



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

May 10, 2023

Page Intentionally Left Blank

Contents

Program Overview.....	3
Program Budget and Savings.....	3
1. Program and/or Sub-Program Name.....	3
2. Program / Sub-Program ID number.....	3
3. Program / Sub-program Budget Table.....	3
4. Program / Sub-program Gross Impacts Table.....	3
5. Program / Sub-Program Cost Effectiveness (TRC).....	3
6. Program / Sub-Program Cost Effectiveness (PAC):.....	4
7. Type of Program / Sub-Program Implementer (PA-delivered, third party-delivered or Partnership):.....	4
8. Market Sector(s) (i.e., residential, commercial, industrial, agricultural, public).....	4
9. Program / Sub-program Type.....	4
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.....	4
11. Program Description.....	5
12. Program Delivery and Customer Services.....	5
13. Program Design and Best Practices.....	6
14. Innovation.....	6
15. Metrics.....	7
16. For Programs claiming to-code savings.....	7
17. Pilots.....	7
18. Workforce Education and Training.....	7
19. Workforce Standards.....	8
20. Disadvantaged Worker Plan.....	8
21. Additional information.....	8
Supporting Documents.....	9
1. Program Manuals and Program Rules.....	9
a. Eligible Measures or Measure Eligibility:.....	9
b. Customer Eligibility Requirements:.....	9
c. Contractor Eligibility Requirements:.....	9
d. Participating Contractors, Manufacturers, Retailers, Distributors, and Partners:.....	9
e. Additional Services:.....	9
f. Audits:.....	9

g.	Sub-Program Quality Assurance Provisions:	10
h.	Other Program Metrics:	10
2.	Program Theory and Program Logic Model	10
3.	Process Flow Chart	10
4.	Incentive Tables, Workpapers, Software Tools.....	10
5.	Quantitative Program Targets	11
6.	Diagram of Program	11
7.	Evaluation, Measurement & Verification (EM&V).....	12
8.	Normalized Metered Energy Consumption (NMEC)	12

PROGRAM OVERVIEW

The Inland Regional Energy Network’s (I-REN) Codes & 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 within the I-REN territory 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. The C&S Training and Education Program will also provide training for the building industry.

PROGRAM BUDGET AND SAVINGS

1. Program and/or Sub-Program Name

I-REN Codes and Standards: Training and Education Program

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

The C&S Training and Education Program is a non-resource program and will not claim any savings. Instead, the C&S program will deliver savings through establishing trainings, regional forums, and education for Building Department staff, construction firms, and the building industry to effectively implement energy efficiency codes and standards including where gaps exist to improve the understanding of energy efficiency codes and standards.

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

As a non-resource program, I-REN’s C&S Technical Support Program does not have a cost effectiveness requirement.

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

As a non-resource program, I-REN’s C&S Technical Support Program does not have a cost effectiveness requirement.

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

Implementer	Yes	No
PA		x
Third Party	x	
Partnership		x

8. Market Sector(s) (i.e., residential, commercial, industrial, agricultural, public)

I-REN’s C&S Training and Education program is cross-cutting coordination with the I-REN Public Sector by incorporating 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. These synergies support I-REN’s Public Sector approach, which focuses on empowering local governments as leaders in energy efficiency through their own publicly owned facilities. The C&S Training and Education program is also cross-cutting coordination with the Workforce Training and Education (WE&T) Sector to ensure there is a trained workforce to support and realize energy efficiency savings goals across all market sectors.

9. Program / Sub-program Type

Primary Program Type	Yes	No
Non-Resource	x	
Resource Acquisition		X
Market Transformation		X

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

Market Channels and Intervention Strategies	Yes	No
Upstream		X
Midstream		X
Downstream		X
Direct Install		X
Non-resource	X	

Finance		X
---------	--	---

I-REN’s governing agencies have a foundation of strong relationships with local governments and jurisdictions in their service territory, and their approach to the public sector has been carefully designed to build on those successes. With existing connections, I-REN is well positioned to reach local agencies to provide education and training offerings. Implementation Plan Narrative

11. Program Description

The Inland Regional Energy Network (I-REN) Codes and Standards (C&S) Training and Education (T&E) program is designed to address and remedy gaps in current investor-owned utility (IOU) offerings for the I-REN territory. By enhancing knowledge and adherence to energy codes in building design and construction, the program serves Riverside and San Bernardino Counties in reducing energy usage within the region.

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

I-REN’s C&S Training and Education Program will foster working relationships with local building departments and the building industry to support, train, and enable long-term streamlining of energy code compliance. I-REN will provide direct training, education, and resources to local building departments as well as regional construction firms responsible for complying with permitting requirements. The strategy focuses on addressing the barriers faced by the C&S community to streamline code enforcement and permitting, and increase energy efficiency in the region through C&S.

Building professionals will gain a better understanding of how to interpret energy reports, leading to improved consistency in the workforce and higher-performing structures. Providing comprehensive training for field inspectors and plan checkers will ensure that installation quality is consistent and meets the expectations of designers. Builders will also benefit from this training, leading to reduced costs associated with constructing compliant structures and enhancing the value proposition for complying effectively. I-REN anticipates that utilizing targeted training events, in-field mentorship, and cost-saving technologies will be effective in transitioning the region to zero net energy buildings. Ensuring that buildings perform as designed will have a significant impact, as performance forecasts will inform energy procurement policy and achieve Greenhouse Gas Emissions (GHG) reduction targets outlined in SB 350 and AB 32.

13. Program Design and Best Practices

The continual building of trust with building professionals throughout the member counties of I-REN will allow for overcoming of several market barriers. These include and are not limited to a lack of conformity across the territories' plan check staff, a lack of awareness of code changes; lack of knowledge of resources; lack of education regarding the value, benefits, and mandates for energy efficiency; and the absence of accessible education and training for the local workforce. In conducting interviews with building professionals in the region, I-REN has found a clear need for consistent messaging via both targeted classroom-style training and one-on-one style mentorship.

I-REN is designed to engage with building professionals of all types to ensure advanced measures, technologies, and compliance strategies are applied correctly to achieve anticipated savings. When the Training and Education program crosscuts with the WE&T sector, it enforces and creates a value proposition of applying code concepts that result in uniformly applied knowledge on both sides of the permitting counter. Additionally, I-REN's marketing, education, and outreach efforts will help drive demand for energy efficiency projects.

Through committed relationships with community members, local jurisdictions, and building professionals, I-REN's delivery of education and training, increases awareness and ensures Codes & Standards needs are addressed which will in turn have a positive impact in addressing local workforce needs and engaging hard-to-reach community members. Workforce development is meshed into the Codes & Standards framework through streamlining of market resources in target areas as a means of removing market barriers of code adoption. Partnerships with local non-governmental and trade organizations will further inform I-REN's direction for workforce needs, especially in disadvantaged and hard to reach (HTR) communities, and those with large Spanish-speaking populations. This information will be used to guide future program strategy shifts to meet local needs.

I-REN's compliance improvement strategy is informed by local jurisdiction survey results, as well as available IOU data to help identify training, tools, resources, and outreach necessary to encourage compliance and desired target achievements. Opportunities for engagement between building professionals and I-REN staff at training and education events will allow for direct feedback in communities where additional training is needed. To further gauge where gaps exist, an annual survey including a needs assessment will be sent to building professionals throughout the I-REN region to provide information on access and use of training, tools, and resources. In addition to program participation and data tracking, permitting counters will receive a collection of regional permitting reports and resources to help inform jurisdictions of local activities and permitting practices.

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 Metropolitan Statistical Area (MSA). I-REN proposes to offer a C&S program tailored to the specific needs of this region, even though the sector is targeted by other non-local programs. This approach is consistent with the California Public Utilities Commission's (CPUC) policy in D.12.11-015 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

As I-REN identifies its evaluation and metric needs to develop a robust plan, I-REN will join the existing Evaluation, Measurement, & Verification (EM&V) framework to support the Energy Division's ongoing efforts. Partnering with the CPUC to provide input on the development of guidelines and participate in studies, working groups, peer coordination groups, and stakeholder meetings is key in helping evaluating C&S knowledge, compliance, and enforcement throughout the region. I-REN led EM&V efforts are currently focused on verifying the non-resource benefits of programs such as the WE&T and C&S programs' efforts to promote best practices through market characterization and process evaluation. I-REN's coordination, throughout the program's life cycle, with CPUC staff is in accordance with guidance in the most recent Energy Division and PA Energy Efficiency EM&V Plan, following the process for Commission Oversight of PA EM&V projects.

I-REN's C&S Training and Education program will embed data collection tools into each program activity to support well-rounded evaluations. Training participation, event attendance, no-show rates and qualitative participant feedback are several external and internal metrics that will be continuously tracked. Software adoption metrics will track a jurisdiction's progress and resulting impacts, from commitment to implementation, when available. Use of available resources metrics will be tracked as relevant to the individual resource.

The following are examples of metrics that will track program performance:

- Percentage of program participants who have increased knowledge of code compliance
- Number of jurisdictions using I-REN trainings and tools for code compliance
- Percentage of event I-REN attendees from hard-to-reach communities (HTR)

16. For Programs claiming to - code savings

Claiming to-code savings is not applicable for the I-REN Training and Education Program.

17. Pilots

No pilots will be operated as part of this program.

18. Workforce Education and Training

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

Through this effort, I-REN will partner with the California Energy Commission (CEC) and other industry partners to facilitate education and training, which allows for shared engagement strategies tailored to the unique conditions at both city and county levels. Additionally, this partnership will help build valuable relationships between Building Department staff, Title 24 compliance specialists, builders, real estate developers, and emerging technology producers – all of which conduct job training and placement within their departments.

I-REN will encourage and increase building professional participation through use of local assets, coordination with IOU offerings, bolster the compliance improvement program success, and deliver multiple training modalities across the region by a team of subject matter experts. I-REN's C&S Training and Education program will provide access to trainings, tools, and resources through the following, not limited to, means:

- Host regional policy forums
- Promote, educate, and coordinate with Energy Code Ace
- Provide Online Courses and Checklists
- Provide access to training events for building departments and building professionals.
Examples of cross-cutting trainings and resources include, but are not limited to:
 - Title 24 trainings
 - Measure level trainings, such as HVAC & QII
 - Commercial passive solar
 - Zero carbon and passive home design
 - Daylighting, controls, and automation
 - ICC and AIA curriculum
 - Online Library (Energy Code Ace coordination)
 - All RENs online courses
- Provide Spanish-language access to resources and trainings
- Offer access to training video library
- Offer regional online permit coordination

The above-mentioned resources will support staff within the building departments and building industry as it allows for greater access to training, certifications, tools, and additional career pathways.

19. Workforce Standards

Workforce Standards are not applicable 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.

Collaborating with local non-profit organizations presents an avenue for establishing career paths for underprivileged workers, as many of the contractors and crew members reside in the disadvantaged communities they serve. To promote building codes and enhance adherence to energy efficiency standards in both new construction and retrofit markets, I-REN will provide mentorship and training initiatives. An example is I-REN's Energy Fellowship, a cross-cutting Workforce Education & Training Program that partners with CivicSpark – a Governor's Initiative AmeriCorps program dedicated to addressing community resilience issues through building energy knowledge and capacity for local public agencies.

21. Additional information

I-REN's C&S Training and Education program does not provide incentives to customers or implementers, and the guidelines in D.18.05.041 Section 2.2.1. regarding incentive design are not directly relevant. However, the principles behind this program align with the guidance of the decision, which aims to optimize the value of investments in energy efficiency made by all stakeholders involved in implementing building codes. By promoting compliance and enforcement of building codes, I-REN is supporting the goal of achieving maximum energy efficiency savings in projects that are supported by non-ratepayer funds.

Supporting Documents

1. Program Manuals and Program Rules

a. Eligible Measures or Measure Eligibility:

Energy efficiency measures are not included in the I-REN C&S Training and Education program. Measure eligibility and measure lists are not applicable.

b. Customer Eligibility Requirements:

I-REN will not target utility customers as a specific group. Thus, customer eligibility criteria requirements are not relevant.

c. Contractor Eligibility Requirements:

Building Department staff, project engineers, building and specialty inspectors, architects and other design-side stakeholders throughout the I-REN territory will be targeted as well. Specific types of contractors or design-side stakeholder participation is not limited.

Licensed building professionals and contractors performing building improvements impacted by code will be targeted to participate in the C&S Training and Education program (license types B, C2, C10, C20, C36, C39, etc.).

d. Participating Contractors, Manufacturers, Retailers, Distributors, and Partners:

To achieve program objectives, I-REN leverages current connections with stakeholder groups while also forging new alliances through collaboration with local governments, building departments, and IOU partners.

The C&S Training and Education program is not an upstream or midstream incentive program and does not have participating contractors, manufacturers, retailers, or distributors.

e. Additional Services:

I-REN will complement regionally specific tools through an online portal. The portal will have links to all statewide resources and provide locally relevant case studies, information, and details to assist in supporting local building officials, particularly small jurisdictions, improve code compliance and permit processes.

f. Audits:

Pre and post audits are not applicable as measures will not be installed for this program. Evaluations following training(s) will be conducted to measure retention of information provided.

g. Sub-Program Quality Assurance Provisions:

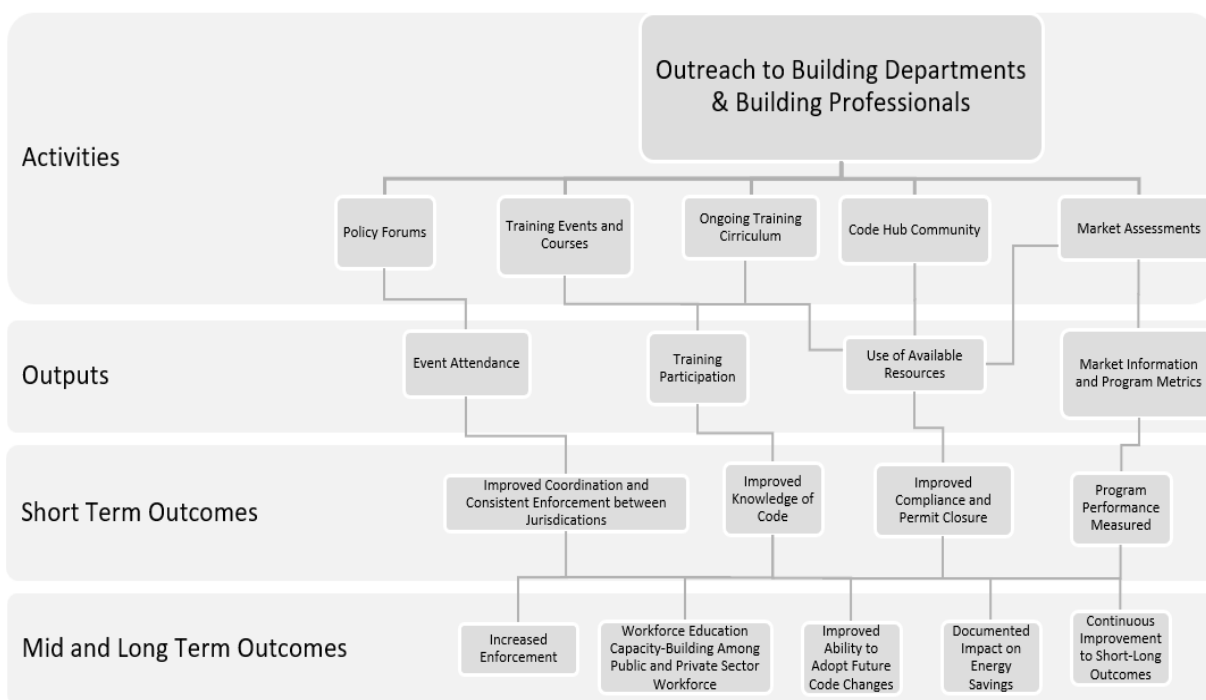
Quality assurance requirements, sampling rates, and quality assurance personnel certifications are not applicable as I-REN’s C&S Training and Education program does not include any measure installations.

h. Other Program Metrics:

Other Program Metrics are not applicable.

2. Program Theory and Program Logic Model

I-REN Codes & Standards Training and Education Program Logic Model



3. Process Flow Chart

I-REN’s C&S Training and Education program does not have a direct program process flow. Therefore, a process flow chart was not included. Instead, the logic model and program diagram display linkages between program activities and the program theory.

4. Incentive Tables, Workpapers, Software Tools

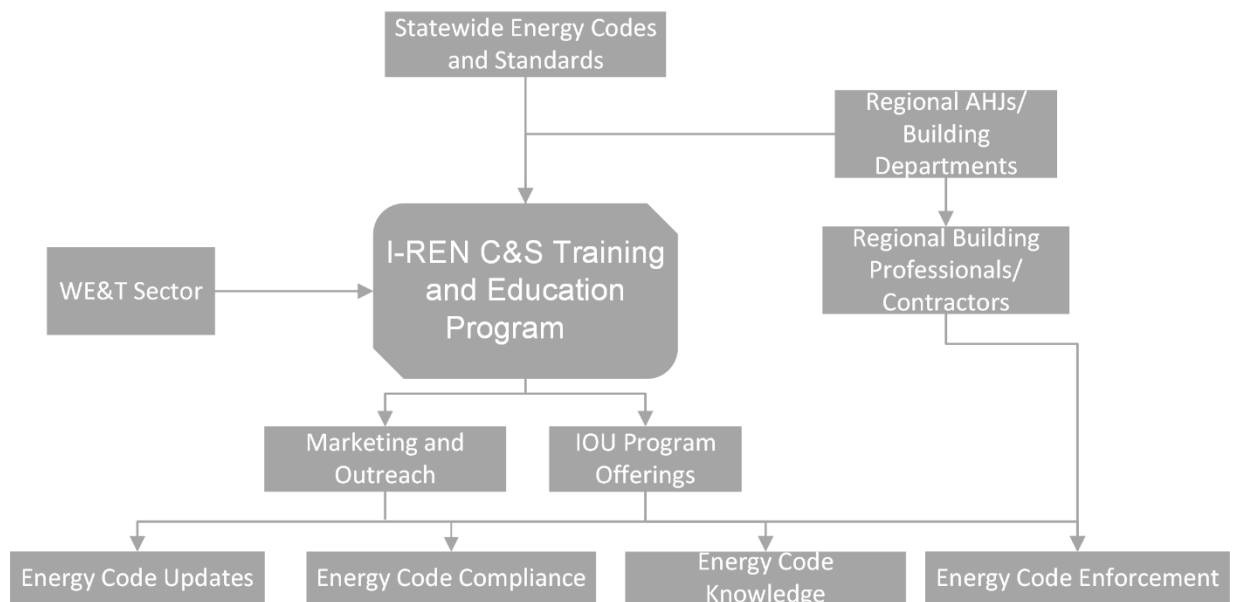
Incentive tables, workpapers, and software tools are not applicable as I-REN’s C&S Training and Education program does not offer incentives, nor does it claim energy savings.

5. Quantitative Program Targets

Metrics	Baseline Year	Short Term Target (2023)	Mid Term Target (2024-2025)
Number of training activities held (trainings, webinars)	TBD	12	24
Number of participants	TBD	360	TBD
Program participants who have increased knowledge in code compliance pre/post training	TBD	TBD	TBD
Percentage of event attendees considered Disadvantaged Workers (DAW)	TBD	TBD	TBD

As a non-resource program, I-REN’s C&S Training and Education program utilizes alternative metrics to track program performance and progress towards goals. Future targets are to be determined (TBD) as the California Title 24 Building Energy Efficiency Standards update on a three-year cycle.

6. Diagram of Program



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

Collaborating with the CPUC, as well as other PAs, the CEC, Energy Division, the region's C&S community is one of I-REN's priorities as a means of supporting statewide and regional efforts around C&S EM&V Roadmaps and Plans. In addition to collaborating with the CPUC, I-REN will also partner with other stakeholders, to ensure that data collection activities are embedded in the program design to meet evaluation requirements and help expand the understanding of REN program impacts in this cross-cutting sector.

8. Normalized Metered Energy Consumption (NMEC)

Normalized Metered Energy Consumption is not applicable for this program.