition youth). • Targets Disadvantaged communities (DACs) and Hard to Reach.	attainment of CAs and IOU Energy Savings and sustainability targets.	for achieving CA-IOU energy savings targets. Training will be conducted at Energy Center, alternative site locations and distribution channels in collaboration as appropriate, with non-IOU sources, feasible for reaching target audiences.
Resource or Non-Resource	Non-resource	Non-resource	Non-resource	Non-resource
Eligible Measures	n/a	n/a	n/a	n/a
Budget	$1,240,346	$375,000*	$8,696,114 * [5]	$X,XXX,XXX*

*SoCalREN, SCE and SoCalGas 2022 budgets provided herein are estimates merely for reference only. The final budgets are subject to Commission approval of 2022-23 BBAL Advice Letter.

[5] Note that the $8,696,114 budget reflects the same budget for SCE's WE&T - Integrated Energy Education & Training Program budget shown on Table 7in Section C subsection 2 above. The two budgets are the same and should not be counted as separate.

One differentiating factor for I-REN's program is that it will target job seekers, students, and workers and partner organizations, such as state, regional, and local stakeholders, including workforce investment boards (WIBs) and economic development departments in order to build partnerships. This partnership focus aligns well with RENs' historical role as convenor of stakeholders and partners due to their close ties with their local and regional communities. Location is another differentiator.

I-REN will prioritize HTR, disadvantaged, underserved, and ESJ communities, and the organizations within those communities that support workforce development. I-REN will help to raise the value of energy efficiency career paths within high schools, community colleges, and universities. These focus areas differentiate I-REN from other PAs' WE&T Workforce Development offerings. SoCalGas supports entry-level job seekers and workers but is moving to more career paths. SCE's focus is geared towards incumbent skill building.

The following table compares the key program parameters of PAs' WE&T workforce development programs.

Table 11: WE&T Workforce Development Program Comparison

Program Parameters	I-REN	SoCalREN	SCE	SoCalGas
Target Audience	Job seekers, including students; individuals who are unemployed, or underemployed; job seekers looking to enter the energy efficiency and advanced energy industry; and job seekers currently working in the industry who seek to make lateral career moves or advance in their fields.	Targets the most underserved and disadvantaged workers (DAW) and Hard to Reach (HTR) - SWMDVBE that can potentially support IOU resource program sectors and local public agencies	Job seekers, including K-12 students; individuals who are unemployed, or underemployed; those interested in entering the energy efficiency and/or advanced energy industry; and those currently working	K-12 Job seekers, including students; individuals who are unemployed, or underemployed; job seekers looking to enter the energy efficiency and advanced energy industry; and job seekers currently

Program Parameters	I-REN	SoCalREN	SCE	SoCalGas
		sustainability projects.	in the industry who are interested in making career changes or further advancing in their fields.	working in the industry who seek to make lateral career moves or advance in their fields.
Location of Training	n/a	• Through local public agency training channels. • In field and online.	n/a	n/a
Training Types	n/a	In-Person/online	n/a	n/a
Statewide/Local	Local	Local	Statewide	Statewide
Partner Organization	State, regional, and local stakeholders, including workforce investment boards (WIBs) and economic development departments	• Public Agencies • Nonprofit organizations • Unions • 3rd party implementers • Workforce centers	SCE will coordinate with PG&E and the vendor to the extent possible to engage the REN supporting program coordination	SoCalGas will coordinate with PG&E to the extent possible to engage the I-REN with the implementation vendor to discuss a coordination strategy

3. Comparable SoCalREN Program – Workforce Education & Training Program – SCR-WET-D1

SoCalREN has historically utilized policies and instruments for local hiring and workforce partnerships while developing infrastructure for small and minority contractors to access clean energy investments. SoCalREN's WE&T Program offerings emphasize a robust regional workforce education and training approach that supports underserved Disadvantaged Workers (DAW), Hard to Reach (HTR) and small, women, minority, and disabled veteran owned business enterprises (SWMDVBE). The primary goal of this Program is to provide the ability to build capacity within the EE industry with a local regional approach. Similar to its

other non-resource programs, the SoCalREN WE&T Program leverages public agencies to reach and engage communities while simultaneously building its underserved workforce, thus providing long term workforce supply in the EE industry.

The SoCalREN WE&T Program provides: 1) comprehensive regional workforce education, training, and resources for DAW/HTRs and SWMDVBE contractors of all skill levels; 2) entry-level workforce skills training for in-school youths 3) SWMDVBE contractors' local government public agency training and capacity building in regard to sustainability projects and RFPs; and 4) a green career pathway for classified at-risk and or homeless individuals, such as transition age at-risk foster youth.

4. Comparable SCE Program – N/A

SCE does not have a specific Workforce Development Program. Instead, SCE participates in the Statewide Career Workforce Readiness (CWR) Program, known as Energize Careers, which is administered by PG&E. Energize Careers aims to create a diverse and representational energy workforce through the economic empowerment of people who experience systemic barriers to employment by helping them to access living wage energy career opportunities. The Energize Careers Program provides holistic services to support disadvantaged workers1 through technical training, job placement, and wrap-around service support. Energize Careers collaborates with pre-apprenticeship programs, apprenticeship programs, community-based training organizations, and community colleges to provide technical energy job training to underserved individuals. Energize Careers also collaborates with wrap-around service providers and industry partners to provide people with services and support to access career pathways into living wage energy efficiency jobs.

5. Comparable SoCalGas Program

N/A

6. Coordination Protocol Between Programs

I-REN is in communication with other PAs operating in the region to identify areas of potential coordination for WE&T activities. I-REN will ensure its activities are differentiated and avoid duplication of effort, while maintaining cooperation with other PAs to improve access to relevant training opportunities across the I-REN counties. As a new PA, I-REN has not yet contracted with implementers. Within 60 days of implementer(s) being contracted for the relevant programs, the Joint PAs will reconvene to plan coordination activities which could include but would not necessarily be limited to meetings and shared class lists.

There is a critical opportunity for Joint PAs to connect entry-level youth to good jobs in the EE field. The Joint PAs will collaborate to define employers and work to get them involved. There is opportunity for all PAs to create pathways to move from high school to non-college routes. They will work collaboratively to feed those entry-level specialists who are prepared for a higher training level into IOU programs.

Time is a critical issue in the education and training of the EE workforce. More than ever, it is vital for employees within the EE industry to stay up to date with emerging technologies and trends. The Joint PAs will work together to establish relevant training curriculum, especially for community colleges.

7. Coordination Between Statewide Program(s)

As a new PA, I-REN has not yet contracted with implementers. Within 60 days of implementer(s) being contracted for the relevant programs, the Joint PAs will reconvene to plan

coordination activities. With PG&E as the statewide administrator for the Career and Workforce Readiness (CWR) and Career Connections WE&T subprograms, the Joint PAs will collaborate to leverage those statewide programs. I-REN will stay abreast of developments pertaining to these statewide programs and coordinate with PG&E to the extent possible to engage the I-REN with the implementation vendor to discuss a coordination strategy. The Joint PAs will take advantage of opportunities for greater coordination and communication with other PAs as needed with regard to statewide programs.

8. Compliance

The following table describes in further detail how I-REN's WE&T Workforce Development Program satisfies the REN criteria in D.12-11-0115.

Table 12: I-REN's 2022 WE&T Workforce Development Program Compliance with D.12-11-015

REN Criteria	I-REN WE&T Program – IREN-WET-001
1. Activities IOU cannot or does not intend to undertake	• I-REN's WE&T program activities will center on convening, engaging, and building capacity with regional workforce development partners in order to define and establish a green workforce. • This program relies on collaboration with established community partner organizations and employers, many of whom have existing connections and trusted relationships with the I-REN member agencies.
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	I-REN's WE&T program activities will drive market support and equity outcomes for HTR, underserved, DAC, and ESJ communities by partnering with and building capacity among local community-focused workforce development partners.

E. CODES AND STANDARDS TRAINING & EDUCATION PROGRAM – IREN-CS-001

I-REN's Codes and Standards (C&S) Training and Education Program is a non-resource program to establish and implement training and education for building department staff and the building industry to support, understand, and effectively implement energy efficiency codes and standards including where gaps exist in the Statewide IOU Compliance Improvement program and enforcement activities. The program will also include outreach to engage, educate and involve regional construction firms and building departments, and support compliance and enforcement within regional EE programs and customers.

1. Summary of I-REN's C&S Training and Education Program Objectives

a) Improve the understanding of energy efficiency codes and standards among local building departments and the building industry to increase implementation and compliance and enforcement.

b) Make code compliance and enforcement a valuable element of the region's energy efficiency goal attainment with engagement regionwide.

2. Summary of Program Differentiation

The following table provides a summary of the PAs' respective C&S Training & Education programs.

Table 13: I-REN, SoCalREN, SCE, and SoCalGas C&S Training & Education Programs Summary

Program Parameters	I-REN	SoCalREN	SCE	SoCalGas
Target Audience(s)	• Local jurisdictions' building department staff	n/a	All stakeholders impacted by the energy code	n/a

Program Parameters	I-REN	SoCalREN	SCE	SoCalGas
	• Permit applicants • Contractors and building professionals • Areas not served by the IOUs (City of Riverside, Imperial Irrigation District service area, etc.)			
Resource or Non-Resource	Non-resource	n/a	Non-resource	n/a
Eligible Measures	n/a	n/a	n/a	n/a
Budget	$860,334	n/a	$3,077,099*	n/a

*SCE 2022 budgets provided herein are estimates merely for reference only. The final budgets are subject to Commission approval of 2022-23 BBAL Advice Letter.

I-REN's C&S Training & Education Program will be differentiated from comparable programs by the more localized geographic area in which trainings will be focused, in Riverside and San Bernardino counties, enabling contractors to more easily attend trainings. I-REN brings existing relationships with important training partners in the region, such as colleges, NGOs, CBOs, trade organizations, and regional entities. Another differentiating factor will be I-REN's focus on serving HTR, DAC, underserved, tribal, and ESJ communities.

I-REN trainings will also be differentiated by topic, with trainings tailored to the region's climate zones and the needs of the region's local jurisdictions, building department staff, and building professionals. I-REN has an understanding of local councils, cities, and communities and their priorities and the ability to navigate the local political climate, which is important for supporting local government jurisdictions. I-REN's familiarity with its communities will be important to inform and deliver regionally relevant training offerings that may not otherwise be

available. I-REN will also coordinate its C&S activities with its WE&T offerings to integrate code compliance and enforcement into technical trainings.

3. **Comparable SoCalREN Program**

   N/A

4. **Comparable SCE Program – Compliance Improvement Subprogram – SCE-13-SW-008C**

The IOU Compliance Improvement subprogram[6] (of which Energy Code Ace is a key component) targets actors within the building and appliance energy code supply chains to maintain comprehensive statewide compliance with energy codes and appliance standards, such as: manufacturers, distributors, retailers, architects, energy consultants, contractors, plans examiners, building inspectors, etc. Whereas the California Energy Commission is responsible for implementing state policy by establishing new Codes and Standards, others (architects, energy consultants, mechanical engineers, IOUs, builders, contractors, etc.) are responsible for interpreting the code and completing compliance forms while jurisdictions' building departments are responsible for enforcing the code. Building codes and appliance standards can be difficult to understand and time consuming to implement, therefore some industry actors fail to comply with regulatory requirements fully.

Compliance improvement program needs are determined through a performance-based solution approach to identify training, tools, resources and outreach necessary to narrow the gap between actual and desired performance, and principals of adult learning theory are employed to improve knowledge swings during training and increase long-term retention. Multiple training

[6] The Compliance Improvement subprogram is a statewide program offered by all IOUs

modalities are used to maximize student participation. With a few exceptions, a consistent curriculum, featured on EnergyCodeAce.com, is developed by the compliance improvement program and delivered statewide by a team of subject matter experts.

5. **Comparable SoCalGas Program**

   N/A

6. **Coordination Protocol Between Programs**

I-REN is in communication with other PAs operating in the region to identify areas of potential coordination for C&S activities. The I-REN governing agencies also bring experience coordinating with other PAs through their LGP work. I-REN will ensure its activities are differentiated and avoid duplication of effort, while maintaining cooperation with other PAs.

As a new PA, I-REN has not yet contracted with implementers. Within 60 days of implementer(s) being contracted for the relevant programs, the Joint PAs will reconvene to plan coordination activities. Through the JCM process I-REN and other PAs have already identified potential opportunities to collaborate on the delivery of workshops and trainings where appropriate to provide greater accessibility and regionally relevant training content to local jurisdictions and building professionals.

7. **Coordination Between Statewide Program(s)**

As a new PA, I-REN has not yet contracted with implementers. Within 60 days of implementer(s) being contracted for the relevant programs, the Joint PAs will reconvene to plan coordination activities. The Joint PAs will coordinate to ensure that ratepayer funds deliver resources efficiently and effectively across the shared territories, including coordination with PG&E as administrator of the statewide Codes & Standards program. With that in mind, the Joint

PAs will approach coordination with the goal of offering transparency through regular communication, efficiency through a collaborative approach to any shared resources, and support for the success of programs across the service area. The Joint PAs will meet regularly to coordinate on the WE&T and C&S programs.

The Joint PAs will share their respective lists of available C&S trainings including those in development stages. Whenever feasible, PAs will leverage existing curriculum and training by communicating training needs via email or in regular coordination meetings. A clear chain of communication and identified contacts will be exchanged for each program and/or sub-program.

IOUs' Compliance Improvement team representative will provide a list of trainings to I-REN on a quarterly basis and will include the following information:

- Class name(s)
- Description(s)
- Instructor name(s)
- Course length time
- Mode of access and location (ex: in-person, training center/city, online)
- Class schedule (if one exists)
- Course agenda

Additionally, a standing agenda item at the quarterly meeting will be to discuss the topics of trainings in development, even if only at a high level. This will reduce the potential for duplication of efforts.

The Joint PAs will determine which existing offerings can be leveraged and coordinate to deliver these resources. I-REN will develop a calendar with potential dates, of when these offerings can be delivered to various audiences in the tri-county region. This calendar will be shared with the Joint PAs and scheduled based on the availability and resource requirements.

The Joint PAs will make each other aware of resources available as courses are scheduled for delivery and new job aides (Energy Code Ace "resources" or "tools") are developed. A portion of the Statewide C&S Team's training schedule is set at the beginning of the year while the rest remains flexible since most courses are offered upon request as a result of the team's outreach efforts. All offerings are posted on the Energy Code Ace website training page as courses are scheduled.

8. Compliance

The following table describes in further detail how I-REN's C&S Training and Education Program satisfies the REN criteria in D.12-11-0115.

Table 14: I-REN's 2022 C&S Training and Education Program Compliance with D.12-11-015

REN Criteria	I-REN C&S Training and Education Program – IREN-CS-001
1. Activities IOU cannot or does not intend to undertake	• As an organization led by and dedicated to serving local governments, I-REN can provide flexible and adaptable solutions to support local jurisdictions. • I-REN brings an understanding of local councils, cities, and communities and their priorities and the ability to navigate the local political climate which is important for delivering support to local government jurisdictions. • I-REN's C&S initiatives will offer locally focused training, education, and tools to support codes and standards implementation, enforcement, and compliance activities.
2. Pilot activities where there is no IOU program offering and where there is potential for scalability	n/a

REN Criteria	I-REN C&S Training and Education Program – IREN-CS-001
3. Activities in hard-to-reach markets, whether or not there is an IOU program that may overlap	The program is open to all local jurisdictions but will provide targeted outreach to underinvested jurisdictions serving hard-to-reach, DAC, underserved, tribal, and ESJ communities where I-REN can help drive market support and equity outcomes and cross-cutting workforce-related objectives.

F. CODES AND STANDARDS TECHNICAL SUPPORT PROGRAM – IREN-CS-001

I-REN's Codes and Standards (C&S) Technical Support Program is a non-resource program to develop technical assistance tools and resources to assist building departments and the building industry with understanding, evaluating, and permitting the energy codes to support improved enforcement and compliance. I-REN will develop regionally appropriate model ordinances, vet and refine them with participating local governments, provide ongoing technical assistance for implementation, and deliver updates to reflect the triennial code cycle.

1. Summary of I-REN's C&S Technical Support Program Objectives

a) Deliver locally informed resources and tools that streamline code compliance and enforcement and increase permit closeout.

2. Summary of Program Differentiation

The following table provides a summary of the PAs' respective C&S Technical Support program.

Table 15: I-REN, SoCalREN, SCE, and SoCalGas C&S Technical Support Program Summary

Program Parameters	I-REN	SoCalREN	SCE	SoCalGas
Target Audience(s)	• Local jurisdictions'	n/a	All stakeholders impacted by the	n/a

Program Parameters	I-REN	SoCalREN	SCE	SoCalGas
	building department staff • Permit applicants • Contractors and building professionals • Areas not served by the IOUs (City of Riverside, Imperial Irrigation District service area, etc.)		energy code	
Resource or Non-Resource	Non-resource	n/a	Non-resource	n/a
Eligible Measures	n/a	n/a	n/a	n/a
Budget	$585,773	n/a	$3,077,099* [7]	n/a

*SCE 2022 budgets provided herein are estimates merely for reference only. The final budgets are subject to Commission approval of 2022-23 BBAL Advice Letter.

I-REN's C&S Technical Support Program will be differentiated from similar programs offered by other PAs by the geographic area in which technical support will be offered, to jurisdictions in the counties of Riverside and San Bernardino. Another differentiating factor will be I-REN's focus on serving HTR, DAC, underserved, tribal, and ESJ communities. I-REN brings existing relationships with the cities in its territory from its work in local government as a convenor and facilitator for issues affecting local jurisdictions. I-REN's existing network of relationships and understanding of local councils, cities, and communities and their priorities and

[7] Note that the $3,077,099 budget reflects the same budget for SCE's Codes & Standards Compliance Improvement subprogram budget shown on **Error! Reference source not found.** in Section E subsection 2 above. The two budgets are the same and should not be counted as separate.

the ability to navigate the local political climate will be important for the on-the-ground support needed to reach building department staff.

I-REN's C&S Technical Support Program will provide one-stop-shop access for its local jurisdictions and building department staff without competing against or duplicating statewide or other regional resources. I-REN's familiarity with its communities will be important to inform and deliver regionally-relevant technical support, such as development and implementation of reach codes and model ordinances.

3. **Comparable SoCalREN Program**

   N/A

4. **Comparable SCE Program – Compliance Improvement Subprogram – SCE-13-SW-008C**

In addition to the training activities enumerated in the previous section, the Compliance Improvement (CI) Subprogram also provides a comprehensive suite of online and interactive tools and resources to support market actors in streamlining their code compliance workflow.

The tools offered on the Energy Code Ace website are comprised of a suite of interactive applications to help users understand compliance processes, installation techniques, which forms are required, and energy efficiency regulations applicable to building projects and appliances in California.

Resources include an array of downloadable materials providing practical and concise guidance on how and when to comply with California's building and appliance energy efficiency standards. The resources that the (CI) subprogram has developed address the lack of time and

resources for industry professionals by providing web-based job aids that are downloadable for quick reference. Some of the key available tools and resources include:

- "Submit a Question" – Online portal providing market actors the opportunity to submit their compliance questions for subject matter expert review and response
- Q&Ace – Searchable database of FAQ's, including common questions fielded by subject matter experts through the "Submit a Question" portal
- Checklists – Step-by-step guidance for plan checks and field inspections to help ensure compliance with the Energy Code
- Forms Ace – Helps market actors determine which forms are applicable to their project scope prior to submittal, to focus their efforts and avoid filling out unnecessary paperwork
- Virtual Compliance Assistant – "TurboTax" style interface that generates compliance forms for project teams by guiding them through a series of direct questions about their projects
- Reference Ace – An online hyperlinked version of the energy code which is easier to navigate than a PDF or hard copy code book
- Image Ace – Provides helpful diagrams and images to better illustrate efficiency concepts and code requirements
- Timeline Ace – Graphically shows when specific Energy Code requirements are going into effect

5. Comparable SoCalGas Program

N/A

6. Coordination Protocol Between Programs

I-REN is in communication with other PAs operating in the region to identify areas of potential coordination for C&S activities, and the I-REN governing agencies bring experience coordinating with other PAs through their LGP work. Coordination activities could include but would not be limited to calling on existing IOU resources for training as needed. I-REN will ensure its activities are differentiated and avoid duplication of effort, while maintaining cooperation with other PAs. As a new PA, I-REN has not yet contracted with implementers. Within 60 days of implementer(s) being contracted for the relevant programs, the Joint PAs will reconvene to plan coordination activities.

7. Coordination Between Statewide Program(s)

As a new PA, I-REN has not yet contracted with implementers. Within 60 days of implementer(s) being contracted for the relevant programs, the Joint PAs will reconvene to plan coordination activities. The Joint PAs will coordinate to ensure that ratepayer funds deliver resources efficiently and effectively across the shared territories, including coordination with PG&E as administrator of the statewide Codes & Standards program. With that in mind, the Joint PAs will approach coordination with the goal of offering transparency through regular communication, efficiency through a collaborative approach to any shared resources, and support for the success of programs across the service area. The Joint PAs will meet regularly to coordinate on the WE&T and C&S programs.

8. Compliance

The following table describes in further detail how I-REN's C&S Technical Support Program satisfies the REN criteria in D.12-11-0115.

Table 16: I-REN's 2022 C&S Technical Support Program Compliance with D.12-11-015

REN Criteria	I-REN C&S Technical Support Program – IREN-CS-001
1. Activities IOU cannot or does not intend to undertake	• As an organization led by and dedicated to serving local governments, I-REN can deliver locally informed resources and tools that streamline code compliance and enforcement and increase permit closeout, in coordination with other PAs to leverage existing resources and avoid duplication. • I-REN's C&S interventions rely on relationships and communication. I-REN is uniquely positioned to serve the C&S sector because the I-REN governing agencies already have extensive connections throughout the region with local building and planning departments, including code officials and permitting staff at all levels, and many of the private construction and architectural firms who frequently apply for permits.
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	The program is open to all local jurisdictions but will provide targeted outreach to underinvested jurisdictions serving hard-to-reach, DAC, underserved, and ESJ communities where I-REN can help drive market support and equity outcomes and cross-cutting workforce-related objectives.

IV. I-REN PROGRAM COMPLIANCE

A. I-REN PROGRAM COMPLIANCE WITH D.12-11-015 AND D.19-12-021

The majority of the activities outlined in I-REN's Business Plan are non-resource programs, designed to support and enhance the activities of other PAs, with a targeted local government resource program not currently provided to its member audiences.

The CPUC in Decision 12-11-015, Decision 16-08-019, Decision 18-05-041, and refined in decision 19-12-021, directed the REN's activities to three areas:[8][9][10][11]

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

I-REN has focused on these three criteria areas and the need to provide value for ratepayers in the development of its program portfolio. The I-REN governing agencies worked for nearly 18 months coordinating, developing, and refining the presented sectors to ensure they do not overlap and instead fill clear gaps, address hard-to-reach communities, and assess opportunities to pilot new ideas that could be scaled beyond the I-REN region. I-REN has

[8] D.12-11-015, p. 17.
[9] D.16-08-019, pp. 11-12.
[10] D.18-05-041, p. 95.
[11] D.19-12-021, p. 32.

reviewed the CPUC guidance and pertinent decisions and is confident that it is well suited and needed to ensure equitable and effective energy efficiency services and resources to the region.

B. I-REN UNDERTAKING ACTIVITIES THAT UTILITIES CANNOT OR DO NOT INTEND TO UNDERTAKE.

A critical differentiation between I-REN and the other PAs' programs is the relationships I-REN has with its constituents, partners, and local governments, which is enhanced by their proximity and historic record of service for those entities. I-REN's ability to tailor and serve San Bernardino County and Riverside County entities will only grow as their programs are implemented. Recognizing these relationships will be important in the coming year as the Joint PAs navigate and avoid any duplication of services and avoid customer confusion.

These relationships are especially important in serving the public sector. Local government agencies and districts that make up the I-REN public sector are challenged in trying to improve the energy efficiency of their equipment and facilities, given various barriers including but not limited to insufficient funding for capital improvements, a lack of awareness around energy efficiency and IOU programs, complicated and long cycles times for approval processes for budgets and spending, and limited time and staff resources.

I-REN has strong existing relationships with, communication channels to, and support from local jurisdictions as an organization made up of local government agencies. I-REN will build on its existing connections in the public sector to help these local government agencies and districts improve their facilities' energy performance, to contribute to energy conservation and greenhouse gas reduction goals and position local government agencies as energy efficiency leaders in their communities. Some of the greatest challenges to participation in the public sector in the I-REN service area may also be indicators of unrealized energy savings potential. I-REN

has designed its Public Sector strategies and tactics to help local government agencies, tribal leadership, and staff at school districts and special districts overcome these participation barriers to improve their facilities' energy performance and harvest "stranded" energy savings.

Insufficient staff time and resources is one of the major barriers to implementing energy efficiency retrofits in public sector buildings. This has been exacerbated over the past two years due to the COVID-19 pandemic, with local governments on the front lines addressing the public health crisis and enduring the associated economic downturn. Local jurisdictions have had to implement mandatory closures of facilities, as well as intensive planning and logistical efforts to prepare for safely reopening facilities to the public. I-REN's Building Upgrade Concierge will provide personalized end-to-end technical assistance, procurement and project management support, capacity-building, and ongoing commissioning support to ensure efficient operations and maintenance.

I-REN's WE&T program activities will center on supporting and leveraging local resources who are ideally positioned to deliver locally-focused, relevant, accessible training opportunities. Offering training at familiar, nearby locations makes it easier for job seekers and workers to attend. I-REN can use its connections and experience to help ensure training opportunities are accessible throughout the region. The I-REN governing agencies have existing partnerships with local colleges and community colleges, successfully providing instructional energy efficiency classes and events at local campuses where they have typically achieved high participation rates.

I-REN's WE&T Workforce Development program activities will center on convening, engaging, and building capacity with regional workforce development partners in order to define

and establish a green workforce. This program relies on collaboration with established community partner organizations and employers, many of whom have existing connections and trusted relationships with the I-REN member agencies.

As an organization led by and dedicated to serving local governments, I-REN can provide flexible and adaptable solutions to support local jurisdictions. I-REN brings an understanding of local councils, cities, and communities and their priorities and the ability to navigate the local political climate which is important for delivering support to local government jurisdictions. I-REN's C&S initiatives will offer locally focused training, education, and tools to support codes and standards implementation, enforcement, and compliance activities.

Additionally, I-REN can deliver locally informed resources and tools that streamline code compliance and enforcement and increase permit closeout. I-REN's C&S interventions rely on relationships and communication. I-REN is uniquely positioned to serve the C&S sector because the I-REN governing agencies already have extensive connections throughout the region with local building and planning departments, including code officials and permitting staff at all levels, and many of the private construction and architectural firms who frequently apply for permits.

C. I-REN UNDERTAKING PILOT ACTIVITIES WHERE THERE IS NO CURRENT UTILITY UNDERTAKING, AND WHERE THERE IS A POTENTIAL FOR SCALABILITY TO A BROADER GEOGRAPHIC REACH, IF SUCCESSFUL.

At this time, I-REN is not proposing a program using this threshold criteria for compliance with D.12-11-015. I-REN is instead proposing program that both fill in gaps to IOU services and that target HTR markets.

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

I-REN's Public Sector Technical Assistance and Strategic Energy Planning Program will be open to all public sector customers but will target underinvested jurisdictions serving hard-to-reach, DAC, underserved, and ESJ communities where I-REN can help address equity issues such as the unequal access to energy efficiency dollars, the need for additional support and commitment for small and underserved communities, ineffective programs for tribal communities, as well as overall lack of diversity. Many of these communities have been historically underinvested in and have greater needs for facility improvements, particularly community serving facilities such as libraries, community centers and the like. By supporting energy efficiency projects in these types of facilities, I-REN can provide equitable and locally administered assistance to public sector agencies where benefits will flow directly to disadvantaged and vulnerable communities.

Program outreach will focus initially on public gathering spaces and community-serving facilities such as community and neighborhood centers, health and recreation centers, senior centers, teen centers, and libraries.

I-REN's Public Sector NMEC Program will provide energy upgrades and retrofits to improve comfort and safety at facilities that benefit HTR customers and vulnerable populations such as children, elders, and low income, disadvantaged, and underserved communities. Higher efficiency equipment, appliances, and controls such as cooling-dominated HVAC loads as well as improvements to operations and maintenance will lower energy bills for local governments, reducing overhead and freeing up funds for other projects. Completion of projects at these high-

visibility locations will support achieving local and statewide energy efficiency and greenhouse gas reduction goals while also positioning local governments as energy efficiency leaders within their communities.

I-REN's WE&T program activities will drive market support and equity outcomes for HTR, underserved, DAC, and ESJ communities by partnering with and building capacity among local community-focused workforce development partners and training providers to improve quality of and access to relevant training opportunities. There is a gap between the demand and supply of existing trades people to provide energy efficiency services in the I-REN service territory. For contractors looking to expand their skills, career advancement and access to high-road jobs, the pathways for obtaining additional certifications can be complicated, costly, and limited by timing or distance.

In a service territory as expansive as the Inland Empire, expanding the number of training sites and promoting multiple delivery mechanisms are crucial for improving access to workforce education. I-REN can help providers identify underserved areas with a significant population that could benefit from training, and I-REN will also coordinate with other PAs and stakeholders to co-sponsor events and collaborate to bring training opportunities to the region. Through co-sponsorship and I-REN's extensive network of connections with local governments, I-REN will help promote training events with marketing and outreach to increase awareness and encourage participation.

I-REN will also provide outreach to employers to support decision-making around onsite training in the workplace or hands-on field training for employees, and will coordinate with other

PAs and key collaborators in the region to leverage existing training opportunities where appropriate.

For areas of the region where in-person training is challenging for cost reasons or limited participation numbers, I-REN will work with local stakeholders and employers to assess the applicability of online training options for supplementing local training. I-REN can recommend regionally appropriate training to pursue and assist with messaging and outreach to guide participants to training opportunities, including trainings offered by other PAs and statewide programs.

I-REN's C&S Training and Education program is open to all local jurisdictions but will provide targeted outreach to underinvested jurisdictions serving hard-to-reach, DAC, underserved, tribal, and ESJ communities where I-REN can help drive market support and equity outcomes and cross-cutting workforce-related objectives. To avoid duplication of effort, I-REN is communicating and exchanging ideas with other PAs operating in the region. Though other programs and initiatives have targeted the C&S sector, many local building departments (and the building industry in general) in the I-REN region have been underserved and will benefit greatly from locally focused training opportunities. I-REN will differentiate its C&S training offerings and coordinate with other training providers where necessary to make the best use of its constituents' ratepayer dollars. Additionally, training in C&S is an important area for crossover activities related to economic development and Workforce Education & Training (WE&T).

The C&S sector faces unique barriers to increased energy efficiency. This is especially true in the I-REN service territory, given its size and distance from the Los Angeles MSA. I-REN's C&S program activities will be tailored to the specific needs of this region, especially

HTR communities, even though the sector has been targeted by other non-local programs. This approach is consistent with CPUC's policy in D.12.11-2015 that Regional Energy Networks (RENs) should implement energy efficiency initiatives in hard-to-reach markets "whether or not there is a current utility program that may overlap."[12] In designing their approach to the C&S sector, I-REN has selected strategies and tactics based on insights from the I-REN governing agencies, with consideration also given to previous attempts by other PAs to address the C&S sector in this hard-to-reach region. Those lessons learned informed I-REN's planning process, as well as best practices from successful C&S programs elsewhere in the state. In this way, I-REN will offer locally-focused services that layer onto and complement existing C&S activities in the region in order to meet the unique needs of its jurisdictions and market actors.

[12] California Public Utilities Commission, Decision 12-11-015, Decision Approving 2013-2014 Energy Efficiency Programs and Budgets, November 8, 2012, Page 17

V. APPENDIX A: SUMMARY OF I-REN PROGRAM COMPLIANCE WITH D.12-11-015

Table 17: I-REN D. 12-11-015 Compliance, by Program

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.
Technical Assistance and Strategic Energy Planning Program	• SoCalREN Public Agency Energy Efficiency Project Delivery Program (EE PDP) • SCG Regional Energy Pathways • SCG3846 PUB-Small/Medium Public Sector 3P Program • SCG3899 PUB- Large Public Sector 3P Program • SCG_SW_IP_Colleges PUB-SW-Institutional Partnership: UC/CSU/CCC • SCG_SW_IP_Gov PUB-SW-Institutional Partnership: DGS & DOC • SCG_SW_MCWH SW Midstream Water Heating • SCG_SW_FS SW Point-of-Sale Food Service	• Building Upgrade Concierge with personalized end-to-end technical assistance, procurement and project management support, capacity-building, and ongoing commissioning support to ensure efficient operations and maintenance. • I-REN has strong existing relationships with, communication channels to, and support from local jurisdictions as an organization made up of local government agencies.	n/a	• The program is open to all public sector customers but will target underinvested jurisdictions serving hard-to-reach, DAC, underserved, and ESJ communities where I-REN can help address equity issues such as the unequal access to energy efficiency dollars, the need for additional support and commitment for small and underserved communities,

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.
				ineffective programs for tribal communities, as well as overall lack of diversity. Many of these communities have been historically underinvested in and have greater needs for facility improvements, particularly community serving facilities such as libraries, community centers and the like. By supporting energy efficiency projects in these types of facilities, I-REN can provide equitable and locally administered assistance to

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.
				public sector agencies where benefits will flow directly to disadvantaged and vulnerable communities.
Public Buildings NMEC Program	SoCalREN – Public Agency NMEC Program [SCR-PUBL-B3]	n/a	n/a	• The program is open to all public sector customers but will target underinvested jurisdictions serving hard-to-reach, DAC, underserved, and ESJ communities where I-REN can help drive equity outcomes. • Program outreach will focus initially on public gathering spaces and community-serving facilities such as community and

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.
				neighborhood centers, health and recreation centers, senior centers, teen centers, and libraries. • Upgrades and retrofits to HVAC and lighting equipment both interior and exterior will improve comfort and safety at facilities that benefit vulnerable populations such as children, elders, and low income, disadvantaged, and underserved communities. • Higher efficiency equipment, appliances and controls such as cooling-dominated

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.
				HVAC loads as well as improvements to operations and maintenance will lower energy bills for local governments, reducing overhead and freeing up funds for other projects. • Completion of projects at these high-visibility locations will support achieving local and statewide energy efficiency and greenhouse gas reduction goals while also positioning local governments as energy efficiency leaders within

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.
				their communities.
WE&T Training and Education Program	• SoCalREN – Workforce Education & Training Program [SCR-WET-D1] • SCE – Integrated Energy Education & Training Program [SCE-13-SW-010A] • SoCalGas – WE&T Integrated Energy Education Training (IEET) [SCG3729]	• I-REN's WE&T program activities will center on supporting and leveraging local resources who are ideally positioned to deliver locally-focused, relevant, accessible training opportunities. • Offering training at familiar, nearby locations makes it easier for job seekers and workers to attend. I-REN can use its connections and experience to help ensure training opportunities are accessible throughout the region. • The I-REN governing agencies have existing partnerships with local colleges and community colleges, successfully providing	n/a	I-REN's WE&T program activities will drive market support and equity outcomes for HTR, underserved, DAC, and ESJ communities by partnering with and building capacity among local community-focused training providers to improve quality of and access to relevant training opportunities.

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.
		instructional energy efficiency classes and events at local campuses where they have typically achieved high participation rates.		
WE&T Workforce Development Program	• SoCalREN – Workforce Education & Training Program [SCR-WET-D1] • SCE – Integrated Energy Education & Training Program [SCE-13-SW-010A]	• I-REN's WE&T program activities will center on convening, engaging, and building capacity with regional workforce development partners in order to define and establish a green workforce. • This program relies on collaboration with established community partner organizations and employers, many of whom have existing connections and trusted relationships with the I-REN member agencies.	n/a	I-REN's WE&T program activities will drive market support and equity outcomes for HTR, underserved, DAC, and ESJ communities by partnering with and building capacity among local community-focused workforce development partners.

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.
C&S Training and Education Program	SCE – Compliance Improvement Subprogram [SCE-13-SW-008C]	• As an organization led by and dedicated to serving local governments, I-REN can provide flexible and adaptable solutions to support local jurisdictions. • I-REN brings an understanding of local councils, cities, and communities and their priorities and the ability to navigate the local political climate which is important for delivering support to local government jurisdictions. • I-REN's C&S initiatives will offer locally focused training, education, and tools to support codes and standards implementation, enforcement, and compliance activities.	n/a	The program is open to all local jurisdictions but will provide targeted outreach to underinvested jurisdictions serving hard-to-reach, DAC, underserved, tribal, and ESJ communities where I-REN can help drive market support and equity outcomes and cross-cutting workforce-related objectives.

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.
C&S Technical Support Program	SCE – Compliance Improvement Subprogram [SCE-13-SW-008C]	• As an organization led by and dedicated to serving local governments, I-REN can deliver locally informed resources and tools that streamline code compliance and enforcement and increase permit closeout. • I-REN's C&S interventions rely on relationships and communication. I-REN is uniquely positioned to serve the C&S sector because the I-REN governing agencies already have extensive connections throughout the region with local building and planning departments, including code officials and permitting staff at all levels, and many of the	n/a	The program is open to all local jurisdictions but will provide targeted outreach to underinvested jurisdictions serving hard-to-reach, DAC, underserved, and ESJ communities where I-REN can help drive market support and equity outcomes and cross-cutting workforce-related objectives.

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.
		private construction and architectural firms who frequently apply for permits.		

VI. APPENDIX B: I-REN SUMMARY OF PROGRAMS OFFERED FOR 2022

Table 18: I-REN Summary of Programs, 2022

Unique ID	Program Name	Sector	Annual Budget	Eligible Measures
IREN-PUBL-001	**Technical Assistance and Strategic Energy Planning Program**	Public	$ 3,102,902	Not applicable; non-resource program
IREN-PUBL-002	**Public Buildings NMEC Program**	Public	$ 3,185,292	Any energy saving measure
IREN-WET-001	**WE&T Training and Education Program**	Cross-cutting: Workforce Education & Training	$ 1,012,949	Not applicable; non-resource program
IREN-WET-001	**WE&T Workforce Development Program**	Cross-cutting: Workforce Education & Training	$ 1,240,346	Not applicable; non-resource program
IREN-CS-001	**C&S Training and Education Program**	Cross-cutting: Codes & Standards	$ 860,334	Not applicable; non-resource program
IREN-CS-001	**C&S Technical Support Program**	Cross-cutting: Codes & Standards	$ 585,773	Not applicable; non-resource program

VII. APPENDIX C: SOCALREN, SCE AND SOCALGAS SUMMARY OF COMPARABLE PROGRAMS

Table 19: SoCalREN Summary of Comparable 2022 Programs

Unique ID	Program Name	Sector	Annual Budget	Eligible Measures
SCR-PUBL-A1	**Public Agency Energy Efficiency Project Delivery Program**	Public	$7,069,078	n/a
SCR-PUBL-B3	**Public Agency NMEC Program**	Public	$1,100,000	Any measure that reduces energy usage
SCR-WET-D1	**Workforce Education & Training Program**	Workforce Education & Training	$750,000	n/a

Table 20: SCE Summary of Comparable 2022 Programs

Unique ID	Program Name	Sector	Annual Budget	Eligible Measures
SCE-13-SW-010A	**Integrated Energy Education & Training**	Cross-Cutting	$8,696,114	n/a
SCE-13-SW-008C	**Compliance Improvement Subprogram**	Cross-cutting	$2,600,000	n/a
SCE-13-L-003I	**Public Sector Performance-Based Retrofit High Opportunity Program**	Public	$526,423	Whole Building
SCE-13-TP-029	**Local Public Sector 3P Solicitation**	Public	$5,181,133	n/a

Table 21: SoCalGas Summary of Comparable 2022 Programs

Unique ID	Program Name	Sector	Annual Budget	Eligible Measures
SCG3912	**Regional Energy Pathways**	Public	$1,932,904	n/a
SCG3729	**WE&T Integrated Energy Education Training (IEET)**	Workforce Education & Training	$4,250,000	n/a
SCG3886	**PUB - Small & Medium Public Sector**	Public Sector	$2,101,168	Direct Install measures
SCG3899	**PUB- Large Public Sector**	Public Sector	$1,750,000	TBD
SCG3739	**PUB – Community Colleges Partnership**	Public Sector	$104,440	n/a
SCG3740	**PUB – UC/CSU Partnership**	Public Sector	$137,088	n/a
SCG_SW_MCWH	**SW Midstream Commercial Water Heating**	Non-RES, Public Sector	$3,684,335	All water heating measures
SCG_SW_FS	**SW Food Service POS**	Non-RES, Public Sector	$3,845,582	Food Service Equipment

Exhibit I

Exhibit I is attached to this agenda item as:

Memorandum of Agreement No. 22-1002767

By and Between

Coachella Valley Association of Governments

And

San Bernardino Associated Governments

And

Western Riverside Council of Governments

For 2022-20278 Inland Regional Energy Network (I-REN)

I-REN Organization

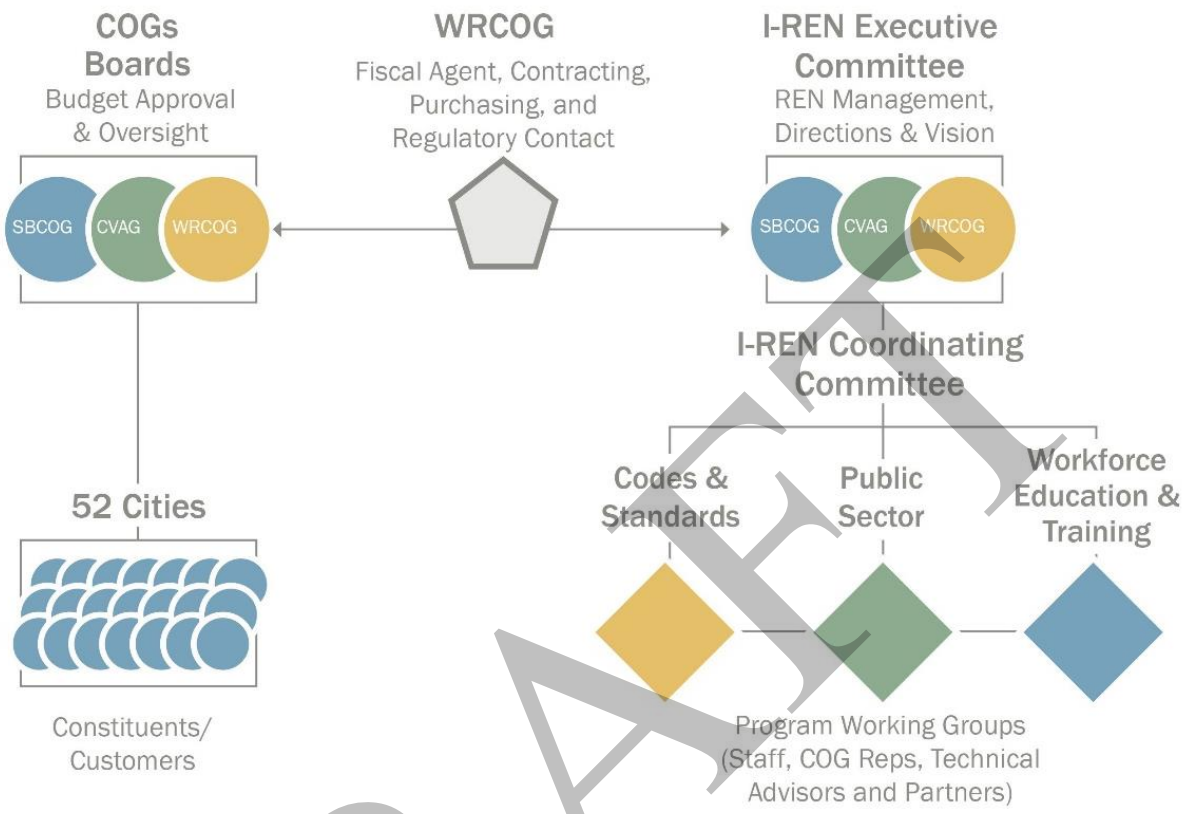


Figure 1-1. I-REN Governance

The I-REN organization builds on the robust and active Committee structure currently used for the three COGs (also referred to herein as the **I-REN governing agencies**). The graphic in Figure 1-1 illustrates the organization and the roles.

The COGs each have an Executive Committee which sets policy and oversees the budgets for the COGs. For I-REN, they will provide an oversight role to ensure accountability and service to the member cities. Representatives from the cities, the County Board of Supervisors, the Municipal Water Districts, and the Tribes collectively have seats on the Executive Committees for WRCOG, CVAG and SBCOG. By working together through the committee structure and utilizing resources, the COGs are cost-effective by reducing duplication of effort and sharing information, enabling strong advocacy and strengthening the Region's standing.

WRCOG will serve as the fiscal agent, purchasing and contracting entity, and primary regulatory contact manager for I-REN. They will not have more decision-making power than the other COGs but will work through the committee structure to ensure equal engagement for the entire region.

Representatives from each COG will in turn be represented on the I-REN Committee and have equal power in I-REN decision making and management. The I-REN Committee will set all strategic direction,

vision, and specific policies related to the operation and management of REN activities, and will jointly consider regulatory issues.

The I-REN Committee will be advised by three programmatic working groups composed of I-REN staff, COG representatives, technical advisors, and partners. The Program Working Groups will focus on program design, implementation, marketing and outreach, and other day-to-day implementation activities. They will provide information, program proposals, and program tracking and monitoring reports to the I-REN Committee on a regular basis to ensure smooth operations and to address any issues or concerns that may arise.

I-REN Vision & Goals

The I-REN governing agencies have collectively developed a vision and three guiding goals to help shape its Business Plan, its future, and anticipated activities:

VISION

I-REN's vision is to connect residents, businesses, and local government to a wide range of energy efficiency resources to increase energy savings and equitable access throughout San Bernardino and Riverside counties.

GOAL 1.

Build capacity and knowledge to enable local governments to effectively leverage energy efficiency services and to demonstrate best practices. (Public Sector Chapter)

GOAL 2.

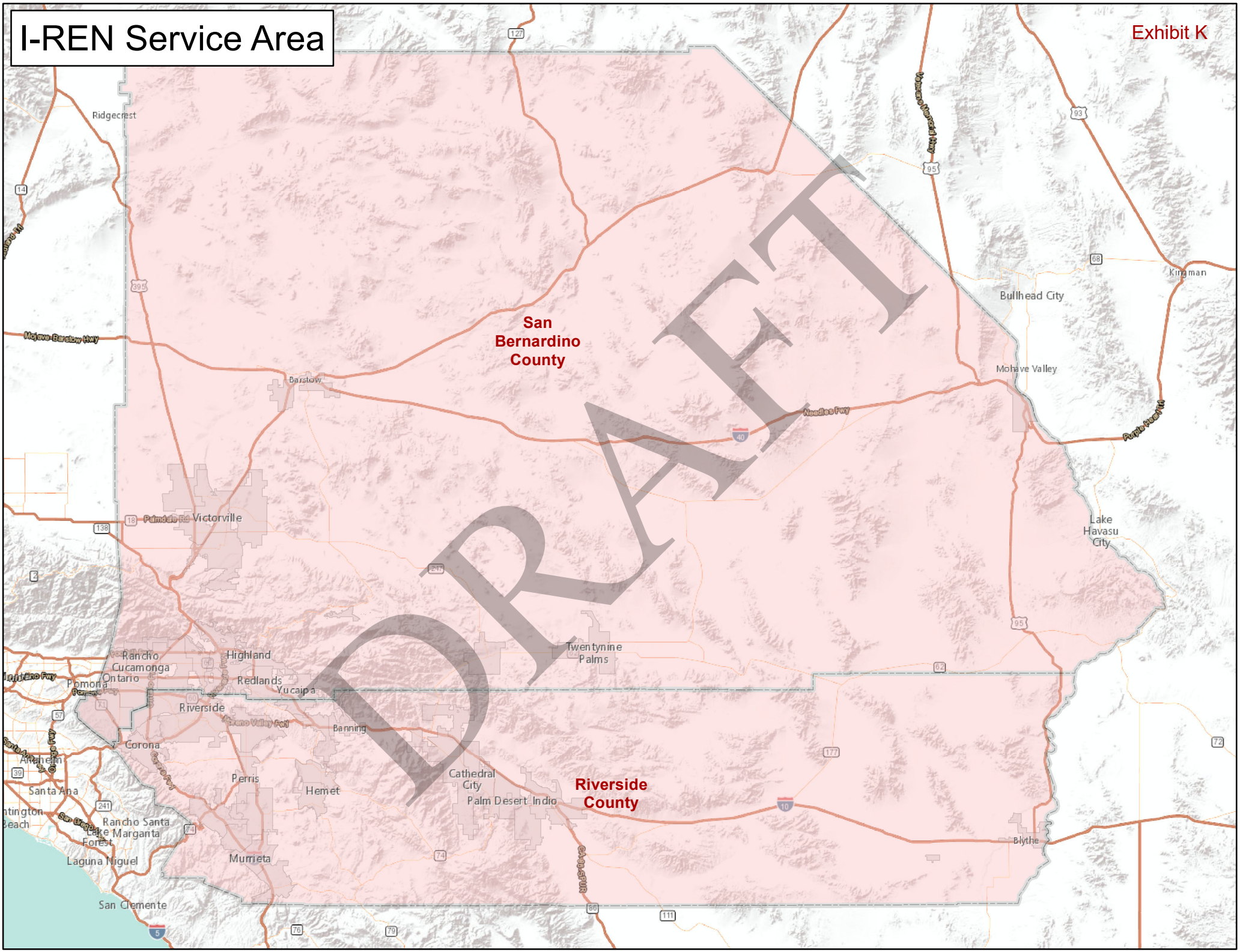
Ensure there is a trained workforce to support and realize energy efficiency savings goals across sectors. (WE&T Chapter)

GOAL 3.

Work closely with local building departments and the building industry to support, train, and enable long-term streamlining of energy code compliance. (Codes and Standards Chapter)

I-REN Service Area

Exhibit K



I-REN Service Territory

The Coachella Valley Association of Governments, San Bernardino Council of Governments, and the Western Riverside Council of Governments, collectively make up the Inland Regional Energy Network, who have been working together since 2019. The I-REN service territory covers over 27,000 square miles – an area nearly the size of the state of South Carolina – with a range of communities, populations, and needs. Vast areas of the region are historically underserved by traditional IOU and other PA programs as they are far away from major cities, have a lack of an available workforce, and socio-economic barriers make them less attractive to travel to provide services. I-REN, as a local government coalition, has a mission to equitably serve these outlying communities which are already part of the I-REN governing agencies' organizational structures.

The Riverside-San Bernardino-Ontario Metropolitan Statistical Area (MSA)[1], which includes the counties of Riverside and San Bernardino, makes up approximately 11% of California's total population, but their square mileage comprises approximately 17% of California's land area. While the Los Angeles and San Francisco MSAs are the largest in the state by population, the Riverside-San Bernardino-Ontario MSA is a very close third – yet it has had historically low participation in energy efficiency programs and has been historically underserved by utility energy efficiency programs. This may be due in part to its distance of two- to three-hours to the Los Angeles MSA – many utility-run programs are administered from within the Los Angeles MSA, and naturally the program implementers focus their resources locally. I-REN is excited for the opportunity to administer regionally appropriate resources locally within the third-largest MSA in the state.

- Riverside County: Population 2,189,641 (2010 Census), covering 7,208 square miles; population density of 304 people/square mile
- San Bernardino County: Population 2,035,210, covering 20,105 square miles (largest county in the United States by area); population density of 101 people/square mile

Figure 1-1. I-REN Service Territory Map[2]

[1] "Metropolitan Statistical Area (MSA) is a geographical area with a population of 50,000 or more, plus adjacent territory that has a high degree of social and economic integration with the core as measured by commuting ties." Definition Provided by the California Employment Development Department.

[2] Source: https://censusreporter.org/profiles/31000US40140-riverside-san-bernardino-ontario-ca-metro-area/

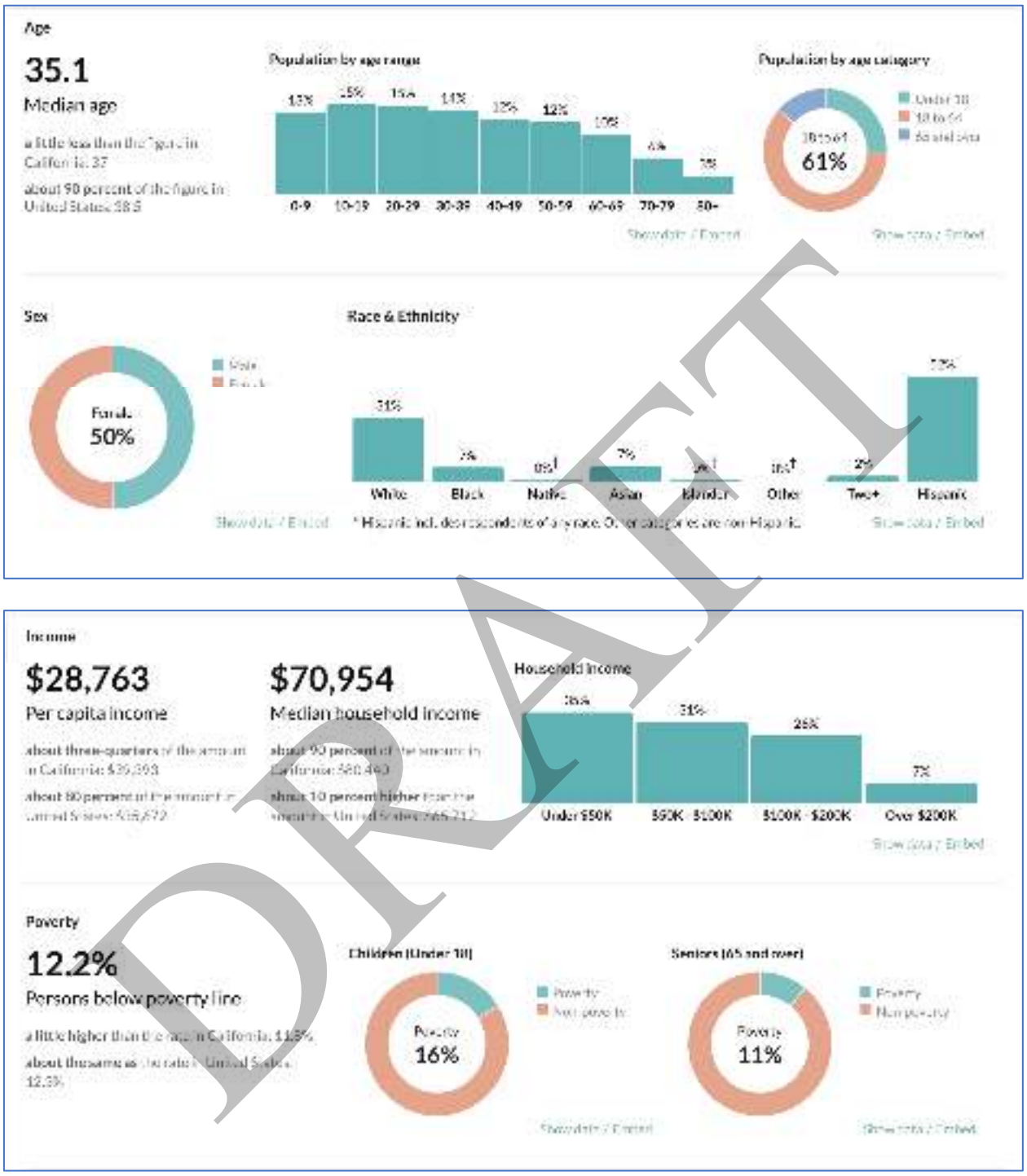


Figure 1-2. Riverside-San Bernardino-Ontario MSA Demographic & Income Data[3]

[3] Source: https://censusreporter.org/profiles/31000US40140-riverside-san-bernardino-ontario-ca-metro-area/

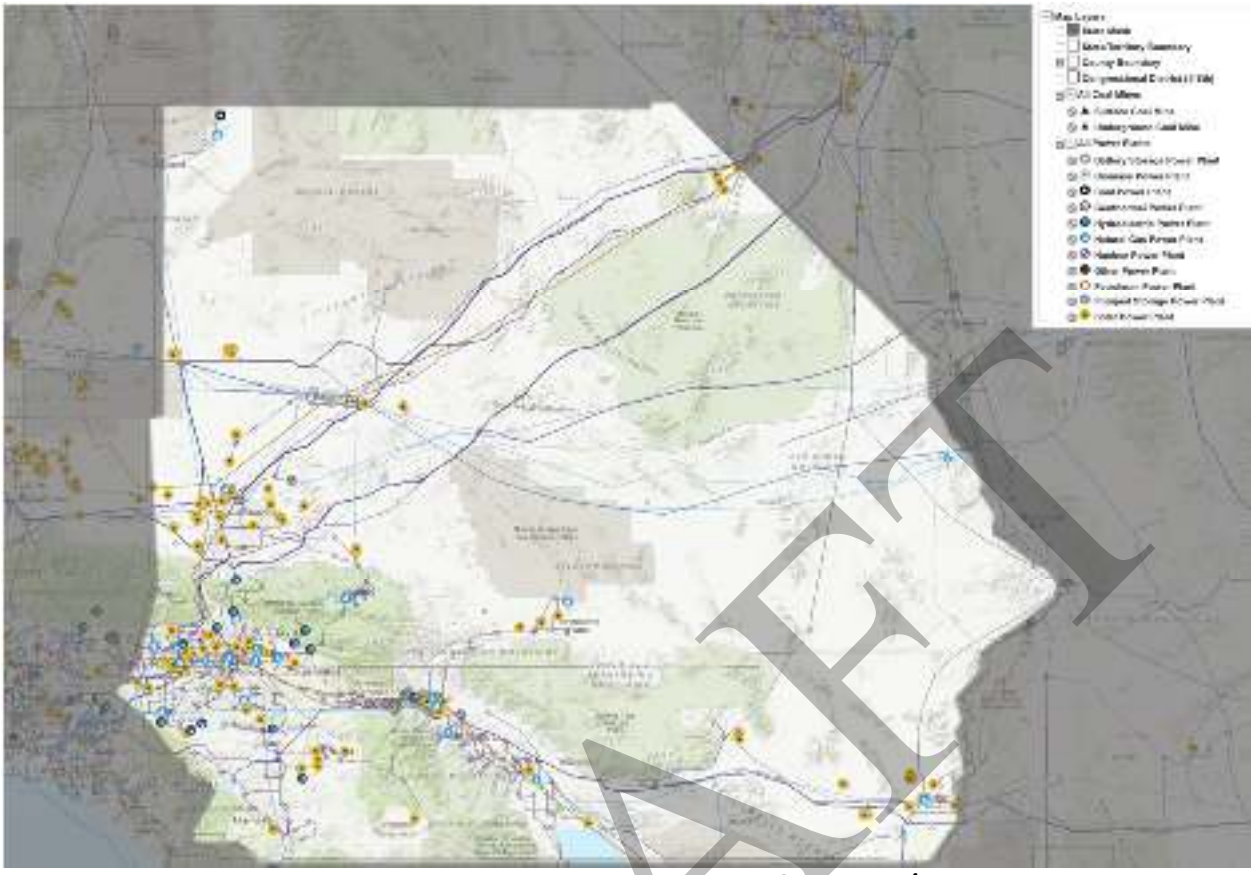


Figure 1-3. I-REN Territory Energy Infrastructure[4]

The I-REN region is a diverse geography with mountains, deserts, distinct urban areas, tribal areas, and vibrant communities and towns. The region is served by SCE and SoCalGas and is included in the SoCalREN territory. While there are multiple Program Administrators (PAs) in the region, the actual services to local communities are limited and do not meet the needs of this growing area. The reduction of Local Government Partnerships (LGPs) in particular is impacting the ability of the local jurisdictions to aggressively reduce energy use in local government buildings and build the capacity to tackle the State's greenhouse gas (GHG) reduction goals.

The illustration in Figure 1-4 from Energy Information Administration (EIA) is a good demonstration of how the Inland Empire is used as a bridge for services to the large Los Angeles MSA, with pipelines, powerlines, etc. crisscrossing the territory. State goals included in SB 350, AB/SB32, and others all point to the need to increase the services and opportunities for energy savings in the inland areas of California. In the Summer of 2020, the California Independent System Operator (CAISO) and SCE issued multiple heat wave warnings and flex alerts, asking all energy consumers to reduce usage during stressful times on the electricity grid. Coupled with massive fire events across the state, it is even more important for I-REN to implement and assist its communities, and thus, the State.

[4] Source: Energy Information Administration (EIA) https://www.eia.gov/state/?sid=CA

I-REN's service territory also includes several relatively new cities incorporated in recent years. The region's continued growth and increasingly hot and dry weather will likely result in an overall increase in energy consumption in the coming years. In addition, the I-REN territory has large sections of the region that are characterized as disadvantaged communities (DACs) as defined by SB 535, tribal lands, or with a population with a median income 60% below the statewide median, as seen in the maps and data in the I-REN Business Plan[5]. These factors contribute to a substantial need for focused, consistent, local engagement to serve these communities and to help reduce energy consumption over time.

The Inland Empire has economic strengths with a growing economy pre-COVID, but also has many socioeconomic vulnerabilities. The I-REN territory has approximately 16% living in poverty (compared to 14.7% living in poverty in California), with 38% of those being Hispanic and 34% white.[6] With I-REN's service territory being among the hottest and driest regions of California and harsh climate conditions in summer months, vulnerable populations such as children, the elderly, and low-to-moderate income families benefit from public gathering spaces that offer protection from extreme heat. Further, these conditions require air conditioning in most buildings resulting in high utility bills and energy use.

I-REN's public sector jurisdictions include two counties, 52 cities, 115 special districts, unincorporated communities, and 15 tribal areas, ranging in size from less than a dozen tribal members in the Augustine Band of Cahuilla Indians to more than 300,000 residents in the City of Riverside.[7] For additional information and analysis on I-REN's public sector jurisdictions, please see Appendix B: Public Sector Market Analysis[8].

When single family residential new construction slowed elsewhere in California after the 2008 housing crisis, the Inland Empire continued to see new single family housing starts due to the greater availability and lower cost of developable land.[9] Data from the 2018 US Census indicates that the I-REN territory represents 13% of California's total new residential permits, despite having 11.6% of the population. In 2018, more than 78% of new permits in the Riverside-San Bernardino-Ontario, CA MSA were for single family homes. Data from the 2018 US Census indicates that the I-REN territory represents 13% of California's total new residential permits, despite having 11.6% of the population.[10] In 2018, more than 78% of new permits in the Riverside-San Bernardino-Ontario, CA MSA were for single family homes.

The California Finance Department reported that between 2010 and 2019, the Inland Empire added 407,476 people to reach a population of 4,632,327.[11] The region has seen steady growth over the last decade following the Great Recession, as people moved away from coastal areas with a higher cost of living.

[5] I-REN Business Plan, 1.11-1.13.
[6] https://datausa.io/profile/geo/riverside-san-bernardino-ontario-ca#economy
[7] U.S. Census Bureau, 2010.
[8] I-REN Business Plan, B.1.
[9] Building the Future: Construction in Southern California. LAEDC Institute for Applied Economics. September 2016. Available online. Accessed October 2020. https://laedc.org/wp-content/uploads/2016/12/Construction_FINAL_20161110.pdf
[10] 2018 Annual Permits Data for New Houses. https://www.census.gov/construction/bps/msaannual.html
[11] Inland Empire Quarterly Economic Report. Economics & Politics, Inc. October 2019. Available Online. Accessed October 2020. http://www.johnhusing.com/QER%20Reports/QER%20October%202019.pdf

CVAG's member agencies include City of Blythe, City of Cathedral City, City of Coachella, City of Desert Hot Springs, City of Indian Wells, City of Indio, City of La Quinta, City of Palm Desert, City of Palm Springs, City of Rancho Mirage, Agua Caliente Band of Cahuilla Indians, Cabazon Band of Mission Indians, and Torrez Martinez Tribe.

SANBAG/SBCOG's member agencies include the Town of Apple Valley, City of Adelanto, City of Barstow, City of Big Bear Lake, City of Chino, City of Chino Hills, City of Colton, City of Fontana, City of Grand Terrace, City of Hesperia, City of Highland, City of Loma Linda, City of Montclair, City of Needles, City of Ontario, City of Rancho Cucamonga, City of Redlands, City of Rialto, City of San Bernardino, City of Twentynine Palms, City of Upland, City of Victorville, City of Yucaipa, the Town of Yucca Valley.

WRCOG's member agencies include The County of Riverside , the City of Banning, the City of Beaumont, the City of Calimesa, the City of Canyon Lake, the City of Corona, the City of Eastvale, City of Hemet, the City of Jurupa Valley, the City of Lake Elsinore, the City of Menifee, the City of Moreno Valley, the City of Murrieta, the City of Norco, City of Perris, the City of Riverside, the City of San Jacinto, the City of Temecula, the City of Wildomar, the Eastern Municipal Water District, the Western Municipal Water District, and the Riverside County Superintendent of Schools.