Inland Regional Energy Network
I-REN Executive Committee

AGENDA

Tuesday, May 20, 2025
2:00 PM

WRCOG
3390 University Avenue, Suite 200
Riverside, CA 92501

Remote Meeting Locations

CVAG
74-199 El Paseo
West Building, Suite 100
Palm Desert, CA 92260

Town of Apple Valley
14955 Dale Evans Parkway
Apple Valley, CA 92307

Members of the public are welcome to participate remotely from any location. Committee member participation is limited to locations that are listed on the published agenda.

Public Zoom Link
Meeting ID: 886 4326 1379
Passcode: 585575
Dial in: 669 444 9171 U.S.

In compliance with the Americans with Disabilities Act and Government Code Section 54954.2, if special assistance is needed to participate in the I-REN Executive Committee meeting, please contact WRCOG at (951) 405-6702. Notification of at least 48 hours prior to meeting time will assist staff in assuring that reasonable arrangements can be made to provide accessibility at the meeting. In

compliance with Government Code Section 54957.5, agenda materials distributed within 72 hours prior to the meeting which are public records relating to an open session agenda item will be available for inspection by members of the public prior to the meeting at 3390 University Avenue, Suite 200, Riverside, CA, 92501.

In addition to commenting at the Committee meeting, members of the public may also submit written comments before or during the meeting, prior to the close of public comment to jleonard@wrcog.us.

Any member of the public requiring a reasonable accommodation to participate in this meeting in light of this announcement shall contact Lucy Felix at least 72 hours prior to the meeting at (951) 405-6702 or jleonard@wrcog.us. Later requests will be accommodated to the extent feasible.

The Committee may take any action on any item listed on the agenda, regardless of the Requested Action.

1. CALL TO ORDER (Oscar Ortiz, Chair)

2. PLEDGE OF ALLEGIANCE

3. ROLL CALL

4. PUBLIC COMMENTS

At this time members of the public can address the Committee regarding any items within the subject matter jurisdiction of the Committee that are not separately listed on this agenda. Members of the public will have an opportunity to speak on agendized items at the time the item is called for discussion. No action may be taken on items not listed on the agenda unless authorized by law. Whenever possible, lengthy testimony should be presented to the Committee in writing and only pertinent points presented orally.

5. CONSENT CALENDAR

All items listed under the Consent Calendar are considered to be routine and may be enacted by one motion. Prior to the motion to consider any action by the Committee, any public comments on any of the Consent Items will be heard. There will be no separate action unless members of the Committee request specific items be removed from the Consent Calendar.

A. Action Minutes from the April 15, 2025, I-REN Executive Committee Meeting

Requested Action(s):

1. Approve the Action Minutes from the April 15, 2025, I-REN Executive Committee meeting.

B. Second Amendment to Professional Services Agreement with EcoHero for School Outreach Presentations

Requested Action(s):

1. Recommend that the WRCOG Executive Committee authorize the WRCOG Executive Director to execute a Second Amendment to the Professional Services Agreement between WRCOG and EcoHero for School Outreach Presentations in an amount not-to-exceed $90,000, for a term through December 31, 2027.

6. REPORTS / DISCUSSION

Members of the public will have an opportunity to speak on agendized items at the time the item is called for discussion.

A. I-REN Energy Science Fair Award Winners

Requested Action(s):

1. Receive and file.

B. Memorandums of Understanding with Riverside County and San Bernardino County for I-REN's Workforce Education & Training Program

Requested Action(s):

1. Recommend that the WRCOG Executive Committee authorize the WRCOG Executive Director to execute Memorandums of Understanding with Riverside County and San Bernardino County separately for further development of the I-REN Workforce Education & Training Program in an amount not-to-exceed $1,500,000 per County for a term through December 31, 2027.

C. Approval of Fiscal Year 2025/2026 Agency Budget

Requested Action(s):

1. Approve the Fiscal Year 2025/2026 Agency budget.

D. California Public Utilities Commission Application Process for Funding for Program Years 2028 - 2035

Requested Action(s):

1. Authorize submittal of the I-REN 2028-2035 Business Plan for programs and services related to the Public, Workforce Education & Training, and Codes & Standards Sectors.
2. Direct I-REN staff to establish better relationships and coordination with existing Energy Efficiency Programs offering services in the Commercial, Residential, and Industrial Sectors, to bring additional resources, programs and services to the communities of the Inland Empire.

E. I-REN Energy Fellowship Status Update

Requested Action(s):

1. Receive and file.

7. REPORT FROM THE EXECUTIVE COMMITTEE CHAIR
Oscar Ortiz, CVAG

8. ITEMS FOR FUTURE AGENDAS
Members are invited to suggest additional items to be brought forward for discussion at future Committee meetings.

9. GENERAL ANNOUNCEMENTS
Members are invited to announce items / activities which may be of general interest to the Committee.

10. NEXT MEETING
The next I-REN Executive Committee meeting is scheduled for Tuesday, July 15, 2025, at 2:00 p.m., in WRCOG's office at 3390 University Avenue, Suite 200, Riverside.

11. ADJOURNMENT

12. AGENCY ACRONYMS

Inland Regional Energy Network Acronym Guide

3C-REN – Tri-County Regional Energy Network (Counties of Ventura, Santa Barbara, and San Luis Obispo)
ABAL – Annual Budget Advice Letter
AHJ – Authority Having Jurisdiction
AVCE – Apple Valley Choice Energy
BayREN – Bay Area Regional Energy Network (nine county REN in Northern California)
BUC – Building Upgrade Concierge
C&S – Codes & Standards
CAEECC – California Energy Efficiency Coordinating Committee
CalChoice – California Choice Energy Authority
Cal ISO – California Independent System Operator
CARB – California Air Resources Board
CCA – Community Choice Aggregator
CCEC – California Climate & Energy Collaborative
CEC – California Energy Commission
COG - Council of Government
CPA – Clean Power Alliance
CPUC – California Public Utilities Commission
CVAG – Coachella Valley Association of Governments
DAC – Disadvantaged Communities
DACAG – Disadvantaged Communities Advisory Group
DCE – Desert Community Energy
DER – Distributed Energy Resources
DOE – U.S Department of Energy
EE – Energy Efficiency
EM&V – Evaluation, Measurement, and Verification
EV – Electric Vehicle
GHG – Greenhouse sas
HTR – Hard To Reach communities
IID – Imperial Irrigation District
IOU – Investor-Owned Utility
I-REN – Inland Regional Energy Network
JCM – Joint Cooperation Memorandum
LGSEC – Local Government Sustainable Energy Coalition
LGP – Local Government Partnership
MOA – Memorandum of Agreement
NEBs – Non-energy Benefits
NMEC – Normalized Metered Energy Consumption
NREL – U.S Department of Energy National Renewable Energy Laboratory
PG&E – Pacific Gas & Electric
PA – Program Administrator
POU – Publicly Owned Utility
REN – Regional Energy Network
RMEA – Rancho Mirage Energy Authority
RPU – Riverside Public Utilities
SBCOG – San Bernardino Council of Governments
SCE – Southern California Edison
SCG / SoCalGas – Southern California Gas Company
SDG&E – San Diego Gas & Electric
SJP – San Jacinto Power
SoCalREN – Southern California Regional Energy Network (all of southern California, administered by Los Angeles County)
TA – Technical Assistance

TOU – Time of use
TRC – Total Resources Cost
V2G – Vehicle to Grid
WE&T – Workforce Education & Training
WRCOG – Western Riverside Council of Governments

I-REN Executive Committee

Action Minutes

1. CALL TO ORDER

The meeting of the I-REN Executive Committee was called to order by Chair Oscar Ortiz at 2:00 p.m. on April 15, 2025, at WRCOG's office.

2. PLEDGE OF ALLEGIANCE

Committee member Crystal Ruiz, led the Committee members and guests in the Pledge of Allegiance.

3. ROLL CALL

CVAG
- City of Indio - Oscar Ortiz (Chair)

SBCOG
- City of Grand Terrace - Bill Hussey
- County of San Bernardino - Curt Hagman
- Town of Apple Valley - Art Bishop

WRCOG
- City of Jurupa Valley - Chris Barajas
- City of San Jacinto - Crystal Ruiz

4. PUBLIC COMMENTS

There were no public comments.

5. CONSENT CALENDAR

RESULT:	**APPROVED AS RECOMMENDED**
MOVER:	San Jacinto
SECONDER:	Grand Terrace
AYES:	Ortiz, Hussey, Hagman, Bishop, Barajas, Ruiz

A. Action Minutes from the February 18, 2025, I-REN Executive Committee Meeting

Action:
1. Approved the Action Minutes from the February 18, 2025, I-REN Executive Committee meeting.

B. First Amendment to Professional Services Agreement with Frontier Energy for

Implementation Services

Action:

1. Recommended that the WRCOG Executive Committee authorize the WRCOG Executive Director to execute a First Amendment to the Professional Services Agreement between WRCOG and Frontier Energy for staff augmentation services to support ongoing implementation of I-REN's programs in an amount not-to-exceed $2,248,519.00, for a term through December 31, 2027.

C. First Amendment to Professional Services Agreement with The Energy Coalition for Public Sector Services

Action:

1. Recommended that the WRCOG Executive Committee authorize the WRCOG Executive Director to execute a First Amendment to the Professional Services Agreement between WRCOG and The Energy Coalition for staff augmentation services to support ongoing implementation of I-REN's Public Sector programs in an amount not-to-exceed $17,762,942.00, for a term through December 31, 2027.

D. First Amendment to Professional Services Agreements for On-Call Workforce, Education & Training services with The Energy Coalition and Riverside Community College Districts

Actions:

1. Recommended that the WRCOG Executive Committee authorize the WRCOG Executive Director to execute a First Amendment to the On-Call Professional Services Agreement between WRCOG and The Energy Coalition for staff augmentation services to support implementation of workforce assessments recommendations in an amount not-to-exceed $735,000, for a term through December 31, 2027.
2. Recommended that the WRCOG Executive Committee authorize the WRCOG Executive Director to execute a First Amendment to the On-Call Professional Services Agreement between WRCOG and Riverside Community College District for support to I-REN with workforce assessment, working group implementation and facilitation services, and other support services in an amount not-to-exceed $600,000, for a term through December 31, 2027.

E. Memorandum of Understanding with California State University of San Bernardino for Evaluation, Measurement, and Verification Studies

Action:

1. Recommended that the WRCOG Executive Committee authorize the WRCOG Executive Director to execute a Memorandum of Understanding between WRCOG and the California State University of San Bernardino for IREN's Evaluation, Measurement, and Verification Studies in an amount not-to-exceed $120,000, for a term through December 31, 2027.

6. REPORTS / DISCUSSION

A. I-REN Energy Efficiency Annual Report for Calendar Year 2024

Action:

1. Received and filed.

B. I-REN 2023-2027 Strategic Plan Update

Action:

1. Received and filed.

7. REPORT FROM THE EXECUTIVE COMMITTEE CHAIR

Chair Ortiz reported that that the City of Indio's Strategic Planning session will be looking intro natural materials, like straw house technology, for energy efficiency, which will be conducted as pilot project within a couple of years. This technology could be beneficial in a situation of natural disaster, such as that caused by the Palisades fires, where the land became toxic as a result of the products burned in the fire. These straw houses would be able to resist fire for approximately two hours due to its Indo Plaster coating, as compared to 30 minutes for modern, construction built homes.

8. ITEMS FOR FUTURE AGENDAS

WRCOG's Casey Dailey reported that at the next meeting, WRCOG will be bringing forth the proposed Fiscal Year 2025/2026 Budget, as well as I-REN's Business Plan.

9. GENERAL ANNOUNCEMENTS

Committee member Crystal Ruiz wished everyone a Happy Easter.

10. NEXT MEETING

The next I-REN Executive Committee meeting is scheduled for Tuesday, May 20, 2025, at 2:00 p.m., in WRCOG's office located at 3390 University Avenue, Suite 200, Riverside.

11. ADJOURNMENT

The meeting was adjourned at 3:13 p.m.

Inland Regional Energy Network
I-REN Executive Committee

Staff Report

Subject: **Second Amendment to Professional Services Agreement with EcoHero for School Outreach Presentations**

Contact: **Tyler Masters, WRCOG Program Manager, tmasters@wrcog.us, (951) 405-6732**

Date: **May 20, 2025**

Recommended Action(s):

1. Recommend that the WRCOG Executive Committee authorize the WRCOG Executive Director to execute a Second Amendment to the Professional Services Agreement between WRCOG and EcoHero for School Outreach Presentations in an amount not-to-exceed $90,000, for a term through December 31, 2027.

Summary:

WRCOG has partnered with EcoHero for over five years to deliver engaging environmental education programs to students across the region. With I-REN's growing involvement in K-12 outreach through programs like the Science Technology Education Partnership (STEP), staff propose a Second Amendment to the EcoHero Agreement to incorporate energy education content aligned with the region's education standards. This Amendment would expand services to include custom I-REN presentations, in-person attendance at assemblies or virtually in classrooms, and extend the contract through December 31, 2027.

Discussion:

Background

WRCOG's Environmental Programs work with EcoHero on school outreach presentations designed to educate students about environmental conservation, sustainability, and eco-friendly practices. Through these outreach programs, WRCOG collaborates with local schools to organize interactive sessions that raise awareness about environmental issues, such as used oil recycling and stormwater pollution prevention. These initiatives aim to instill a sense of environmental responsibility among students. By actively engaging with schools, WRCOG fosters an environmentally conscious mindset among students, encouraging them to become future leaders in sustainability. For over five years, WRCOG has worked with EcoHero to provide these educational assemblies and programs.

The initial contract with EcoHero expired on June 30, 2023, and in October 2023, WRCOG issued a Request for Proposals (RFP) for an environmental education outreach provider. After proposal evaluations and interviews, it was determined that EcoHero was the highest value bidder. A

Professional Services Agreement was entered into on December 4, 2023. A First Amendment of the Agreement was executed on August 9, 2024, to extend the services for an additional year through June 2025.

Present Situation

Since 2023, I-REN has participated in STEP, a nonprofit established to bridge the skills gap between our K-12 students and high-technology industry needs. STEP produces its flagship science and technology education event every year, the STEP Conference. The first of its kind in the region, this conference serves to ignite the imagination of thousands of students, so that they might pursue promising careers in high-technology fields. It also provides hands-on training to hundreds of K-12 teachers, ensuring they have the latest tools to keep our students competitive in the global marketplace.

STEP is supported largely by Riverside County Office of Education and San Bernardino Superintendent of Schools. Through I-REN's participation in STEP, and after multiple conversations with County education staff, an opportunity has been identified where I-REN can support the existing education and curriculum through development of outreach initiatives related to energy education. This opportunity includes the customization of the existing EcoHero offerings to include energy efficiency content, and the creation of a presentation that meets Next Generation Science Standards among other energy and science school standards.

Staff proposes a Second Amendment to the WRCOG EcoHero contract that will provide the additional outreach services for energy education that adhere to both County offices of education standards. Services would include:

- Development of custom content - Development of an I-REN energy-related presentation and custom story book.
- Districtwide event presentations where multiple schools' students convene at events (like Student STEPcon which convenes 1300+ students from multiple schools).
- Performances - including but not limited to up to 25 (in school year 2025-2026) and up to 46 (2026-2027) whole school in-person assembly presentations or up to 100 virtual classroom presentations available to any school or school district in Riverside or San Bernardino Counties.

This contract amendment will continue EcoHero school outreach services for WRCOG environmental programs, increasing the contract scope and budget to include services needed for I-REN's energy outreach, and extending the contract term through December 31, 2027.

Prior Action(s):

None.

Financial Summary:

The Amendment with The EcoHero Show is included in the Fiscal Year 2024/2025 budget and is also included in the Fiscal Year 2025/2026 budget.

Attachment(s):

Attachment 1 - Second Amendment to Professional Services Agreement with The EcoHero Show

SECOND AMENDMENT TO

PROFESSIONAL SERVICES AGREEMENT
BETWEEN
WESTERN RIVERSIDE COUNCIL OF GOVERNMENTS
AND
ECOHERO SHOW

1. PARTIES AND DATE.

This Second Amendment is made and entered into this 2nd day of June 2025, by and between the Western Riverside Council of Governments, a California public agency ("WRCOG") and **EcoHero Show, a limited liability company** ("Consultant"). WRCOG and Consultant are sometimes individually referred to as "Party" and collectively as "Parties."

2. RECITALS.

2.1 Master Agreement.

WRCOG and Consultant have entered into that certain Professional Services Agreement dated December 4, 2023 ("Master Agreement").

2.2 First Amendment.

WRCOG and Consultant entered into the First Amendment on August 9, 2024, for the purposes of extending the term.

2.3 Second Amendment.

WRCOG and Consultant desire to enter into this Second Amendment for the purpose of extending the Master Agreement length and providing additional compensation for additional services for the Inland Regional Energy Network program ("Services").

3. TERMS.

3.1 Extending Master Agreement Length.

The term of the Master Agreement shall be extended to December 31, 2027.

3.2 Additional Compensation and Scope of Services.

Per Section 3.3.1 of the Master Agreement, the original compensation amount shall not exceed Twenty Thousand Dollars ($20,000) per year. This amendment increases the total compensation amount for Services performed pursuant to the Agreement and this Second Amendment to a total not to exceed amount of **Ninety-Thousand Dollars ($90,000) per year; $10,000 for Environmental program activities, and $80,000 for I-REN activities,** without written approval of WRCOG's Executive Director.

3.3 Amendment to Exhibits "A "and "B" of the Master Agreement.

a. Exhibit “A” of the Master Agreement shall be amended to include additional services as outlined in Exhibit “A-1”, attached hereto to this Second Amendment and incorporated herein by this reference.

b. Exhibit “B” of the Master Agreement shall be amended to reflect the Schedule of Services and Compensation for the additional services as outlined in Exhibit “B-1”, attached hereto to this Second Amendment and incorporated herein by this reference.

3.4 Continuation of Existing Provisions.

Except as amended by this Second Amendment, all provisions of the Master Agreement including without limitation the indemnity and insurance provisions, shall remain in full force and effect and shall govern the actions of the Parties under this Second Amendment.

3.5 Counterparts.

This First Amendment may be executed in duplicate originals, each of which is deemed to be an original, but when taken together shall constitute one instrument.

3.6 Electronic Delivery of Agreement; Electronic Signatures.

A manually signed copy of this Second Amendment which is transmitted by facsimile, email or other means of electronic transmission shall be deemed to have the same legal effect as delivery of an original executed copy of this Second Amendment for all purposes. This Second Amendment may be signed using an electronic signature.

[Signatures on the following page]

SIGNATURE PAGE TO

SECOND AMENDMENT TO

PROFESSIONAL SERVICES AGREEMENT
BETWEEN
WESTERN RIVERSIDE COUNCIL OF GOVERNMENTS
AND
ECOHERO SHOW

IN WITNESS WHEREOF, the Parties hereto have made and executed this First Amendment as of the date first written above.

WRCOG

WESTERN RIVERSIDE COUNCIL
OF GOVERNMENTS

By: _____
Dr. Kurt Wilson
Executive Director

CONSULTANT

ECOHERO

By: _____
Brett Edwards
CEO

Approved to Form:

By: _____
Steven C. DeBaun
General Counsel

Exhibit “A-1”

SCOPE OF WORK

SUMMARY

WRCOG / IREN is considering hiring The EcoHero Show to deliver districtwide energy efficiency concerts for K-6th grade students during STEPCON in October 2025, 2026, & 2027. The presentations would be filmed and made available to students not in attendance at STEPCON to ensure equitable delivery of messaging. During the proceeding school semesters, The EcoHero Show would provide school assemblies and classroom presentations to schools throughout their region. These interactive shows would inspire students to embrace sustainability and share eco-friendly habits with their families, amplifying the impact at home and in the community.

The EcoHero Show believes the impact of these presentations could be further strengthened through the development of a custom song and/or custom book that features prominent infrastructure and locations throughout the WRCOG region. The custom creations would be integrated into the district-wide event and individual school presentations to deepen students' connection to the messaging.

COMPANY

About:

We believe monumental change begins with youth. The EcoHero Show combines hip-hop and sustainability to inspire youth to take action for a greener future. Since 2015, Mr. Eco and his team have performed worldwide, empowering students with the belief that every kid can change the world. Through music videos, interactive dances, trivia, and storytelling, we introduce sustainability topics and practical actions students can take to make an impact at school and home.

Experience:

The EcoHero Show has been trusted by over 140 cities, counties, and organizations like Siemens, SolarCity, MidAmerican Solar, and Brita. We've delivered environmental programming to 2,700+ schools across seven countries, reaching more than 1.4 million students. Our YouTube channel engages a global audience with 27,000+ subscribers and over 3.5 million views.

PROGRAM

Goals:

Our program will accomplish the following:

- Foster a sustainable culture at K-6th grade schools and encourage students to adopt eco-friendly energy practices at home.
- Educate students on energy efficiency practices and complex systems thinking, such as the food-water-energy nexus.
- Promote personal behavior changes that students can apply in their daily lives.
- Inspire lifelong EcoHero leaders who champion sustainability in their communities and are global citizens.

Workflow:

We collaborate with sponsors, school districts, and key stakeholders to bring custom creations, regionwide concerts, and school presentations to life. Below is the general flow you can expect:

- **Planning:** We partner with your team and STEPCON coordinators to integrate The EcoHero Show into event flow. A shared tasks and milestones document can be created to ensure a seamless planning process.
- **Development:** We gather information from your team about key details they would like featured in custom creations. We then work with our artists to create copy, artwork, and visuals. Your direction is invited throughout the entire process.
- **Outreach**: Our team handles all school outreach and booking logistics for individual assemblies and classroom presentations proposed for spring 2026, spring 2027, and fall 2027.
- **Execution:** Our team handles all aspects of the performance and filming (for STEPCON shows only), creating a memorable and engaging event for students.
- **Post-Event Impact:** We provide detailed impact data, including the number of students reached, testimonials, and survey results.
- **Continued Learning:** Students stay engaged through *The EcoHero Club* newsletter, our themed read/rap-along children's books, and on our YouTube page.

Offerings:

Custom Creations

Proposed for Summer 2025 & Summer 2026

- **Custom Read/Rap-Along Book** where our “Let’s Go Eco” crew learns about STEM/Energy Careers. (example here)
    - Services include:
        - Script creation with custom ideas for specific jurisdiction
        - Art creation bringing the script to life
        - Audiobook singalong and video following the artwork
- **Custom Song & Lyric Video** that features your community and STEM/Energy Careers. This is an asset you would own for any marketing uses desired. (example here)
    - Services include:
        - Lyric creation with custom ideas for specific jurisdiction
        - Professional song recording featuring unique melodies and rhythms
        - Videographer capturing prominent landmarks and features
- **Custom Coloring Book** that takes art/concepts from the Custom Read/Rap-Along book and other energy efficiency/curriculum aligned concepts.
    - Services include:
        - Art creation, printing, and distribution

Region-wide Events

Proposed for Fall 2025, Fall 2026, & Fall 2027

We create and execute large-scale performances at centralized venues to engage an entire region’s schools in one unforgettable event. For WRCOG, this would be a series of performances during STEPCON every October. Our region-wide shows combine music, interactive activities, and storytelling to inspire students and amplify your district’s sustainability goals. Take a look at our brief overview or watch the entire concert (created and performed for Virginia’s Prince William County school district). Our region-wide events include:

- Live performances featuring four EcoHero performers.
- Professional filming & editing of the event, with access provided to all schools.
- Impact tracking, including video viewership, for detailed reporting.

Individual Schools Performances

Proposed for Spring 2026, Spring 2027, & Fall 2027

We have two presentation styles that serve as both education and outreach tools:

- Our **Whole School Assemblies** are 40 minutes long and developed for students in K – 5th grades. These are presented in-person to the entire student body in a large gathering space. Click here to watch our assembly overview video.
    - *Note*: Due to the pandemic, we also developed a live-stream version of this offering to accommodate schools that could not host us in-person. We continue to list that virtual offering on all documentation as a precaution.
- Our **Classroom Presentations** are 40 minutes long and developed for students in 1st – 5th grades. These are presented virtually by streaming directly into individual classes. This offering helps us reach students at schools that may not be able to book a whole school assembly. Click here to watch our classroom overview video.

Post-Performance Education

Proposed for Spring 2026, Spring 2027, & Fall 2027

Our programs are designed to extend learning beyond the performance, ensuring students continue to engage with sustainability topics through diverse formats tailored to different learning styles. Some of our key continued learning tools include:

- **Follow-Up Classroom Curriculum:** We provide optional learning activities that reinforce key messages taught during our show. These materials, designed to fit easily into classroom schedules, are automatically shared with teachers at no additional cost.
- **Read/Rap-Along Books & Coloring Books:** Our children's rap-along book series complements the performance by bringing sustainability lessons to life through music and storytelling, serving as a lasting educational resource.

EXHIBIT "B-1"

SCHEDULE OF SERVICES AND COMPENSATION

PRICING

Proposed Offerings:

Custom Creations

- **Custom Read/Rap-Along Book**: $10,000 creation fee
    - *Animated Sing-along Video:* $5,000 creation fee
    - Includes scriptwriting, artwork, and voice recording (for video)
- **Custom Song**: $10,000 creation fee
    - *Lyric Video:* $5,000 creation fee
    - Includes recording, lyrics, videography
- **Custom Coloring Book**: $7,500 creation fee
    - Includes copywriting and artwork development

Regionwide Event

- **In-Person Regional Concert**: $10,000 for the first day
    - *Additional Performance Days*: $7,500 for days two and three; $5,000 for days four and five.
        - Includes all coordination, performer travel, and performance
    - *Recording Distribution:* $10,000
        - Includes filming, editing, and video distribution
    - Above are our “day rates”. We’re happy to perform multiple shows per day.
- **Venue Rental**: N/A (STEPCON responsible)
- **Bussing Costs**: N/A (STEPCON responsible)

Individual School Presentation

- **In-Person Whole School Assemblies:** $1,250 per school
    - $150 if a school requires a second assembly due to fire code requirements
- **Live-Streaming Whole School Assemblies:** $900 per school
- **Live-Streaming Classroom Presentations:** $320 per class

Read/Rap-Along Books

- **Hardcover**: $35 per custom book / $30 per standard book
- **Softcover**: $20 per custom book / $15 per standard book

ESTIMATE

The EcoHero Show LLC
2012 W. Alluvial
Fresno, CA 93711

billing@ecoheroshow.com
+1 (888) 482-3885
www.ecoheroshow.com

Bill to
Western Riverside Region

Estimate details
Estimate no.: 1811
Estimate date: 05/05/2025

2025- 2026

#	Service Date	Product/Service	Description	Qty	Rate	Amount
1.		**Custom Content Creation**	Custom STEM/Energy Careers Song ($10,000); Lyric Video ($5,000)	1	$15,000.00	$15,000.00
2.		**Custom Content Creation**	Custom STEM/Eenrgy Careers Read/Rap A-Long Book ($10,000); Rap-Along Video ($5,000)	1	$15,000.00	$15,000.00
3.		**Custom Content Creation**	Custom STEM/Energy Careers coloring book	1	$7,500.00	$7,500.00
4.		**Custom Show Creation**	Creation of Presentation Featuring Custom Song & Book	1	$1,000.00	$1,000.00
5.		**Districtwide Event**	2025 STEPCON Shows ($10,000); Recording & Distribution ($10,000)	1	$20,000.00	$20,000.00
6.		**The EcoHero Show Program**	Performances: ~ Up to 25 In-Person Whole School Assemblies ($1,250 per school first show additional $150 for second show) ~ Up to 98 Virtual Classroom Presentations ($320 per classroom) ~ Or a mix of above offerings, not to exceed budgeted amount Reinforcement Tools (optional): ~ Read-Along Books ($30 per hardcover, $15 per softcover) ~ Custom Read-Along Books ($35 per hardcover, $20 per softcover) ~ Custom Coloring Books ($5 per book)	1	$21,500.00	$21,500.00

Total	**$80,000.00**

Note to customer

Note: $150 fee applies if a school requires a second assembly (for example: due to fire code restrictions in auditorium)

Accepted date	**Accepted by**

ESTIMATE

The EcoHero Show LLC
2012 W. Alluvial
Fresno, CA 93711

billing@ecoheroshow.com
+1 (888) 482-3885
www.ecoheroshow.com

Bill to
Western Riverside Region

Estimate details
Estimate no.: 1818
Estimate date: 05/08/2025

2026 - 2027

#	Service Date	Product/Service	Description	Qty	Rate	Amount
1.		**Districtwide Event**	2026 STEPCON Shows ($10,000); Recording & Distribution ($10,000)	1	$20,000.00	$20,000.00
2.		**The EcoHero Show Program**	Performances: ~ Up to 46 In-Person Whole School Assemblies ($1,300 per school first show additional $150 for second show) ~ Up to 171 Virtual Classroom Presentations ($350 per classroom) ~ Or a mix of above offerings, not to exceed budgeted amount Reinforcement Tools (optional): ~ Read-Along Books ($30 per hardcover, $15 per softcover) ~ Custom Read-Along Books ($35 per hardcover, $20 per softcover) ~ Custom Coloring Books ($5 per book)	1	$60,000.00	$60,000.00

Total **$80,000.00**

Note to customer

Note: $150 fee applies if a school requires a second assembly (for example: due to fire code restrictions in auditorium)

Accepted date **Accepted by**

ESTIMATE

The EcoHero Show LLC
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Fresno, CA 93711

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+1 (888) 482-3885
www.ecoheroshow.com

Bill to
Western Riverside Region

Estimate details
Estimate no.: 1819
Estimate date: 05/08/2025

school year: fall 2027 - Dec. 2027

#	Service Date	Product/Service	Description	Qty	Rate	Amount
1.		**Districtwide Event**	2027 STEPCON Shows ($10,000); Recording & Distribution ($10,000)	1	$20,000.00	$20,000.00
2.		**The EcoHero Show Program**	Performances: ~ Up to 15 In-Person Whole School Assemblies ($1,300 per school first show additional $150 for second show) ~ Up to 57 Virtual Classroom Presentations ($350 per classroom) ~ Or a mix of above offerings, not to exceed budgeted amount Reinforcement Tools (optional): ~ Read-Along Books ($30 per hardcover, $15 per softcover) ~ Custom Read-Along Books ($35 per hardcover, $20 per softcover) ~ Custom Coloring Books ($5 per book)	1	$20,000.00	$20,000.00

Total **$40,000.00**

Note to customer

Note: $150 fee applies if a school requires a second assembly (for example: due to fire code restrictions in auditorium)

Accepted date **Accepted by**

Inland Regional Energy Network
I-REN Executive Committee

Staff Report

Subject: **I-REN Energy Science Fair Award Winners**

Contact: **Jennifer Aguilar, SBCOG Program Manager, jaguilar@gosbcta.com, (909) 884-8276**

Date: **May 20, 2025**

Recommended Action(s):

1. Receive and file.

Summary:

The purpose of this item is to provide a information on the 2025 Energy Science Fair award winners from the San Bernardino, Inyo, and Mono Counties Science and Engineering Fair.

Discussion:

Background

In March 2024, I-REN participated in the judging and sponsorship of the San Bernardino, Inyo, and Mono Counties Science and Engineering Fair (SIMSEF), which is an annual competition of science projects from students who attend the schools in each County. Four bright, young students were awarded for their innovative energy ideas and provided with a monetary award from I-REN for their projects.

Present Situation

Continuing in that same tradition, I-REN sponsored the 2025 SIMSEF, providing awards for local students. On March 14, 2025, I-REN staff presented the SIMSEF awards to winners in three categories: Elementary, Junior, and Senior Divisions. I-REN received an appreciation award in recognition of the support for the Fair.

The following students received I-REN awards and are scheduled to attend the May I-REN Executive Committee meeting to be acknowledged and presented with their scholarship check award:

- Elementary Division ($100): Sophia Hernandez from South Tamarind Elementary School for her project: Clean Energy in the Sustainable Materials and Design category.
- Junior Division ($500): Holden Scheff from Granite Mountain Charter School for his project: Watt a Waste: Using Microbial Fuel Cells to Produce Electricity in the Environmental Engineering category.
- Senior Division ($1,000): David Nguyen from Rialto High School for his project: Effect of Dust on

Solar Panel Efficiency in the Sustainable Materials and Design category.

All three students competed at both the local and county level to be considered for this award. Both the Junior and Senior Division winners move on to the State level as well, to promote their project and bring awareness to energy efficiency.

Prior Action(s):

None.

Financial Summary:

Activities related to the Workforce Education & Training Sector are included under the I-REN Fiscal Year 2024/2025 Budget in Fund 180, under the Workforce Education & Training subprogram.

Attachment(s):

None.

Inland Regional Energy Network
I-REN Executive Committee

Staff Report

Subject: **Memorandums of Understanding with Riverside County and San Bernardino County for I-REN's Workforce Education & Training Program**

Contact: **Tyler Masters, WRCOG Program Manager, tmasters@wrcog.us, (951) 405-6732**

Date: **May 20, 2025**

Recommended Action(s):

1. Recommend that the WRCOG Executive Committee authorize the WRCOG Executive Director to execute Memorandums of Understanding with Riverside County and San Bernardino County separately for further development of the I-REN Workforce Education & Training Program in an amount not-to-exceed $1,500,000 per County for a term through December 31, 2027.

Summary:

In January 2025, an Energy Workforce Gaps Assessment was completed that provides a comprehensive outlook on the difficulties experienced by energy employers while also assessing the needs of the projected workforce in the coming years. I-REN is awarding Riverside and San Bernardino Counties $1.5M each through calendar year 2027 to allocate toward identifying opportunities for expanding or enhancing existing programs led by Riverside and San Bernardino County Workforce Development Divisions to meet the four key recommendations for I-REN's Energy Workforce Gaps Assessment.

Discussion:

Background

Since 2023, I-REN staff have frequently met with both County Workforce Development Departments (WDDs) to discuss areas of opportunities for collaboration and ways to leverage each other's resources to implement programs that support the goals of both I-REN and each County's WDD.

In January 2025, the I-REN Executive Committee recommended that the WRCOG Executive Committee authorize the WRCOG Executive Director to execute Memorandums of Understanding (MOUs) with each County separately, and authorize him, or his designee, to enter into discussions with both Counties to develop contracts to implement programs related to these MOUs. Today's action clarifies the funding and scope, and authorizes final MOUs between all three entities.

In February 2025, I-REN facilitated an introductory meeting with Riverside and San Bernardino Counties to provide a comprehensive overview of the Energy Workforce Gaps Assessment's foundational content and review of the four key recommendations. Staff from each County expressed the importance of

funding support services that could impact the accessibility of training to job seekers.

In March 2025, I-REN held a brainstorming session with the Counties to discuss the workforce assessment and discuss ideas to expand existing programs and resources that align with the workforce assessment recommendations.

In April 2025, I-REN held a third meeting with County partners to align on goals, timelines, and potential uses of I-REN funds. San Bernardino County expressed interest in building vocational training cohorts, developing employer-aligned sector partnerships, upskilling the existing workforce, and expanding services by leveraging state and I-REN resources. Riverside County shared these priorities, emphasizing addressing gaps identified in the Assessment, retaining the regional energy workforce, and aligning efforts with broader regional initiatives.

In April 2025, I-REN hosted a final meeting with the Counties to discuss specific scopes of work, trackable metrics, deliverables, and budgeting to ensure programming is aligned with the four key recommendations outlined in the Energy Workforce Gaps Assessment.

Present Situation

In January 2025, the I-REN Executive Committee approved proceeding with the development of MOUs with both Counties WDDs. Since that action, staff has engaged extensively with County representatives to further refine the scope and details of each MOU. Staff is now returning to the I-REN Executive Committee to present additional context and specific information regarding the scope of work for each participating county.

Riverside and San Bernardino County Workforce Development Departments will each be awarded $1.5M in funding from I-REN to support workforce, education, and training programming within the Inland Empire region through December 31, 2027. Although both Counties will work closely together and continue to expand existing partnerships and programming, each County will have its own set of goals and deliverables in supporting the incoming and existing energy workforce, directly addressing the four key recommendations within the Energy Workforce Gaps Assessment.

San Bernardino County WDD Scope of Work:

- **Recommendation 1: Connect job seekers to training providers**
  - Proposed Cost: Approximately $913,773 (combined cost with Recommendation 3)
  - Tasks:
    - Launch a centralized list of energy training programs and expand Workforce Development Specialist (WDS) services at America's Job Centers of California (AJCCs) to connect job seekers, especially from underserved communities, with relevant, accessible training and personalized support.
    - Convene biannual Training Provider Partnership Roundtables to align regional curricula with energy workforce demands, reduce program duplication, and identify opportunities for new training development across regions.
    - Launch targeted outreach campaigns to attract diverse candidates and implement financial incentives and stipends to lower barriers, increase enrollment, and improve completion rates in clean energy training programs.
- **Recommendation 2: Provide support services to make training and certification more**

attainable
    - Proposed Cost: $160,000
    - Tasks:
        - Provide stipends and cover essential costs such as certification exam fees, Personal Protective Equipment, tools, transportation, uniforms, and technology to help eliminate financial and logistical barriers to training completion.
        - Connect participants with Energy WDS for personalized intake, career assessments, enrollment assistance, and ongoing support to help them stay on track and access the right opportunities.
- **Recommendation 3: Strengthen the regional education and training pipeline from K-12 to energy employment**
    - Proposed Cost: Costs combined with proposed costs within Recommendation 1. ($913,773 total for both)
    - Tasks:
        - Outreach to K–12 schools to introduce energy career pathways by deploying dedicated staff to guide youth (ages 16 – 24) — especially in underserved communities — into training, pre-apprenticeships, and job opportunities.
        - Bridge gaps between high school, postsecondary education, and employers by aligning curricula, promoting dual enrollment, and co-enrolling students in energy credentialing programs through partnerships with Career Technical Education programs, Regional Occupation Programs, and community colleges.
        - Partner with employers and unions to offer mentorships, job shadowing, and site visits, giving students real-world experience and improving readiness for clean energy careers.
- **Recommendation 4: Strengthen collaboration between employers and workforce development organizations to assess training effectiveness**
    - Proposed Cost**:** $235,542
    - Tasks:
        - Convene regional advisory councils with clean energy employers, labor, educators, and workforce boards to review labor market trends, align training with industry needs, and incorporate emerging tools and credentials.
        - Expand employer data sharing to track outcomes such as training effectiveness, job placement, and participant satisfaction, using insights to refine curricula and resources continuously.
        - To create a sustainable, industry-aligned workforce pipeline, employers should be involved in co-designing and delivering training, mentoring participants, and providing hands-on experiences supported by formal incentives.
- **Total San Bernardino County WDD Costs:**
    - Proposed Administrative Support Costs: $190,685.00 (provides support for all four Recommendations and tasks)
    - **Proposed Total Cost:** $1,500,000

Riverside County WDD Scope of Work:

- **Recommendation 1: Connect job seekers to training providers**
    - Proposed Cost: $630,000.00
    - Tasks:
        - Deploy Career Coaches at AJCCs to conduct targeted outreach and connect individuals, especially from underrepresented communities, with high-demand energy

training and wraparound support services.
        - Existing programming and resources will support delivering industry-recognized credentials in the clean energy and energy efficiency industries.
- **Recommendation 2: Provide support services to make training and certification more attainable**
    - Proposed Cost: $210,000.00
    - Tasks:
        - Expand and strengthen existing wraparound service models within Riverside County's workforce system to reduce barriers to entry and completion of energy-related training programs.
        - Offer training vouchers, transportation, tools, technology access, childcare, and other supportive services to promote participant success.
        - Provide subsidized wages, employer incentives, and coordinate on-the-job training and sector partnerships to foster stronger industry connections and hands-on learning opportunities.
- **Recommendation 3: Strengthen the regional education and training pipeline from K-12 to energy employment**
    - Proposed Cost: $472,000.00
    - Tasks:
        - Explore partnerships with K–12 districts, Regional Occupational Programs, and Career Technical Education providers to increase awareness of clean energy career pathways and enhance regional alignment.
        - Create targeted training programs focused on clean energy and energy efficiency technologies, leading to industry-recognized credentials and in-demand workforce skills.
- **Recommendation 4: Strengthen collaboration between employers and workforce development organizations to assess training effectiveness**
    - Proposed Cost: $168,000.00
        - Establish or participate in Energy Sector Employer Councils or Coalitions to strengthen collaboration and feedback loops between energy employers and workforce partners.
        - Commit to developing a robust employment pipeline that addresses regional workforce demands and supports long-term clean energy industry growth.
- **Proposed Total Riverside County WDD Cost:** $1,500,000

Prior Action(s):

February 23, 2025: The WRCOG Executive Committee authorized the WRCOG Executive Director to execute Memorandums of Understanding with Riverside County and San Bernardino County separately, and authorize him, or his designee, to enter into discussions with both Counties to develop contracts to implement programs related to these Memorandums of Understanding, for consideration by the I-REN Executive Committee and both Counties.

January 21, 2025: The I-REN Executive Committee recommended that the WRCOG Executive Committee authorize the WRCOG Executive Director to execute Memorandums of Understanding with Riverside County and San Bernardino County separately, and authorize him, or his designee, to enter into discussions with both Counties to develop contracts to implement programs related to these

Memorandums of Understanding, for consideration by the I-REN Executive Committee and both Counties.

Financial Summary:

Activities related to the Workforce Education & Training Sector are included under the I-REN Fiscal Year 2024/2025 Budget in Fund 180, under the Workforce Education & Training subprogram.

Attachment(s):

Attachment 1 - I-REN and San Bernardino County WDD Partnership Scope
Attachment 2 - I-REN and San Bernardino County Budget
Attachment 3 - I-REN and Riverside County WDD Partnership Scope
Attachment 4 - I-REN and Riverside County WDD Budget

Attachment

I-REN and San Bernardino County
WFDD Partnership Scope

Overview

Recommended Action(s): I-REN is awarding Riverside and San Bernardino counties $1.5 million each through calendar year 2027 to allocate toward identifying opportunities for expanding or enhancing existing programs led by Riverside and San Bernardino County workforce development divisions to meet the four key recommendations for I-REN's Energy Workforce Gaps Assessment.

Summary: I-REN seeks opportunities to build a more resilient energy workforce within the Inland Empire. The first step in identifying the gaps and challenges within the existing workforce was to put forward an Energy Workforce Gaps Assessment that provides a comprehensive outlook on the difficulties experienced by energy employers while also assessing the needs of the projected workforce in the coming years. This Assessment was completed in January 2025, after being reviewed and approved by I-REN Workforce Roundtables and I-REN Executive Committee (https://iren.gov/DocumentCenter/View/277/I-REN-Energy-Workforce-Assessment-Report). A core component of the assessment focuses on training needs and job accessibility needed to meet industry standards and demands. To not reinvent the wheel, I-REN hopes to partner closely with both county workforce development divisions to expand existing energy-related workforce programming, pathways, and resources to achieve the key recommendations outlined in the Energy Workforce Gaps Assessment.

Background:

- **2/11/25**: I-REN facilitated an introductory meeting with Riverside and San Bernardino counties to provide a comprehensive overview of the Energy Workforce Gaps Assessment's foundational content and review of the four key recommendations.
- **3/20/25**: I-REN set up a second meeting with the counties as a brainstorming session to discuss questions or general comments relating to the workforce assessment and discuss ideas from the counties to build out existing programs and resources that align with the workforce assessment recommendations.
- **4/10/25**: I-REN met with the counties for a third time to discuss goals and timelines, review existing programs, and explore a county 'wishlist' for utilizing I-REN funds.

San Bernardino County Energy (SBC)

Summary of project proposal goals:

The SBC Energy proposal outlines a strategic plan by San Bernardino County-Workforce Development Department to expand and enhance current workforce development programs in alignment with the key recommendations outlined in I-REN's Energy Workforce Gaps Assessment (January 2025). Through targeted investment of the $1.5 million allocation, the county will strengthen local training pathways, improve job accessibility, and foster partnerships that promote a resilient energy workforce throughout the Inland Empire.

Overview of scope & objectives:

- Connect job seekers with high-quality, industry-aligned energy training providers.
- To ensure energy industry job seekers can access and complete training and certification in energy-related fields by providing support services that are strategically aligned with the needs of the clean energy workforce pipeline.
- Assist in creating and developing a system with early exposure, accessible training pathways, and seamless alignment between education systems, workforce training providers, and employers in the Energy Industry.
- Assist in the development of a continuous, collaborative framework between employers, unions, training providers, and workforce development boards to improve training program alignment, responsiveness, and accountability

Proposed programming in connection with assessment recommendations: See assessment report for more details on recommendations
Recommendation 1: Connect job seekers to training providers.
Describe how the proposed action will meet recommendation 1:
To address the regional workforce gaps identified in I-REN's Energy Workforce Gaps Assessment, San Bernardino County WDD proposes a multi-pronged strategy to connect job seekers with high-quality, industry-aligned energy training providers. These actions aim to amplify and expand existing training infrastructure while embedding equity, accessibility, and employer engagement throughout. **Centralized Energy Training Pathways List** We will utilize the training list document created by I-REN that maps all local and regional training providers offering programs relevant to the energy sector. SB County WDD will assist

in facilitating training programs entry into the State of California's Eligible Training Provider List (ETPL).

- Partners: Local community colleges, adult education programs, certified pre-apprenticeship programs, and labor unions.
- Connection to Goal: This platform demystifies training options and streamlines access for job seekers, with direct alignment to energy career tracks outlined in the Gaps Assessment.
- Status: New offering, built in coordination with existing WIOA services.

Energy Career Workforce Development Specialists (WDS) (Expansion of Existing Services)

San Bernardino County will expand existing Workforce Development Specialist teams by training designated staff, who will be stationed at AJCCs (America's Job Centers of California).

- Duties include providing one-on-one coaching, screening job seekers for energy sector interest, connecting them to relevant training providers, supporting enrollment, and offering follow-up job placement support.
- AJCC staff will help engage historically underserved populations.
- Connection to Goal: WDS provide the "human bridge" between job seekers and training providers, ensuring no one falls through the crack.

Training Provider Partnership Roundtable

San Bernardino County will **convene bi-annual roundtables** with regional training providers to align offerings with energy sector needs and reduce duplication. This roundtable will also serve to identify any gaps in offerings and explore opportunities for new curriculum development.

- Participating providers can include: San Bernardino Community College District, San Bernardino Valley College, Crafton Hills College, Victor Valley College, Riverside City College, College of the Desert, Chaffey College, local Adult Schools and local union training centers.
- Connection to Goal: Ensures job seekers are being connected to training that is responsive to current and emerging energy sector needs.

Energy Training Incentives/Stipends (New Offering)

To increase enrollment and completion of energy training programs, we propose establishing a Energy Training Incentives/Stipends that provides eligible job seekers with financial assistance for costs not typically covered by traditional funding (e.g., tools, uniforms, travel, testing fees).

- Connection to Goal: Removes financial barriers and increases access to training across income levels.
- Status: New offerings, complementary to existing WIOA supports.

Targeted Outreach and Recruitment Campaign (Expansion of Existing Services)

We will launch a region-wide awareness campaign to recruit job seekers into energy training pathways using digital media, community-based outreach, and in-person events.

- Focus on youth, veterans, reentry populations, and low-income residents.
- Materials will highlight available training programs, energy career pathways, success stories, and how to connect with the AJCCs.
- Connection to Goal: Drives demand and ensures training seats are filled with diverse candidates.
- Status: Expansion of current outreach services with a clean energy focus

How do the proposed actions connect to the energy industry?

All proposed actions are designed to directly support the development of a resilient, inclusive, and industry-aligned energy workforce within Riverside and San Bernardino Counties. Each component builds toward closing the workforce gaps identified in the January 2025 **I-REN Energy Workforce Gaps Assessment**, specifically in areas such as training access, credential alignment, and job placement.

All proposed actions 1.) Centralized Energy Training Pathways List, 2.) Energy Career Workforce Development Specialists (Expansion of Existing Services), 3.) Training Provider Partnership Roundtable (Amplification of Existing Convenings), 4.) Energy Training Incentives/Stipends (New Offering), 5.) Targeted Outreach and Recruitment Campaign (Expansion of Existing Services)

Align with occupations and skillsets prioritized in the I-REN Energy Workforce Gaps Assessment; Are built around connecting individuals to clean energy sectors, not general workforce placement; Address both supply (training availability) and demand (employer engagement) within the energy workforce pipeline, and Support I-REN's equity goals by improving access to energy careers for underrepresented communities

How will the proposed actions fill the gaps outlined in the recommendation?

The proposed actions by San Bernardino County Workforce Development Department are intentionally designed to fill the critical gaps and advance the four key recommendations identified in **I-REN's Energy Workforce Gaps Assessment (January 2025).** Below is a summary of how each recommendation is addressed through this initiative:

Expand and Align Training Programs to Meet Current and Future Energy Workforce

Needs
Gap Identified: Training programs are not adequately aligned with the evolving needs of the energy sector, especially around decarbonization, electrification, and distributed energy systems.
Solution: Training Provider Roundtables will bring together regional energy training providers and employers to align curricula with industry needs and labor market demands.
Results: Energy Career WDS will guide participants into industry-recognized programs, ensuring training is relevant and career-connected. Energy Careers Training Pathways List and connection to the ETPL will help job seekers easily identify and access aligned training options, streamlining connections to high-quality programs.

Increase Awareness and Accessibility of Energy Careers, Especially in Underrepresented Communities

Gap Identified: Many job seekers—especially those from low-income, historically underserved communities—lack awareness of or access to energy career pathways.
Solutions: Outreach and Recruitment Campaign will use targeted digital and grassroots outreach to raise awareness of energy careers and training opportunities among underserved populations.
Results: Energy Career WDS will provide competent guidance and case management to reduce confusion and help individuals navigate complex systems. Energy Training Incentives/Stipends will reduce financial barriers (e.g., exam fees, travel, tools), helping more individuals enroll and persist in energy training programs.

Strengthen Employer Engagement and Real-Time Labor Market Feedback Loops

Gap Identified: Training programs are often designed without consistent employer input, resulting in mismatches between what's taught and what's needed.
Solutions: Training Provider Roundtables will formalize employer engagement as an ongoing process, ensuring that training evolves in step with industry trends and technologies.
Results: Employer partnerships embedded in this initiative will provide real-time feedback on labor needs and host hiring fairs, work-based learning opportunities including Incumbent Worker Training, and internships.

Create Sustainable, Cross-Sector Partnerships That Break Down Silos in Workforce Development

Gap Identified: Workforce development efforts are fragmented across agencies, institutions, and geographies, limiting collective impact.
Solution: Joint County coordination between Riverside and San Bernardino represents a regional, collaborative approach to workforce development.
Results: Partnerships with community colleges, CBOs, labor unions, and training providers will ensure a comprehensive, unified response to workforce needs.

The actions proposed are not isolated efforts—they are directly tied to the challenges and solutions detailed in I-REN's Energy Workforce Gaps Assessment. By expanding access,

aligning training, engaging employers, and building stronger partnerships, this initiative will directly fill the most pressing workforce development gaps in the region's energy sector

Anticipated funding allocation and description of utilization:

- Connect job seekers to training providers. $913,773.00- Connect job seekers with high-quality, industry-aligned energy training providers including OJT, Paid WEX and Incumbent worker training.

Trackable metrics:

- 120 Individuals will be enrolled into high-quality, industry-aligned energy vocational training
- 96 Individuals that are enrolled will complete high-quality, industry-aligned energy vocational training with a certificate (80%)
- CPUC Metric Index 302 – Clean energy training enrollment
- CPUC Metric Index 304 – Percent of total WE&T training program participants that meet the definition of disadvantaged worker

Recommendation 2: Provide support services to make training and certification more attainable.

Describe how the proposed action will meet recommendation 2:

To ensure energy industry job seekers can access and complete training and certification in energy-related fields, this initiative includes targeted support services that are strategically aligned with the needs of the clean energy workforce pipeline. These services address both financial and structural barriers that commonly prevent individuals, especially those from underserved communities, from pursuing or completing training in high-demand energy sectors.

How do the proposed actions connect to the energy industry?

Energy Training Incentives/Stipends/Support Services

- Certification exam fees (e.g., NABCEP, OSHA 30, EPA 608)
- Specialized tools and PPE for solar, HVAC, and weatherization jobs
- Transportation to and from training sites, especially for remote locations in San Bernardino County.
- Uniforms, safety gear, and materials for hands-on lab instruction.
- Technology support (e.g., laptops or internet hotspots)
- Pre-loaded gas or transit cards for completing orientation/info session/intake
- Toolkits or equipment for completing technical milestones
- Gift cards or bonuses for passing certification exams

Energy Career Workforce Development Specialist (WDS)

- Conduct intake and interest assessments specific to energy career pathways
- Help identify appropriate training providers and programs based on career goals
- Assist with enrollment, paperwork, and application processes
- Monitor progress during training and provide follow-up guidance
- Connect participants to Training Incentives/Stipends
- Build relationships with employers and help facilitate interviews and placement

This comprehensive approach to support services addresses both systemic inequities and practical challenges, ensuring that the region's emerging energy workforce is not only more skilled—but more inclusive, more supported, and better positioned to thrive. These services are essential to achieving the goals outlined in I-REN's Energy Workforce Gaps Assessment and building a more equitable energy future for San Bernardino County.

How will the proposed actions fill the gaps outlined in the recommendation?

According to the Gaps Assessment (January 2025), the following issues prevent individuals from successfully completing training for energy careers:

- Lack of transportation, childcare, or digital access
- High out-of-pocket costs for tools, PPE, exam fees, and materials
- Limited awareness of available resources or guidance navigating options
- Low program retention due to life challenges and lack of wraparound support
- Disconnection between training institutions and community-based supports

These barriers contribute to low enrollment and high attrition rates in energy-related programs ultimately limiting the region's ability to meet workforce demand in high-growth, high-skill energy sectors. The following targeted actions are designed to directly fill these support-related gaps and improve outcomes across the energy workforce pipeline:

Energy Training Incentives/Stipends/Support Services

Gap Identified: High upfront and hidden costs of energy training prevent many from enrolling or finishing programs.
Solution: The Energy Training Incentives/Stipends/Support Services provides direct financial assistance for:

- Certification exams (e.g., NABCEP, EPA 608, BPI, OSHA 30)
- Tools and uniforms required for solar, HVAC, and energy efficiency programs
- Transportation and childcare during training
- Technology and internet access for hybrid or online learning

Results: Participants can enroll and persist in technical training programs without facing cost-prohibitive financial barriers. This directly supports greater completion and certification rates, especially among underserved populations.

Energy Career Workforce Development Specialist (WDS)

Gap Identified: Many job seekers lack guidance on how to navigate complex energy training and employment pathways.
Solution: WDS offer personalized support including:

- Intake and skills assessment tailored to energy sector careers
- Referrals to aligned training programs and certification tracks
- Support accessing supportive services and applying for assistance
- Follow-up during and after training to ensure successful completion and job placement

Results: WDS provide structure and continuity for job seekers, increasing the likelihood of program retention and ensuring participants are progressing toward industry-recognized credentials aligned with regional workforce demand.

Integrated Supportive Partnerships

Gap Identified: Workforce development efforts often operate in silos without sufficient connection to CBOs or wraparound resources.
Solution: The counties will formalize partnerships with:

- Community colleges and training providers delivering energy programs
- Community-based organizations offering wraparound services (e.g., food assistance, housing navigation, mental health, digital literacy)
- Labor unions and pre-apprenticeship programs to provide mentorship and career exposure

Results: A coordinated ecosystem of support reduces life disruptions that can derail training progress and ensures that energy training is paired with the necessary services to promote success and long-term career advancement.

Milestone-Based Incentives/Stipends/Support Services

Gap Identified: Participants drop out of training due to financial strain and lack of tangible rewards or encouragement.
Solution: Provide small, career-aligned incentives for completing key training milestones, such as:

- Toolkits for completing hands-on labs
- Transit or gas cards to attend certification exams
- Graduation bonuses or job readiness support at program completion

Results: These incentives encourage participants to persist through long or challenging programs, helping boost completion and credential attainment rates in priority energy occupations.

In direct response to I-REN's Call to Action, the proposed support services fill a critical recommendation of the I-REN Energy Workforce Gaps Assessment by directly targeting training access and completion barriers. These supports ensure more San Bernardino County residents, particularly those who have been historically excluded, can gain access to, persist through, and succeed in energy training and certification programs. By investing in these services, San Bernardino County is not only expanding workforce opportunity but are also actively building a more inclusive, skilled, and resilient energy workforce that is essential to meeting California's clean energy transition goals.

Anticipated funding allocation and description of utilization:

- Provide support services to make training and certification more attainable. $160,000.00 to ensure energy industry job seekers can access and complete training and certification in energy-related fields, this initiative includes targeted support services that are strategically aligned with the needs of the clean energy workforce pipeline

Trackable metrics:

- 120 Individuals will be enrolled into high-quality, industry-aligned energy vocational training and will receive Milestone-Based Incentives/Stipends/Support Services helping boost completion and credential attainment rates in priority energy occupations.
- CPUC WE&T Metric: Index 304 – Percent of total WE&T training program participants that meet the definition of disadvantaged worker.

Recommendation 3: Strengthen the regional education and training pipeline from K-12 to energy employment.

Describe how the proposed action will meet recommendation 3:

The transition to a clean energy economy requires early exposure, accessible training pathways, and seamless alignment between education systems, workforce training providers, and employers. The proposed actions are designed to strengthen the entire regional pipeline, from K–12 to career entry, by building awareness, reducing barriers, and creating clear, supported on-ramps to high-growth energy careers for Inland Empire residents.

How do the proposed actions connect to the energy industry?

This comprehensive approach aligns with the I-REN Energy Workforce Gaps Assessment recommendation to bolster the education-to-employment pathway and ensure that young people and transitioning workers can move from interest to industry through coordinated and supported training opportunities.

Early Career Exposure and Outreach for K–12 Students
Action: Launch an energy career awareness campaign in collaboration with school districts, youth-serving organizations, and after-school programs. Activities will include:

- Energy career days and classroom presentations led by local employers, unions, and alumni of energy training programs
- Interactive, hands-on energy demonstrations at community STEM and career fairs
- Development of grade-appropriate curriculum modules focused on clean energy, sustainability, and skilled trades
- Summer camps or internship-style programs introducing students to solar, electrification, and EV infrastructure technologies

Impact: These efforts spark early interest in energy careers, especially among students from underserved communities who may not be exposed to these options through traditional academic channels. This builds the foundation for future participation in technical education or workforce training programs.

Integrated Career Navigation and Support for Youth and Young Adults
Action: Expand the reach of Energy Career Staff to serve in-school youth (ages 16–24) in addition to adult job seekers. Energy Career staff can:

- Partner with high school career counselors and CTE coordinators to identify interested students
- Provide post-secondary advising focused on energy pathways (apprenticeships, community college certificates, workforce training)
- Connect students to local pre-apprenticeships, summer bridge programs, and dual enrollment opportunities in energy-related fields
- Offer wraparound support to youth transitioning from high school to workforce training or employment

Impact: Young people receive individualized, energy-specific career planning support at a critical transition point—helping them make informed decisions and stay engaged in the education-to-employment pipeline.

Strengthened Partnerships with CTE and Post-Secondary Energy Training Programs
Action: Formalize partnerships with regional community colleges, Regional Occupational Programs (ROPs), and adult schools offering energy-relevant programs (e.g., HVAC, solar PV, energy auditing, EV charging station tech, and building performance). Activities include:

- Joint curriculum planning to ensure alignment with employer demand and industry standards
- Cross-promotion of programs through the AJCCs
- Co-enrollment strategies that allow youth and adult learners to earn credentials while gaining hands-on experience

Impact: Creates a more cohesive, accessible training ecosystem where learners of all ages can earn stackable credentials and move fluidly from education to energy employment. Strengthens capacity and enrollment in existing regional programs that already offer high-quality energy training.

Employer and Industry Engagement Along the Pipeline
Action: Host regional energy workforce roundtables with K–12 educators, training providers, and employers to:

- Ensure curricula reflect up-to-date skills and certifications required in the energy sector
- Facilitate site tours, mentorship programs, and work-based learning opportunities
- Align job placement pipelines with employers' talent needs

Impact: Keeps the pipeline responsive to real-world workforce shifts and ensures that training leads to actual jobs. Young people and adult learners can see a clear, supported path to long-term employment in the region's growing energy economy.

Together, these actions create a coordinated, equity-driven energy workforce pipeline that starts with early awareness in K–12 and extends through postsecondary training and career entry. By embedding support, mentorship, and clear transitions throughout the education and training journey, the San Bernardino County will be better positioned to meet the growing demand for clean energy worker and ensure that local youth are at the center of that opportunity.

How will the proposed actions fill the gaps outlined in the recommendation?

The I-REN Energy Workforce Gaps Assessment identified several key weaknesses in the Inland Empire's current education and training pipeline as it relates to clean energy employment. These include:

- Limited awareness of clean energy careers among K–12 students and educators
- Fragmented connections between K–12, postsecondary training providers, and energy employers
- Few structured transitions from high school to energy training or apprenticeships
- Inconsistent access to career navigation and wraparound supports for youth
- Equity gaps that leave rural, low-income, and BIPOC students underrepresented in energy pathways

The proposed actions are designed to directly address these pipeline deficiencies by creating coordinated, well-supported, and accessible pathways from early exposure to career entry in energy sectors such as solar installation, energy efficiency, electrification, HVAC, and EV infrastructure.

Career Awareness and Exposure for K–12 Students

Gap Identified: Lack of early awareness and inspiration around energy careers.
Solution: Implement hands-on energy career outreach in K–12 settings through workshops, career fairs, school-based demos, and interactive curriculum.
Result: Students begin engaging with energy concepts and occupations early, helping build a foundation of interest and career curiosity in middle and high school. This exposure is especially critical in communities that lack strong CTE programs or employer engagement.

Energy Career Navigation for Youth

Gap Identified: No clear, supported bridge between high school and energy workforce programs.

Solution: Expand Energy Career staff to serve in-school and opportunity youth (ages 16–24), helping them transition into energy-related postsecondary training, pre-apprenticeships, and entry-level jobs.
Result: Youth receive individualized support and guidance to navigate their options, stay engaged, and make informed decisions that lead them into clean energy training and employment.

Strengthened Alignment with CTE, ROPs, and Community Colleges

Gap Identified: Disconnect between K–12, postsecondary education, and workforce needs.
Solution: Establish strong partnerships between workforce boards, community colleges, CTE programs, and employers to align curricula, promote dual enrollment, and co-enroll youth in energy credentialing programs.
Result: Students experience a seamless pipeline from high school to postsecondary training to employment in high-demand energy occupations.

Employer-Driven Work-Based Learning Opportunities

Gap Identified: Students lack real-world energy sector exposure and hands-on learning.
Solution: Facilitate mentorships, job shadowing, and site visits through partnerships with energy employers and unions. Include work-based learning in summer programs and pre-apprenticeships.
Result: Participants build experience and confidence in energy-related environments, helping bridge the gap between education and career entry.

These actions form a comprehensive response to the education-to-employment pipeline gaps outlined in the I-REN Energy Workforce Gaps Assessment. They ensure that K–12 students and young adults have the information, resources, and structured pathways they need to enter and thrive in clean energy careers. By doing so, the Inland Empire will not only build a more skilled energy workforce, but a more equitable and sustainable future for generations to come.

Anticipated funding allocation and description of utilization:

- Connect job seekers to training providers with an emphasis on Paid WEX for recent graduates of the K-12 educational system. $913,773.00- Connect job seekers with high-quality, industry-aligned energy training providers including OJT, Paid WEX and Incumbent worker training.
- Leverage resources and programming from the K-12 educational systems to connect in-school youth to work based leaning services including: pre-apprenticeships, apprenticeships, internship, company tours, job shadows and mentorship opportunities.

Trackable metrics:

- Number of referrals that San Bernardino County WDD connects to the K-12 educational system for resources and programming.

Recommendation 4: Strengthen collaboration between employers and workforce development organizations to assess training effectiveness.

Describe how the proposed action will meet recommendation 4:

A core finding of the I-REN Energy Workforce Gaps Assessment is that while training programs exist across the Inland Empire, they are not consistently aligned with real-time industry demands or monitored for effectiveness in producing job-ready candidates. Energy employers often report a mismatch between training curricula and the evolving needs of clean energy occupations, while workforce development organizations lack structured, ongoing feedback loops from the industry.

The actions will create a continuous, collaborative framework between employers, unions, training providers, and workforce development boards to improve training program alignment, responsiveness, and accountability. These partnerships will ensure the region produces a well-prepared, competitive energy workforce that meets employer needs and advances regional economic resilience by not just building a pipeline but a pool of energy industry workers.

How do the proposed actions connect to the energy industry?

Partner with I-REN's Established Regional Energy Workforce Advisory Councils
Action: Connect and convene with the employer-driven advisory councils in Riverside and San Bernardino Counties composed of:

- Clean energy employers (solar, HVAC, EV infrastructure, energy efficiency)
- Labor unions and registered apprenticeship sponsors
- Community colleges, ROPs, and workforce training providers
- Workforce development board staff and WDS

Purpose:

- Review labor market data and hiring trends
- Evaluate current training program content, credentials, and soft skill development
- Provide direct feedback on graduate preparedness and job performance
- Identify emerging certifications, tools, and technologies for integration

Impact: Advisory councils will create structured, recurring spaces for employer feedback, leading to real-time program improvements and ensuring training is directly responsive to market needs.

Implement Training Outcomes Tracking and Feedback Loop
Action: Expand data-sharing agreements between workforce development boards and employers to track key metrics:

- Training enrollment and completion
- Certification and credential attainment
- Time to job placement and wage progression
- Employer satisfaction with new hires

Purpose:

- Enable evidence-based evaluation of program performance
- Help identify which training programs lead to quality energy employment

- Inform curriculum adjustments and resource allocation

Impact: This data-driven feedback system creates a performance-based culture where programs are refined and scaled based on what works, improving ROI for both participants and employers.

Embed Employers into Program Design and Delivery

Action: Involve employers in:

- Co-designing training modules, particularly in technical and emerging skill areas
- Serving as guest instructors or mentors in workforce programs
- Offering job shadowing, internship, or pre-apprenticeship experiences
- Reviewing and endorsing curricula used by AJCCs and training providers

Impact: Employers take on a co-ownership role in the training process, resulting in curricula that are grounded in industry realities and participants who are better prepared for workplace expectations.

Leverage Energy Career WDS-Business Service Reps. for Employer Engagement

Action: Navigators will regularly consult with employers to:

- Identify in-demand roles and training needs
- Follow up on participant performance and placement outcomes
- Surface soft skill or cultural fit concerns for program response

Impact: Real-time feedback helps ensure continuous program alignment and a two-way relationship between job developers and hiring partners.

Create Regional Employer Engagement Incentives

Action: Offer incentives to employers who:

- Hire from local energy training programs
- Participate in advisory councils or curriculum development
- Provide training space, mentors, or in-kind support for program delivery

These incentives formalize employer participation and build shared ownership in developing a regional energy talent pipeline.

By embedding employers into every stage of the training pipeline, from design to evaluation, the proposed actions build a dynamic, responsive, and high-accountability workforce ecosystem. The above actions and strategies fill a critical gap identified by I-REN by making sure that workforce programs work for both employers and job seekers. Through this collaborative approach, San Bernardino County will accelerate the development of a high-quality, demand-driven energy workforce.

How will the proposed actions fill the gaps outlined in the recommendation?

Regional Energy Workforce Advisory Councils

Gap Identified: Training programs developed without employer input
Solution: Formalize quarterly advisory councils co-led by industry to assess curricula, identify skill gaps, and co-create training priorities.

Result: Programs are immediately more aligned with actual hiring needs, including emerging technologies in the energy field.

Employer Feedback and Data-Sharing Systems

Gap Identified: No reliable system for assessing graduate success or employer satisfaction
Solution: Implement data mining in the CalJOB System for the participants of this initiative by tracking outcomes for job placement, certification rates, and retention, and share results with employers and program leaders.
Result: Workforce boards and training providers can use real data to refine and improve programs, ensuring accountability and impact.

Employer Participation in Program Delivery

Gap Identified: Limited real-world context and engagement in training
Solution: Invite employers and unions to participate as instructors, mentors, site hosts, or internship providers.
Result: Participants gain hands-on experience and insight into real job expectations, while programs benefit from industry relevance and credibility.

Energy Career WDS-Business Services Reps with Employer Liaison Roles

Gap Identified: Disconnected communication between employers and workforce providers
Solution: WDS-Business Services Reps regularly consult employers about hiring needs, performance of recent hires, and training gaps.
Result: Training content and support services can be quickly adjusted in response to actual employer feedback, keeping the system agile and effective.

Employer Incentives and Recognition

Gap Identified: Lack of motivation for employers to actively engage
Solution: Offer recognition, stipends, or in-kind partnerships for employers who contribute to training strategy, placement, or mentorship.
Result: Employers become long-term partners in the region's workforce pipeline, leading to sustainable collaboration and shared ownership.

These proposed actions will build a sustainable infrastructure for employer-workforce collaboration, closing a critical loop in the training pipeline. As a result, programs will become more demand-driven, performance-focused, and aligned with regional clean energy workforce needs. This ensures that the San Bernardino County job seekers not only complete training, but enter the workforce with the skills, certifications, and readiness that local employers require helping fulfill I-REN's vision for a resilient and prepared energy workforce.

Anticipated funding allocation and description of utilization:

• $235,542.00 Staffing Cost-Salary & Benefits that will fund WDS-Business Services Reps regularly consulting with employers about hiring needs, performance of recent hires, and training gaps.
Trackable metrics:
• Placement Rate and Retention-Of the 120 Individuals will be enrolled into high-quality, industry-aligned energy vocational training, 96 Individuals that are enrolled will complete high-quality, industry-aligned energy vocational training with a certificate (80%) and 68 (70%) will enter training related employment and 50 (74%) will be employed at 2nd quarter and 4th quarter after exit. • CPUC Metric: Index 333 – Placement rate in energy-related employment

Proposed Project Timeline	
07/01/2025-9/30/2025	• Agreement Start-up and Implementation of Scope of work and objectives
10/01/2025-3/31/2027	• Delivery of all Training Services-IWT/OJT/PWEX/Classroom Training/120 participants
01/01/2026 – 6/30/2027	• Job Placement Services-68 (70%) will enter training related employment and 50 (74%) will be employed at 2nd quarter and 4th quarter after exit.
04/01/2027-6/30/2027	• Follow-up and Evaluation of all objectives and outcomes

Total Budget: $1,500,000.00

Timeline	Project, Task, or Deliverable	Cost
07/25-06/27	Training-IWT/OJT/PWEX/Classroom Training/120 participants	$913,773.00
07/25-06/27	Participant Support Services/Stipends/120 participants	$160,000.00
07/25-06/27	Staffing Cost-Salary & Benefits	$235,542.00
07/25-06/27	Travel-Transportation, lodging, meals and other travel-related costs	$5000.00

07/25-06/27	Operating Expenses-Rent, Utilities, Communications and Supplies	$43,703.00
07/25-06/27	Contractor Services-Staff Capacity Training	$8,500.00
07/25-06/27	Indirect Costs-10% of Staffing Cost, Travel, Utilities and Communication, Supplies, and Training	$133,482.00
	Total	$1,500,000.00

Existing and anticipated partnerships with regional stakeholders:

- Please list out existing or anticipated alliances and their role in supporting and fulfilling the outcomes outlined above.
  Local post-secondary institutions including four year universities, community colleges, adult education programs, certified pre-apprenticeship programs, employers, community based organizations, local and national governmental agencies and labor unions.

Attachment

I-REN and San Bernardino County Budget

Organization	**SAN BERNARDINO COUNTY WORKFORCE DEVELOPMENT BOARD**
Project Name	**I-REN SBC Energy**

PROGRAM COST								
Participant Support Services/Stipends	Support Services/Stipends/120 participants							**160,000.00**
							Total Program Cost	**160,000.00**
STAFFING COST								
Job Titles of Staff	**FTE**	**Monthly Salary**	**Months**	**Total Salary**		**Benefits**	**Benefit %**	**Total Staff Salaries + Benefits**
WORKFORCE DEVELOPMENT SPECIALIST	0.60	6,594.00	24.00	94,954.00		43,935.00	*46.27*	***138,889.00***
SENIOR ACCOUNTANT	0.03	6,888.00	24.00	4,959.00		1,873.00	*37.77*	***6,832.00***
ADMIN SUPERVISOR I	0.02	9,261.00	24.00	4,445.00		1,130.00	*25.42*	***5,575.00***
STAFF ANALYST II	0.04	7,746.00	24.00	7,436.00		2,497.00	*33.58*	***9,933.00***
WORKFORCE DEVELOPMENT SUPERVISOR	0.02	7,115.00	24.00	3,415.00		1,368.00	*40.06*	***4,783.00***
BUSINESS SERVICES SPECIALIST	0.30	6,639.00	24.00	47,801.00		21,729.00	*45.46*	***69,530.00***
			Total Salary	163,010.00	Total Benefits	72,532.00		38.09
						Total Staffing Cost		**$235,542.00**
TRAVEL								
Travel & Meetings	Transportation, lodging, meals and other travel-related costs							**5,000.00**
							Total Travel Expenses	**5,000.00**
OPERATING EXPENSES								
Rent	Facility cost of program staff directly charged to the program							**31,703.00**
Utilities and Communication	Utilities and Communication cost for program staff directly charged to the program							**6,000.00**
Supplies	Operating Supplies and other operating cost of the program							**6,000.00**
							Total Operating Expenses	**43,703.00**
TRAINING								
IWT/OJT/Classroom Training/120 participants								**913,773.00**
							Total Training Expenses	**913,773.00**
CONTRACTOR SERVICES								
Staff Trainings								**8,500.00**
							Total Contractor Services Expenses	**8,500.00**
INDIRECT COSTS								
Indirect Cost	10% of Staffing Cost, Travel, Utilities and Communication, Supplies, and Training							**133,482.00**
							Total Indirect Cost	**133,482.00**
							Grant Total	**$1,500,000.00**

Attachment

I-REN and Riverside WFDD Partnership Scope

Overview

Recommended Action(s): I-REN is awarding Riverside and San Bernardino counties $1.5 million each through calendar year 2027 to allocate toward identifying opportunities for expanding or enhancing existing programs led by Riverside and San Bernardino county workforce development divisions to meet the four key recommendations for I-REN's Energy Workforce Gaps Assessment.

Summary: I-REN seeks opportunities to build a more resilient energy workforce within the Inland Empire. The first step in identifying the gaps and challenges within the existing workforce was to put forward an Energy Workforce Gaps Assessment that provides a comprehensive outlook on the difficulties experienced by energy employers while also assessing the needs of the projected workforce in the coming years. This Assessment was completed in January 2025, after being reviewed and approved by I-REN Workforce Roundtables and I-REN Executive Committee (https://iren.gov/DocumentCenter/View/277/I-REN-Energy-Workforce-Assessment-Report). A core component of the assessment focuses on training needs and job accessibility needed to meet industry standards and demands. To not reinvent the wheel, I-REN hopes to partner closely with both county workforce development divisions to expand existing energy-related workforce programming, pathways, and resources to achieve the key recommendations outlined in the Energy Workforce Gaps Assessment.

Background:

- **2/11/25**: I-REN facilitated an introductory meeting with Riverside and San Bernardino counties to provide a comprehensive overview of the Energy Workforce Gaps Assessment's foundational content and review of the four key recommendations.
- **3/20/25**: I-REN set up a second meeting with the counties as a brainstorming session to discuss questions or general comments relating to the workforce assessment and discuss ideas from the counties to build out existing programs and resources that align with the workforce assessment recommendations.
- **4/10/25**: I-REN met with the counties for a third time to discuss goals and timelines, review existing programs, and explore a county 'wishlist' for utilizing I-REN funds.

Riverside County Workforce Development Division (RCWDD)- Expanding Access to High-Demand Energy Careers

Summary of project proposal goals:
Provide an outline and summary of the proposed programming and how it directly addresses the regional energy workforce needs outlined in the four assessment recommendations.
The Riverside County Workforce Development Division (RCWDD) is dedicated to bridging regional workforce gaps in the Inland Empire's energy sector by expanding and aligning its existing training and support infrastructure with the four key recommendations of I-REN's Energy Workforce Gaps Assessment. This initiative will enhance accessibility to high-demand energy careers by investing in targeted training, outreach, and wrap-around services, particularly for underserved populations. The project responds directly to employer-identified needs for technical certifications, workforce readiness, and geographic access to energy career pathways.

Overview of scope & objectives:

- *[Project 1]Please describe the project's goals and achievable outcomes*. Expand Energy-Sector Training Access: Partner with educational institutions to increase enrollment in clean energy programs.
- *Example 2* Target Underserved Communities: Conduct outreach to engage youth, women, and residents from rural communities.
- *Example 3* Strengthen Employment Pathways: Partner with energy employers and apprenticeship programs to support job placement in the regional clean energy sector.

Proposed programming in connection with assessment recommendations: See assessment report for more details on recommendations
Recommendation 1: Connect job seekers to training providers.
Describe how the proposed action will meet recommendation 1:
Through America's Job Centers of California (AJCCs), the Riverside County Workforce Development Division (RCWDD) will deploy Career Coaches (case managers) to conduct targeted outreach and connect individuals, particularly those from underrepresented communities, with high-demand clean energy training opportunities. By expanding co-enrollment into the Workforce Innovation and Opportunity Act (WIOA) and Special Grant programs, Career Coaches will provide participants with comprehensive wrap-around supportive services. This approach addresses key barriers identified in the I-REN Energy Workforce Gaps Assessment and is

designed to boost program enrollment, completion, and long-term employment outcomes. Career Coaches will also facilitate direct connections between job seekers and training providers offering programs aligned with in-demand energy careers.

How do the proposed actions connect to the energy industry?

All training accessed through this initiative will focus on priority occupations identified in the I-REN labor market analysis, such as solar photovoltaic installers, HVAC technicians, energy auditors, and roles in grid modernization and electrification. Moreso, the proposed actions will assist with filling the in-demand labor market while promoting the importance of wide arrange of occupations that help sustain high-demand energy sector. These occupations are critical to the Inland Empire's clean energy transition and regional decarbonization goals. These include but are not restricted to the following.

- Tier 1 Occupations: Encompasses occupations directly related to utilities, Smart GRID technology, and transmission line infrastructure. Job opportunities include, but are not limited to, Electrical Engineers, Utility Engineers, Electricians, Electrical Power-Line Installers and Repairers, Transmission Line Technicians, Smart GRID Specialists, GRID Resilience Experts, and other positions dedicated to maintaining and advancing energy infrastructure and system reliability.
- Tier 2 Occupations: Focuses on customer-oriented roles within the green energy and clean workforce sectors. Job opportunities include, but are not limited to, Customer Service Technicians for Electric Vehicle (EV) systems, HVAC Specialists, Residential Solar Photovoltaic Installers, Smart Meter Technicians, and other positions that support renewable energy technologies and sustainability by directly engaging with and serving customers.
- Tier 3 Occupations: Covers maintenance and support service roles essential to the efficient operation of energy sector organizations. Job opportunities in this category include Maintenance Technicians, Truck Drivers, Accounting Specialists, Logistics Coordinators, and Administrative Support roles such as HR Specialists, Clerical Staff, and Executive Assistants. These positions are crucial in maintaining operational efficiency and ensuring the seamless functioning of energy infrastructure and services.

How will the proposed actions fill the gaps outlined in the recommendation?

According to the I-REN Energy Workforce Gaps Assessment, the proposed actions fill critical workforce gaps by directly addressing the region's most pressing challenges: 55.8% of employers cited technical skills deficiencies among applicants, while 39% identified high training costs as a significant barrier to workforce entry. Additionally, with solar jobs projected to grow by 81.3% and over 85% of workers in key energy occupations expected to retire or transfer by 2030, there is an urgent need to expand access to affordable, industry-aligned training programs and build a robust pipeline of new talent equipped to meet the demands of the evolving energy sector.

Anticipated funding allocation and description of utilization:

- $630,000 – The amount of $480,000 will be allocated for training and instruction and ensure that training activities will deliver industry-recognized credentials in clean energy. These funds will cover tuition, licensing, and certification fees, with approximately $8,000 per participant for each of the 60 participants. A total of $150,000 will support the development of specialized training curricula focused on clean energy technologies and workforce skills, designed to provide the instruction necessary for earning industry-recognized credentials.

Trackable metrics:

- Number of individuals referred to or enrolled in energy training programs
- Completion and certification rates
- Number of participants co-enrolled in WIOA and receiving support services
- Participant job placements in energy-related fields within six months or two quarters
- CPUC Metric Index 302 – Clean energy training enrollment
- CPUC Metric Index 304 – Percent of total WE&T training program participants that meet the definition of disadvantaged worker

Recommendation 2: Provide support services to make training and certification more attainable.

Describe how the proposed action will meet recommendation 2:

RCWDD will scale and enhance existing wrap-around service models within Riverside County's workforce system to reduce barriers to entry and completion of energy-related training programs. Recognizing that 39% of employers cited training costs as a major barrier, the program will provide transportation assistance, childcare support, digital access stipends, paid work-based learning, among other resources as deemed necessary to ensure participants, particularly those from rural and underserved communities, can fully engage in training. These services will be offered through America's Job Centers of California (AJCCs), leveraging co-enrollment with WIOA and partner programs. New partnerships with community-based organizations and housing service providers will further expand access to case management, basic needs assistance, and referral networks to provide wrap-around services for the residents that will be served through this program.

How do the proposed actions connect to the energy industry?

Support services will be attached to training pathways in high-growth energy fields such as HVAC, solar installation, energy auditing, and EV infrastructure. Eliminating logistical and financial barriers will assist with ensuring more residents can pursue the certifications and technical credentials that are required to access these careers.

How will the proposed actions fill the gaps outlined in the recommendation?

The I-REN assessment identifies high training costs, location challenges, and schedule conflicts as key barriers to participation in energy training programs. Providing comprehensive support services and removing these friction points will significantly improve program access and completion, especially for low-income and nontraditional students.

Anticipated funding allocation and description of utilization:

- $210,000 – These funds will go directly to participant support services, which will be used to provide Training vouchers, transportation, tools, technology access, childcare support, and other wrap-around services essential for participant success. These funds may also be used to provide household support, including—but not limited to—supplemental assistance, cost-of-living subsidies, and housing assistance, as the targeted populations for these trainings may include underserved households. There will be an allocated amount of $3,500 for each participant for a total of 60 participants.

Trackable metrics:

- Number of participants receiving support services
- Percentage of participants completing training
- Certifications earned and job placements in energy occupations
- Participant satisfaction with accessibility and support services
- CPUC WE&T Metric: Index 304 – Percent of total WE&T training program participants that meet the definition of disadvantaged worker.

Recommendation 3: Strengthen the regional education and training pipeline from K-12 to energy employment.

Describe how the proposed action will meet recommendation 3:

RCWDD will work toward strengthening the regional education and training pipeline by exploring opportunities to increase collaboration with K-12 districts, Regional Occupational Programs (ROPs), and Career Technical Education (CTE) providers to raise awareness of clean energy career pathways. This may include supporting the integration of energy-related content into existing curricula, promoting early exposure through career exploration activities, and identifying opportunities for alignment between high school programs and postsecondary training. These efforts aim to build interest and readiness among youth for future careers in the energy sector while aligning with regional labor market needs.

How do the proposed actions connect to the energy industry?

These actions strive to increase awareness and readiness for careers in the energy sector by exposing students early to occupations such as solar PV installers, HVAC technicians, and energy auditors, roles identified in the I-REN Assessment as having high

growth potential. Aligning educational pathways with evolving industry needs will help prepare the future workforce qualifications towards supporting clean energy infrastructure, building electrification, and grid modernization across the region.

How will the proposed actions fill the gaps outlined in the recommendation?

The I-REN Assessment identified limited energy-related training in K-12 and a lack of early exposure to the energy sector. By working to align CTE programs and promote awareness of energy careers, RCWDD helps fill this pipeline gap, ensuring students understand feasible pathways that do not require four-year degrees while improving equitable access to high-wage, in-demand jobs.

Anticipated funding allocation and description of utilization:

- $472,000 – An allocated amount stemming from $300,000 in personnel (staff salaries and benefits), $5,000 in travel, and $167,000 in indirect costs and operating expenses will be allocated to ensure that our designated staff are engaging with stakeholders and successfully executing this project to ensure that all the trackable metrics are met. A total amount will serve for salaries and fringe benefits for project managers, career coaches, outreach staff, and administrative support needed to implement and manage the program effectively. The funds designated for travel will be used to support employer site visits, participant engagement, and off-site training coordination. The indirect costs and operating expenses will include the overhead costs such as operating costs, such as but not limited to shared services, IT, utilities, compliance and reporting infrastructure, as well as staff capacity building to ensure the team remains up to date with trends and training in the clean energy sector. Funding also supports general administrative functions across WDD. Nevertheless, these funds will help establish and lay the foundation for the WDD team to streamline communication and strengthen the relationships with the mentioned key stakeholders.

Trackable metrics:

- Number of schools or programs engaged
- Number of students participating in energy-focused career exploration activities
- Increase in awareness or interest in energy careers
- Enrollment in postsecondary energy-related training programs or apprenticeships

Recommendation 4: Strengthen collaboration between employers and workforce development organizations to assess training effectiveness.

Describe how the proposed action will meet recommendation 4:
RCWDD will work on either establishing or engaging in Energy Sector Employer Councils or Coalitions to strengthen feedback between energy employers and workforce partners. These groups will help review training content, identify emerging trends, and support hiring efforts. To evaluate effectiveness, RCWDD may implement post-training employer surveys, basic job placement tracking, and periodic follow-ups to assess retention and satisfaction. Shared dashboards or summary reports can be used, as capacity allows, to support data-informed adjustments to training alignment and delivery.
How do the proposed actions connect to the energy industry?
This feedback mechanism ensures that training programs remain relevant and aligned with dynamic industry needs to ensure graduates are prepared for employer needs and succeed in the clean energy sector.
How will the proposed actions fill the gaps outlined in the recommendation?
The assessment highlighted employer frustration with training misalignment and poor retention outcomes. Regular collaboration and evaluation mechanisms will address this by ensuring programs meet current workforce standards and that job seekers are trained in relevant, in-demand skills.
Anticipated funding allocation and description of utilization:
• $168,000- This total amount of funding will be allocated across several key areas to support the program's objectives. A portion will go toward subsidizing wages for program participants, ensuring they receive fair compensation while gaining valuable work experience. Additionally, funds will be used to provide financial incentives to employers who hire and train participants, helping to reduce the cost burden associated with onboarding new workers. Resources will also be dedicated to on-the-job coordination, which includes managing placements, providing ongoing support to both employers and participants, and ensuring that job responsibilities align with training goals. Finally, the program will invest in building and strengthening partnerships within the clean energy sector, collaborating with industry employers to create pathways to long-term employment and ensure that training programs are aligned with current and future workforce needs.
Trackable metrics:
• Number of employers participating in feedback forums • Percentage of training programs revised based on employer input • Employer satisfaction with hires

- Retention rates at 6 and 12 months post-placement
- CPUC Metric: Index 333 – Placement rate in energy-related employment

Proposed Project Timeline	
07/2025-06/2026	• 40 Enrolled Participants • 10 Completed Participants • 10 Employed Participants • 10 Certification Attainments
07/2025-06/2026	• 2 New Programs on either State or Local ETPL • Create a pipeline with 1 K-12 education institution through referrals
07/2026-06/2027	• 20 Enrolled Participants • 35 Completed Participants • 30 Employed Participants • 10 Certification Attainments
07/2026-06/2027	• 4 New Programs on either State or Local ETPL • Create a pipeline with 1 K-12 education institution through referrals

Total Budget: When creating the budget, please consider all recommendations outlined in the energy workforce gaps assessment while prioritizing primary recommendations #3 and #4. In the 'Project, Task, or Deliverables' column, please state which recommendation(s) are being addressed. Add additional rows to the total budget as needed.

Timeline	Project, Task, or Deliverable	Cost
07/2025-07/2027	**Personnel (Staff Salaries & Fringe)-** Salaries and fringe benefits for project managers, career coaches, outreach staff, and administrative support needed to implement and manage the program effectively.	$300,000
07/2025-07/2027	**Travel-** Support employer site visits, participant engagement, and off-site training coordination	$5,000
07/2025-07/2027	**Training & Instruction-** Training activities to deliver industry-recognized credentials in clean energy.	$480,000

	This includes covering tuition, licensing, and certification fees. *($8k/participant x 60 participants)*	
07/2025-07/2027	**Participant Support Services-** Training vouchers, transportation, tools, technology access, childcare support, and other wrap-around services essential for participant success. These funds may also be used to provide household support, including—but not limited to—supplemental assistance, cost-of-living subsidies, and housing assistance, as the targeted populations for these trainings may include underserved households. *($3,500/participant x 60 participants)*	$210,000
07/2025-07/2027	**Work-Based Learning & Employer Engagement-** Subsidized wages for participants, employer incentives, OJT coordination, and sector partnership development with clean energy employers. *($4,800/participant x 35 participants)*	$168,000
07/2025-07/2027	**Equipment & Supplies-** Reserved for staff equipment and supplies, ensuring team members have the technology, materials, and tools needed to effectively administer and deliver the program.	$20,000
07/2025-07/2027	**Curriculum Development-** Funding will support the development of specialized training curricula focused on clean energy technologies and workforce skills, designed to provide the instruction necessary for earning industry-recognized credentials.	$150,000
07/2025-07/2027	**Indirect Costs + Operating Expenses-** Overhead costs include operating costs, such as but not limited to shared services, IT, utilities, compliance and reporting infrastructure, as well as staff capacity building to ensure the team remains up to date with trends and training in the clean energy sector. Funding also supports general administrative functions across WDD.	$167,000
	Total	$1,500,000

Existing and anticipated partnerships with regional stakeholders:

- Please list out existing or anticipated alliances and their role in supporting and fulfilling the outcomes outlined above.

To support the advancement of clean energy outcomes, various strategic partnerships play a pivotal role. Below is a list of key existing and anticipated alliances, along with their contributions:

- **Southern California Edison-** We will build upon our established collaboration and successful partnership to ensure the continued development of a sustainable employment pipeline for participants as they near the completion of their respective training programs. By leveraging the insights and strengths gained through our previous efforts, we are committed to creating long-term career opportunities for participants. This ongoing collaboration will facilitate seamless transitions from training to employment, ensuring that participants are not only well-prepared for the workforce but also connected to employers who are actively seeking skilled professionals. Our goal is to foster a robust network that supports both the individual career growth of participants and the workforce needs of local employers.
- **Employer Services-** As a key component of the Riverside County Workforce Development Division, the Employer Services team will remain dedicated to enhancing the employer pipeline throughout Riverside County. This will be achieved by proactively identifying and cultivating employment opportunities that are closely aligned with the skills and qualifications of participants completing their training. By fostering strong partnerships with local employers, the team will ensure that participants are matched with positions that not only meet their career aspirations but also address the evolving workforce demands of the region. This collaborative effort aims to create a sustainable and thriving job market for trained individuals while supporting the economic growth of Riverside County.
- **University of California, Riverside-** The Riverside County Workforce Development Division has been collaborating closely with the University of California, Riverside (UCR) Extension team to design and develop customized training programs tailored to the specific demands of the clean energy sector. This partnership aims to ensure that the curriculum is both relevant and responsive to current industry trends, equipping participants with the skills and knowledge most sought after by clean energy employers. By aligning training content with real-world workforce needs, the program seeks to create a strong talent pipeline that supports regional economic growth and sustainable employment opportunities.
- **Lithium Valley Consortium-** Through our strong, established partnership with the Lithium Valley Consortium, the Riverside County Workforce Development Division is committed to ensuring that the startups being developed through the Lithium Valley Clean Tech Hub are seamlessly integrated into a robust employment pipeline. As these innovative companies grow and evolve, we will work closely with them to identify workforce needs and connect them with skilled, trained participants ready to contribute to the clean energy sector. By aligning workforce

development efforts with the goals of the Clean Tech Hub, we aim to create a sustainable ecosystem where emerging businesses have access to a talent pool that is not only prepared for the demands of the industry but also positioned for long-term success. This collaboration will play a pivotal role in supporting both the growth of clean tech startups and the career advancement of individuals within Riverside County.

- **Ohmio-** The established partnership with Ohmio, an innovative all-electric autonomous shuttle company that recently relocated to Riverside, presents a unique opportunity to further strengthen the local employer pipeline. As Ohmio expands its operations in the region, it will play a crucial role in providing employment opportunities for participants completing their training programs. By working closely with Ohmio, we can ensure that trained individuals are matched with roles that align with their skills while supporting the company's growth in the rapidly evolving clean transportation sector. This collaboration will not only enhance the job prospects for program participants but also contribute to the development of a skilled workforce that meets the emerging needs of cutting-edge industries like autonomous electric transportation.
- **Unions (electrical, ironworkers, carpenters)-** The Riverside County Workforce Development Division has actively engaged with local unions such as IronWorkers, IBEW, and Southwest Carpenters Union, recognizing the vital role they play in addressing the diverse occupational tiers within the workforce. Given the varied skill levels and job classifications that must be considered, these unions will be integral to the success of the program. Their involvement will ensure that participants are not only trained to meet industry standards but also supported throughout their career advancement within their respective fields. By collaborating with unions, we can align training efforts with specific workforce demands, ensuring a smooth transition from training to employment while fostering long-term job security and growth for participants.
- **Thrive Inland SoCal-** As our collaboration with Thrive Inland SoCal continues to expand, the Riverside County Workforce Development Division will leverage its extensive network to ensure that participants are effectively connected with a diverse range of employers and community-based organizations. These strategic partnerships will play a crucial role in enhancing the success of this project by providing additional resources, job opportunities, and support systems that are integral to workforce development. By tapping into Thrive Inland SoCal's network, we will facilitate stronger community engagement and create a more comprehensive support system that addresses both the immediate and long-term needs of participants.

Attachment

I-REN Riverside County WDD Budget

Inland Regional Energy Network (I-REN)- Budget Breakdown ($1,500,000)

Riverside County Workforce Development Division (RCWDD)

Category	Estimated Amount	Description
1. Personnel (Staff Salaries & Fringe)	**$300,000**	Salaries and fringe benefits for project managers, career coaches, outreach staff, and administrative support needed to implement and manage the program effectively.
2. Travel	**$5,000**	Support employer site visits, participant engagement, and off-site training coordination
3. Training & Instruction	**$480,000**	Training activities to deliver industry-recognized credentials in clean energy. This includes covering tuition, licensing, and certification fees. *($8k/participant x 60 participants)*
4. Participant Support Services	**$210,000**	Training vouchers, transportation, tools, technology access, childcare support, and other wrap-around services essential for participant success. These funds may also be used to provide household support, including—but not limited to—supplemental assistance, cost-of-living subsidies, and housing assistance, as the targeted populations for these trainings may include underserved households. *($3,500/participant x 60 participants)*
5. Work-Based Learning & Employer Engagement	**$168,000**	Subsidized wages for participants, employer incentives, OJT coordination, and sector partnership development with clean energy employers. *($4,800/participant x 35 participants)*
6. Equipment & Supplies	**$20,000**	Reserved for staff equipment and supplies, ensuring team members have the technology, materials, and tools needed to effectively administer and deliver the program.
7. Curriculum Development	**$150,000**	Funding will support the development of specialized training curricula focused on clean energy technologies and workforce skills, designed to provide the instruction necessary for earning industry-recognized credentials.
8. Indirect Costs + Operating Expenses	**$167,000**	Overhead costs include operating costs, such as but not limited to shared services, IT, utilities, compliance and reporting infrastructure, as well as staff capacity building to ensure the team remains up to date with trends and training in the clean energy sector. Funding also supports general administrative functions across WDD.

This $1,500,000 investment enables RCWDD to effectively build a scalable clean energy training pipeline. Designed to serve an estimated 60 participants, the program provides hands-on training, wrap-around services, and direct pathways into the clean energy sector through strong employer partnerships and industry-aligned instruction.

Inland Regional Energy Network
I-REN Executive Committee

Staff Report

Subject: **Approval of Fiscal Year 2025/2026 Agency Budget**

Contact: **Casey Dailey, WRCOG Director of Energy & Environmental Programs, cdailey@wrcog.us, (951) 405-6720**

Date: **May 20, 2025**

Recommended Action(s):

1. Approve the Fiscal Year 2025/2026 Agency budget.

Summary:

The proposed Fiscal Year (FY) 2025/2026 I-REN budget is $12,893,215 and is divided amongst the three authorized sectors: Public, Workforce Education & Training, and Codes & Standards. Also included in the budget is a small portion set aside for Evaluation, Measurement and Verification (EM&V) studies. I-REN authorized funding is through 2027.

Discussion:

Background

The I-REN Business Plan, approved by the California Public Utilities Commission (CPUC), establishes the $65.6M, 6-year, budgeting parameters of I-REN in terms of the revenue amount and spending categories that can be authorized. For the purposes of annual budgeting, the spending categories remain consistent throughout the 6-year authorization period and the spending amounts fluctuate. As funds from the 6-year authorization are drawn down, the remaining funds are spread over the remaining time. Lower spending levels in year one are offset by proportionally higher spending levels in future years. While the pace of spending fluctuates slightly from year to year, the cumulative spending total over the 6-year period is capped at $65.6M.

As indicated in I-REN's recently filed 2024 Annual Report, I-REN expended $6.7M against $11.4M in CPUC-approved revenues. A significant portion of the unspent funds in 2024 are directly related to I-REN member agencies' participation and engagement with I-REN programs and services. The Cash for Kilowatts Program has approximately $2.5M per year allocated through 2027 for eligible public sector projects. Additionally, there is approximately $850,000 allocated annually to the I-REN Fellowship Program to fund 27 Fellows throughout the I-REN territory. I-REN's ability to expend the budget provided by the CPUC is directly proportional to the public sector agency participation in its programs. More prioritization of I-REN programs and services from member agencies is essential for I-REN to spend its allocated budget and, to seek additional funds in the future.

All the conditions listed above are temporary and reflect the similar challenges faced by other RENs. Staffing and programmatic adjustments are being made to expedite the project development and initiation phases, which will lead to greater resources spent in Technical Assistance and Cash for Kilowatts. Outreach campaigns are being developed to communicate new offerings and opportunities directly to I-REN member agencies, with the goal of initiating action amongst member agencies to take advantage of I-REN. Outreach activities have ramped up significantly to the community colleges and universities throughout I-REN territory to inform students of the Energy Fellowship Program. Supporting the addition of Fellows to local governments helps to build capacity to engage with I-REN and its programs, resources and services.

On October 17, 2023, I-REN submitted its True-up Advice letter to the CPUC, as required, and approved by the I-REN Executive Committee. The Advice letter was approved by the CPUC in 2024. In its approval of the Advice letter, the CPUC approved a revised budget for I-REN for Years 2024-2027, as shown below.

Sector	2024	2025	2026	2027
Public	$6,288,477	$8,397,047	$9,292,014	$10,343,585
Workforce, Education & Training	$2,979,532	$3,299,149	$3,374,649	$3,418,519
Codes & Standards	$1,740,936	$1,826,214	$1,850,278	$1,862,863
Evaluation, Measurement & Verification (EM&V)	$458,706	$563,434	$604,873	$651,040
Total	**$11,467,651**	**$14,085,844**	**$15,121,814**	**$16,276,007**

The budget being presented is based on the total amount of planned expenses expected to occur throughout FY 2025/2026. As a result, the proposed FY 2025/2026 budget is not the full amount authorized by the CPUC in its approval of the Advice Letter. I-REN will submit its next Mid-Cycle Advice Letter to the CPUC in September 2025, which will adjust the remaining 2025-2027 budget commensurate with the unbudgeted and unspent funds from 2024. In the event I-REN expenditures exceed the proposed FY 2025/2026 revenue numbers, WRCOG, as lead Administrative Agency, can amend the I-REN budget to increase revenues to the amount required as a result of increased expenditures.

It is important to focus on the programmatic outcomes that have resulted in the past year of I-REN's first full year of activities and to understand I-REN is still continuing to ramp-up for many of its programs. In May 2025, the Executive Committee awarded multiple contract amendments to enhance the Public Sector programs and extend them to the end of 2027. Additional on-call contracts were approved to support the expansion and buildout of the Workforce, Education & Training sector. These contracts include development of an energy workforce market assessment, establishment and facilitation of working groups to help guide program development, and to establish contacts and partnerships with the existing businesses and trades in the I-REN territory to support an ecosystem of business, workforce developers, career and technical training, and job seekers. Staff is including $850,000 in the proposed FY 2025/2026 budget under Workforce, Education & Training to have available for proposed initiatives that result from the on-call contracts.

The Executive Committee approved the Public Sector Technical Assistance (TA) Policy in January 2024, and I-REN staff, along with its consultants, have been working diligently to introduce and deploy the TA

resources to member agencies. One programmatic adjustment that was made to better meet individual agencies where they are in their respective energy journey, is to allow cities and counties that have already identified an energy saving project to initiate the site visit and energy audits at those facilities so they can move forward with their projects. To help drive member agency engagement and utilization of the energy planning services and technical assistance offered by I-REN, a targeted outreach campaign was initiated to educate members on the resources available and to highlight 2024 successes.

Present Situation

The proposed FY 2025/2026 I-REN budget of $12,893,215 is segregated into three components, based on the approved sectors in the Business Plan: Public, Workforce Education & Training (WE&T) and Codes & Standards, plus a small carve out for EM&V studies ($120,000). Several funding items appear separately in more than one sector in order to reflect the costs associated with a particular function and provide greater transparency about the staffing activities of I-REN.

Public Sector	Expenditures
The Energy Coalition	$4,025,773
Normalized Metered Energy Consumption (NMEC) Incentives	$360,000
Alternative Energy Systems Consulting, Inc. (AESC) - BUC Software	$218,333
ICF Resources (Marketing & Outreach)	$83,333
Frontier Energy (I-REN Implementation contract)	$202,058
CivicPlus (Website Development)	$20,501
Legal Counsel	$10,000
Event Support	$75,000
CVAG Staffing Reimbursement	$300,000
SBCOG Staffing Reimbursement	$300,000
WRCOG Staffing Reimbursement	$1,219,609
WRCOG Overhead	$637,894
Miscellaneous Expenses (supplies & materials, computer equipment, travel, conferences, mileage reimbursements, etc.)	$44,000
Total Expenditures:	**$7,496,501**

WE&T proposed expenditures are $3,898,752. These expenditures consist of the below authorized contracts, staffing costs, overhead and other miscellaneous expenses. The WE&T Initiative amount of $850,000 is anticipated to be utilized to support new initiatives related to the WE&T Sector following direction from the Executive Committee.

Workforce Education & Training	Expenditures
CivicSpark (I-REN Energy Fellowship Program)	$837,000

Fellowship Reimbursements	$20,000
The Energy Coalition	$165,299
Riverside Community College District	$192,400
Chino Valley Chamber of Commerce	$50,000
I-REN Initiative (OPR)	$250,000
CCEC and Annual Memberships	$202,000
Burke Rix Communications	$50,000
CV Strategies	$50,000
MOU's with Riverside County & San Bernardino County WDDs	$1,000,000
Webinars/Virtual Certifications	$60,000
ICF Resources (Marketing & Outreach)	$83,333
Frontier Energy (existing contract)	$202,058
CivicPlus (Website Development)	$20,501
Legal Counsel	$10,000
COG Educational & Outreach Sponsorships	$50,000
Miscellaneous Expenses (supplies & materials, computer equipment, travel, conferences, mileage reimbursements, etc.)	$82,200
CVAG Staffing Reimbursement	$125,000
SBCOG Staffing Reimbursement	$125,000
WRCOG Staffing Reimbursement	$212,708
WRCOG Overhead	$111,253
Total Expenditures:	**$3,898,752**

Codes & Standards proposed expenses are $1,377,962. These expenditures consist of the below authorized contracts, staffing costs, overhead and other miscellaneous expenses.

Codes & Standards	Expenditures
Frontier Energy	$791,333
ICF Resources (Marketing & Outreach)	$83,333
Frontier Energy (existing contract)	$202,058
CivicPlus (Website Development)	$20,501
BB&K (Legal Counsel)	$10,000
CVAG Staffing Reimbursement	$25,000
SBCOG Staffing Reimbursement	$25,000
WRCOG Staffing Reimbursement	$141,978
WRCOG Overhead	$74,259
Miscellaneous Expenses (supplies & materials, computer equipment, travel, conferences, mileage reimbursements, etc.)	$4,500
Total Expenditures:	**$1,377,962**

As the Administrative Lead agency, the I-REN budget 'lives' in the overall WRCOG budget. Staff will recommend the FY 2025/2026 WRCOG budget for approval by the WRCOG General Assembly at its upcoming meeting on June 12, 2025. The WRCOG Executive Committee only authorize the maximum revenue and expenditure levels, leaving the line item details to the I-REN Executive Committee.

Prior Action(s):

None.

Financial Summary:

The proposed FY 2025/2026 I-REN budget is $12,893,215 and is divided amongst the three authorized sectors: Public, Workforce Education & Training, and Codes & Standards. This budget will be formally approved by the WRCOG General Assembly on June 12, 2025.

Attachment(s):

None.

Inland Regional Energy Network
I-REN Executive Committee

Staff Report

Subject: **California Public Utilities Commission Application Process for Funding for Program Years 2028 - 2035**

Contact: **Casey Dailey, WRCOG Director of Energy & Environmental Programs, cdailey@wrcog.us, (951) 405-6720**

Date: **May 20, 2025**

Recommended Action(s):

1. Authorize submittal of the I-REN 2028-2035 Business Plan for programs and services related to the Public, Workforce Education & Training, and Codes & Standards Sectors.
2. Direct I-REN staff to establish better relationships and coordination with existing Energy Efficiency Programs offering services in the Commercial, Residential, and Industrial Sectors, to bring additional resources, programs and services to the communities of the Inland Empire.

Summary:

The draft 2028 I-REN Business Plan is in progress, preparing for submission to the CPUC to secure funding for program years 2028 – 2035, with authorization from the Executive Committee to proceed with development of the next Business Plan with its current three sectors. Staff have undertaken research at the request of the Executive Committee to identify whether there are gaps in existing statewide and regional programs for other market sectors, such as Residential, Commercial, and Industrial. This item presents the results of that research, as well as critical new developments in the CPUC regulatory and state legislative environment that have occurred since the February 18, 2025, Executive Committee meeting.

Discussion:

Background

At the January 21, 2025, Executive Committee meeting, staff presented an overview of the CPUC application process for I-REN Energy Efficiency (EE) Program funding for 2028 – 2035. The application, or "Business Plan," is due to the CPUC in February 2026 and will consist of an eight-year strategic business plan and four-year portfolio plan. In addition to outlining detailed plans for program years 2028 - 2031, the 2028 Business Plan will also include high-level strategies, as well as future plans and goals for program years 2032 – 2035.

Preparing the 2028 Business Plan will involve assessing the energy efficiency needs of stakeholder communities within the CPUC-defined market sectors I-REN wishes to serve, determining capabilities to

address those needs, and developing a compelling set of strategies and a justifiable budget request to serve those sectors.

The question of exploring new market sectors was mentioned at the January 21, 2025, Executive Committee meeting, specifically with regard to commercial and industrial new construction program opportunities and California Assembly Bill (AB) 98, signed into law on September 29, 2024. AB 98 becomes effective January 1, 2026, and relates to warehousing and trucking activity, and is relevant for the I-REN region as it is home to numerous existing and planned warehouse facilities and trucking routes. Additionally, it was also brought to staff's attention that the Coachella Valley Association of Governments would like to discuss the potential of adding residential and small and medium commercial sectors in the next Business Plan submission.

At the February 18, 2025, Executive Committee meeting, staff presented preliminary results from its program research, indicating a high number of programs potentially available but in need of further examination. Staff also shared relevant context regarding the regulatory environment in which I-REN will be developing its new Business Plan, and the recent and ongoing threats to REN and EE funding due to the State's energy bill affordability crisis.

At the conclusion of the presentation, Executive Committee authorized staff to continue Business Plan development with the same sectors outlined in the current business plan (Public, Codes & Standards, and Workforce Education & Training) and was directed to return at a future meeting for a discussion of possible inclusion of additional sectors.

Present Situation

Staff have conducted a comprehensive review of statewide and regional ratepayer-funded programs offered by CPUC authorized Portfolio Administrators (PAs) in the I-REN region, in order to determine what gaps may exist in the current suite of EE programs. Staff have also observed significant new developments in the CPUC regulatory environment, to add to the regulatory context previously provided at the February 18, 2025, meeting.

Program Review & Gap Analysis

Based on I-REN Staff research, there are existing programs in each of the sectors of interest to I-REN Executive Committee members. The programs cover a broad range of participant and building types, with services targeted to end-user utility customers as well as upstream market actors in the energy efficiency supply chain such as manufacturers. There are program offerings for low income residents and small businesses, in addition to "market rate" programs targeted to more well-resourced residents and businesses.

Existing programs offered by Southern California Gas Company, Southern California Edison, and Southern California Regional Energy Network, and Statewide programs that are aligned with I-REN Executive Committee members' interests are shown in the attachment to this staff report. The attachment provides additional detail as well as additional programs available to the region in other market sectors and subsectors.

In addition to ratepayer-funded energy efficiency programs included in the Attachment, there are also program offerings such as the California Energy Commission (CEC) Equitable Building Decarbonization

(EBD) program, a residential direct install program with an emphasis on serving disadvantaged communities. I-REN is a partner for CEC EBD implementation in the Southern California region, and through this work I-REN will learn best practices and develop partner relationships within the residential sector, which could position I-REN for a future residential program offering by potentially reducing the amount of time spent on program development. Over the coming years of CEC EBD implementation, I-REN will assess whether its learnings can be applied in this way to consider a future residential offering. Using the EBD program consultants grants an opportunity to broadcast the many available programs to our agencies.

At this time there do not appear to be gaps in the availability of energy efficiency programs serving the I-REN region. However, as mentioned in the February 18, 2025, Staff Report on this topic, there may be a gap in awareness and utilization of the existing suite of energy programs available to I-REN communities.

Staff recognizes there is interest for programs serving the Commercial, Residential and Industrial sectors now. While it may not be feasible or advisable to add additional sectors to the I-REN portfolio, there are many ways I-REN can integrate and incorporate the above referenced programs in its overall outreach and education to the community. One way to accomplish this is to establish a more formal Third-Party PA coordination forum for discussion between I-REN staff and the PAs responsible for implementing those programs. This would create a direct line of communication between I-REN and the other administrators of these programs and allow for marketing, education and outreach of these programs alongside I-REN's existing suite of program offerings. Additional funding can be allocated to I-REN's COG partners to help effectuate this effort, if needed.

Regulatory & Legislative Updates: In the months since the February 2025 Executive Committee meeting, there have been significant additional indicators that scrutiny of REN and energy efficiency funding by regulatory bodies and lawmakers is increasing, driven by the energy bill affordability crisis in the state.

These recent developments include:

- March 12, 2025: The Public Advocates Office of the Public Utilities Commission (Cal Advocates) released a position paper entitled Addressing Underperforming Ratepayer-Funded Programs.
    - The paper specifically targets RENs, saying they are not focused on the State's energy goals, and "have not effectively delivered on the primary objectives of reducing energy consumption, lowering demand, and decreasing greenhouse gas emissions." The paper calls for RENs to no longer be funded by ratepayers.
- March 18, 2025: The CPUC released Report 2023-127 by the State Auditor, entitled "Without Improving Its Oversight, the Benefits of Energy Efficiency Programs May Not Be Worth Their Cost to Ratepayers."
    - In the corresponding letter to the Governor and Legislative Leaders, California State Auditor Grant Parks advised that "the CPUC could better protect ratepayers by increasing its monitoring of utilities' efficiency programs, proactively identifying underperforming efficiency programs, and eliminating those that do not save sufficient energy or do not prove to be cost-effective."
- April 1, 2025: An Assembly Bill aimed at establishing a third party review of ratepayer-funded program proposals by the Public Advocates Office of the Cal Advocates was passed unanimously by the Assembly Committee on Utilities and Energy and has been re-referred to the Committee on

Appropriations with the recommendation: To Consent Calendar.
    - AB-61, Electricity and natural gas: legislation imposing mandated programs and requirements: third-party review includes language directing Cal Advocates to examine all existing legislatively mandated ratepayer-funded programs, including the question of whether other non-ratepayer funding sources should be used for programs, as well as proposals for new programs.
    - The Bill requires that Cal Advocates establish a "program" to conduct this analysis by January 1, 2027. As a reminder, I-REN's funding ends December 31, 2027; in the upcoming Business Plan due in 2026, I-REN must apply for additional funding for 2028 and beyond.
- April 24, 2025: The CPUC voted to approve the new EE Rulemaking proceeding.
    - In the Order Instituting Rulemaking (OIR) for the new EE proceeding, the CPUC names "Portfolio Oversight" and "Cost-Effectiveness" as scoped issues to address in a forthcoming Administrative Law Judge ruling, in alignment with the State Auditor's report as mentioned above, as well as the Governor's Executive Order N-5-24, which directed the CPUC to "modify or sunset any underperforming or underutilized programs or orders whose costs exceed the value and benefits to electric ratepayers."
    - The OIR mentions that the proceeding "will include (among other related issues) actions to identify and improve or **conclude programs that consistently underperform**" and explore ways to **reduce ratepayer funding for programs**."

These regulatory and legislative developments, along with prior context, represent a trend of rapidly advancing scrutiny on RENs and ratepayer-funded energy efficiency in general. It is clear that existing programs will face an uphill battle in justifying their continuation, and new programs will be examined with even more scrutiny.

Business Plan Recommendations: After careful consideration of the existing field of EE programs serving the I-REN region within the context of the current regulatory and legislative environment, staff recommend the following actions regarding the Business Plan for 2028-2031.

1. Maintain the three existing market sectors.
    a. In parallel with Business Plan Development in 2025, continue to push for greater participation and outcomes associated with the existing programs, to include in the Business Plan to justify continued funding for these programs.
2. Do not add new market sectors at this time.
    a. Due to the availability of existing programs to serve I-REN communities, and the concerning indications of regulatory and potentially legislative scrutiny being applied to RENs and energy efficiency, it will be difficult to justify expanding into market sectors in which ratepayers are already funding a robust set of existing programs.
3. Incorporate outreach plans into existing programs to spread awareness of other PA's existing programs in the region.
    a. I-REN can act now to begin assessing and meeting outreach needs to increase utilization of existing EE programs.
    b. I-REN should also propose additional outreach strategies in its new Business Plan within the framework of existing sectors and programs to increase awareness of EE programs in the region.
    c. I-REN's two main audiences are local government agencies and other public sector entities, as well as EE workforce-job seekers as well as currently employed building professionals.

d. Through these audiences, I-REN can provide resources and encouragement to local government staff to spread the word about EE programs, while encouraging job seekers and building professionals to seek out EE job opportunities associated with existing programs.
e. I-REN is currently involved in multiple regulatory Portfolio Administrator Sector Coordination meetings where specific sector related programs are discussed to avoid program duplication with overlapping territories. During these meetings, I-REN can bring forward more specific discussions on the marketing and outreach strategies to ensure outreach of programs throughout the region is occurring and is done so without confusing our agencies.

Prior Action(s):

February 18, 2025: The Executive Committee authorized staff to continue the development of the 2028 Business Plan for the Public, Codes & Standards, and Workforce Education & Training Sectors and direct staff to return at a future meeting for a discussion of possible inclusion of additional sectors.

Financial Summary:

The I-REN has an existing, six-year, $65M budget approved by the CPUC from 2022 through 2027. The amount for the next funding period is currently being analyzed and will be submitted with the new Business Plan.

Attachment(s):

Attachment 1 - EE Programs List
Attachment 2 - Public Advocates Office Addressing Underperforming Ratepayer-Funded Programs
Attachment 3 - Auditor of the State of California - Report 2023-127
Attachment 4 - Order Instituting Rulemaking for Oversight of Energy Efficiency Portfolios
Attachment 5 - Executive Department State of California Executive Order N-5-24

Attachment

Residential, Commercial and Industrial Energy Efficiency Programs Available in I-REN Service Territory

Residential, Commercial and Industrial
Energy Efficiency Programs Available in I-REN Service Territory

Residential EE Programs in I-REN Region

PA	Program Name & Website Link	Brief Description
SCG	Energy Savings Assistance (ESA) Program	Provides comprehensive energy-saving home improvements and services to income-qualified renters and homeowners, whose home is at least five years old
SCG	Mobile Home Park Residents | SoCalGas	Offers owners of mobile home parks the opportunity to replace their park's energy distribution system with a new, professionally installed energy distribution system
SCG	Residential Advanced Clean Energy Program	Provides energy efficiency solutions to residential, single-family SoCalGas customers through the direct installation of basic and advanced energy measures. Eligible customers may receive enrollment assistance, a needs assessment and consultation, direct installation measures (no-cost and co-pay), local agency energy and water measures where available, and financing options.
SCG	Multifamily Energy Alliance Program	Helps multifamily property owners and managers work toward energy efficiency goals through select direct install upgrades, equipment rebates, and step-by-step support throughout participation.
SCG	Residential Appliance Rebates & Incentives	Rebates and incentives for purchase of eligible energy-efficient and ENERGY STAR certified appliances
SCE	Energy Savings Assistance (ESA) Program	Offers income-qualified homeowners and renters the opportunity to receive energy-saving home improvements, such as a heat pump water heater replacement, or energy-efficient appliances, such as a new refrigerator, clothes washer, or dishwasher replacement, and more. If you qualify, we will cover the cost, including installation by an authorized contractor.
SCE	Residential Direct Install Program (Single Family & Multifamily)	Offers no-cost energy efficiency upgrades to owners and tenants of single family and multifamily properties. Products and services may include a Smart Thermostat, Fan Controller, Duct Test and Seal, and more.
SCE	Comprehensive Manufactured Homes Program: Rebates, Incentives, and Savings Tips	Offers energy-saving products and services that optimize air conditioning operation, efficiency, and comfort. Products and services may include a Smart Thermostat, Fan Controller, Duct Test and Seal, and more.
SCR	Small Hard-to-Reach Multifamily Direct Install Program	Property owners can make important retrofits to their property, using SoCalREN's Small Hard-to-Reach Direct Install (HTRDI) Program to cover the cost of equipment and installation.
SCR	Kits for Kids Program: Free Energy-Savings Measures for Households	Introduces third and fourth-grade students from participating schools to energy efficiency and how it can help their families save money and improve their comfort

		and safety at home. Participation includes each household installing the energy-efficient items from the kit in their home. Each enrolled classroom is eligible to receive a $1,000 grant if 65% of students install the energy-efficient items and provide proof of installation.
SW	Upstream Residential & Commercial EE Program for HVAC Distributors | Comfortably CA	Offers resources and incentives to distributors, manufacturers, retailers, and contractors for selling high-efficiency HVAC equipment and provides no-cost training to contractors and technicians.
SW	Golden State Rebates	Provides instant rebate coupons for Air Conditioners, Smart Thermostats, Electric Heat Pump Water Heaters, and Gas Water Heaters. Rebate coupons can be redeemed at participating retail locations (in-store or online).
SW	California Energy-Smart Homes	Residential new construction and alterations program that provides incentives to adopt advanced energy measures and transition to all-electric construction. All-in-one solution that offers incentives for single family, duplex, townhome, multifamily low-rise, alterations, and accessory dwelling units.

Small & Medium Commercial EE Programs in I-REN Region

PA	Program Name & Website Link	Brief Description
SCG	Small Business Savings (SBS) Program	Targets all small and medium customer facilities under 50,000 therms located in San Bernardino, Riverside, and Orange counties. The program focuses on helping businesses lower their energy bill and improve competitiveness by saving energy through several program resources, including assessments, kits, and prescribed incentives.
SCG	Business Appliance Rebates & Incentives	Rebates and incentives for purchase of eligible energy-efficient and ENERGY STAR certified appliances
SCE	On-Bill Financing Program	Open to all SCE non-residential customers; provides no-interest financing, financial incentives for EE equipment installation.
SCE	Local Commercial Strategic Energy Management (SEM) Program	Provides customized energy-saving services SCE customers including commercial buildings, private and trade schools, hotels and hospitality, health care centers and hospitals. Program provides up to six years of technical assistance to identify energy-saving projects, rebate incentives and operational improvements.
SCE	Measured Savings Program	Targets commercial customers in SCE's service territory. Program pays Aggregators to develop and deliver projects for qualified customers that bring Total System Benefits to the grid. Savings are paid and measured through normalized metered energy consumption (NMEC).
SW	California Energy Design Assistance (CEDA)	Program promotes the electrification and decarbonization of new building construction or major renovation. CEDA

		works in collaboration with project teams to reduce energy demand, consumption, and carbon emissions. Available for commercial, public, industrial, agriculture, and high-rise multifamily projects.
SW	California Foodservice Instant Rebates Program	customers can get valuable Instant Rebates on qualifying energy-efficient equipment for their businesses.

Industrial EE Programs in I-REN Region

PA	Program Name & Website Link	Brief Description
SCG	Industrial Energy Partners (IEP) Program	provides energy efficiency services, industry-specific technical assistance, and energy savings upgrades that could help your facility save on energy costs. The program is open to textile, wood, paper, mining, aerospace, machinery, asphalt, cement, minerals, metals, and plastic customers.
SCG	Industrial Savings, Training, Assistance, Rebate (Industrial STAR) Program	provides incentives and rebates to industrial food and beverage customers. The program also provides audits and technical assistance to eligible customers to help them save energy. Industrial STAR offers rebates for deemed measures and provides incentives via a custom path to accommodate replacement of less efficient equipment with new, high-efficiency equipment or make comprehensive changes to the customer's process that could reduce energy consumption.
SCG	Innovations To Industrials Strategic Energy Management (ITI SEM) Program	ITI SEM comes at no additional cost to your business. This program does not involve selling equipment or services, but focuses on providing technical support, incentives, and energy team coaching.
SCE	SPARKe Industrial and Agriculture Strategic Energy Management (SEM) Program | Cascade Energy	Industrial, commercial, and agricultural businesses that use at least 2 million kWh annually are eligible for this program, which offers access to the highest incentive rates for capital projects (up to $0.21/kWh) and electrification (up to $7/therm) to help upgrade and improve legacy equipment.
SW	California Energy Design Assistance (CEDA)	Program promotes the electrification and decarbonization of new building construction or major renovation. CEDA works in collaboration with project teams to reduce energy demand, consumption, and carbon emissions. Available for commercial, public, industrial, agriculture, and high-rise multifamily projects.

Attachment

Public Advocates Office

Addressing Underperforming Ratepayer-Funded Programs

The Public ADVOCATES OFFICE

Addressing Underperforming Ratepayer-Funded Programs

Date: March 12, 2025

SUMMARY: Electricity rates in California have more than doubled over the past decade, significantly outpacing inflation. Rising costs, driven by wildfire mitigation efforts and legacy rooftop solar subsidies, are further exacerbated by underperforming programs funded through customers' utility bills. Over the past four years, ratepayers have contributed more than $1.3 billion to programs that have not produced sufficient environmental or social benefits to justify their costs.[1] To protect ratepayers, reforms are needed to reduce utility costs and lower bills.

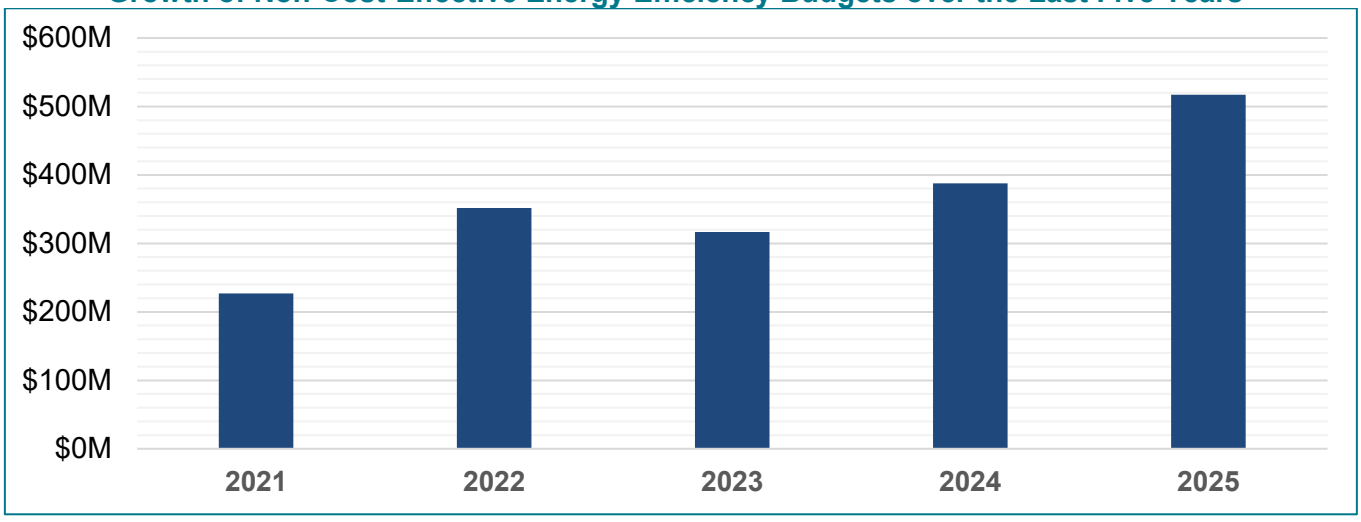
BACKGROUND

California's four largest utilities[2] have been authorized to collect more than $5.9 billion over four years from electric ratepayers to fund energy efficiency and demand response programs.[3] However, many of these programs no longer deliver the intended benefits, even as their authorized budgets continue to grow. Historically, energy efficiency initiatives helped lower overall costs for customers by reducing energy consumption. Energy efficiency continues to be a key cornerstone to achieving the state's clean climate and energy policy goals. However, as California has strengthened building codes to mandate higher efficiency standards, the effectiveness of many existing programs has diminished.[4]

As a result, long-standing programs have become less cost-effective, delivering fewer climate and energy benefits for every ratepayer dollar spent. Today, more than 63% of these programs fail to meet cost-effectiveness criteria, meaning they impose additional costs on ratepayers without corresponding benefits.[5]

Despite these challenges, program budgets have not been adjusted accordingly and continue to expand. This places an excessive financial burden on ratepayers – especially middle- and lower-income households – who already spend a disproportionate share of their income on utility bills.[6]

Growth of Non-Cost-Effective Energy Efficiency Budgets over the Last Five Years[7]



IDENTIFYING AREAS FOR REFORM

Often, demand-side programs – such as demand response and energy efficiency – operate in silos, addressing greenhouse gas reduction, reliability, and affordability separately rather than through an integrated approach.

Ensuring that ratepayer-funded programs are cost-effective, well-coordinated, and aligned with California's long-term climate and energy goals is critical. The California Public Utilities Commission (CPUC) should carefully balance these priorities to ensure that decarbonization and reliability goals are achieved without placing excessive financial burden on ratepayers. To facilitate the level of electrification required to meet state climate targets, electricity rates must remain below reasonable thresholds and ratepayer-funded programs must yield measurable, quantifiable benefits.

1) Maximizing Climate Impact by Addressing Misaligned Incentives

An increasing amount of energy efficiency funding is directed toward building electrification, replacing traditional natural gas appliances such as water and space heaters. While the CPUC has approved a limited ban on natural gas incentives (with an exemption for technologies with no viable electric alternatives),[8] ratepayer funds continue to support the installation of natural gas appliances through programs such as the Energy Savings Assistance Program, contradicting the state's clean energy goals. Encouraging the installation of new gas appliances will delay electrification and result in increased ratepayer costs by prolonging the need to maintain gas system infrastructure.

Ensuring that newly installed electric appliances are designed to integrate with complementary programs can maximize decarbonization benefits and support grid reliability. For instance, requiring heat pump water heaters to be demand response-enabled upon installation would allow them to provide both economic and emergency reliability advantages.[9] To fully support California's climate and affordability objectives, ratepayer funding should be prioritized for cost-effective electrification measures that deliver tangible benefits to both customers and the grid.

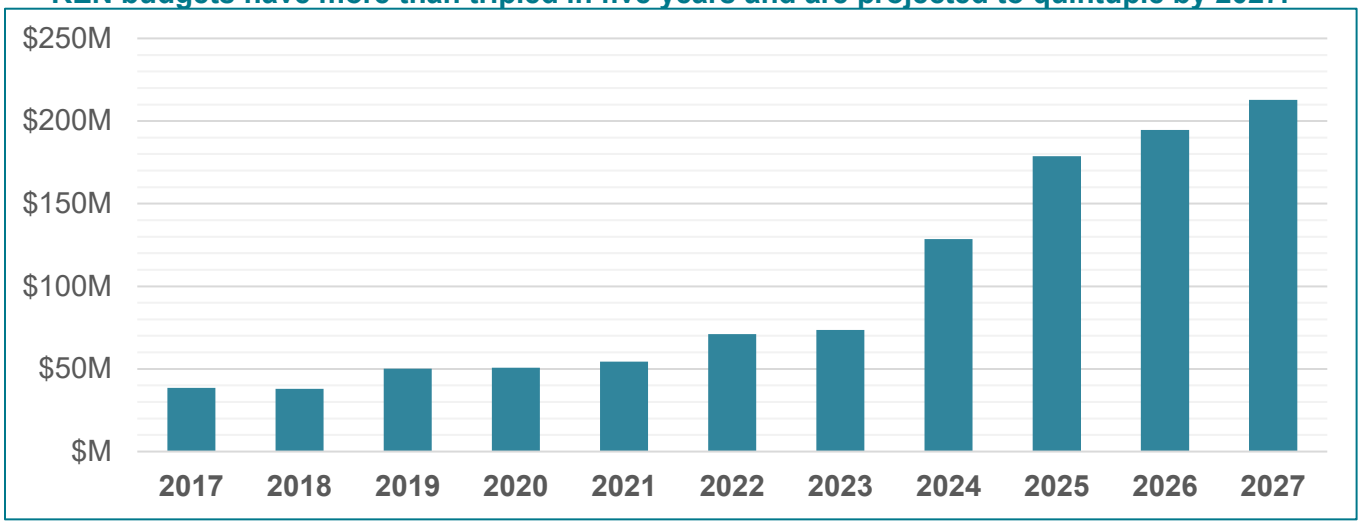
2) Applying Alternative Funding Sources for Regional Energy Networks (RENs)

Regional Energy Networks (RENs), established as local government-led programs, were designed to complement utility-administered energy efficiency initiatives, which collectively receive $3.6 billion in funding.[10] Despite receiving approval for $664 million in energy efficiency funding, RENs do not primarily focus on achieving the state's energy goals and have not effectively delivered on the primary objectives of reducing energy consumption, lowering demand, and decreasing greenhouse gas emissions.

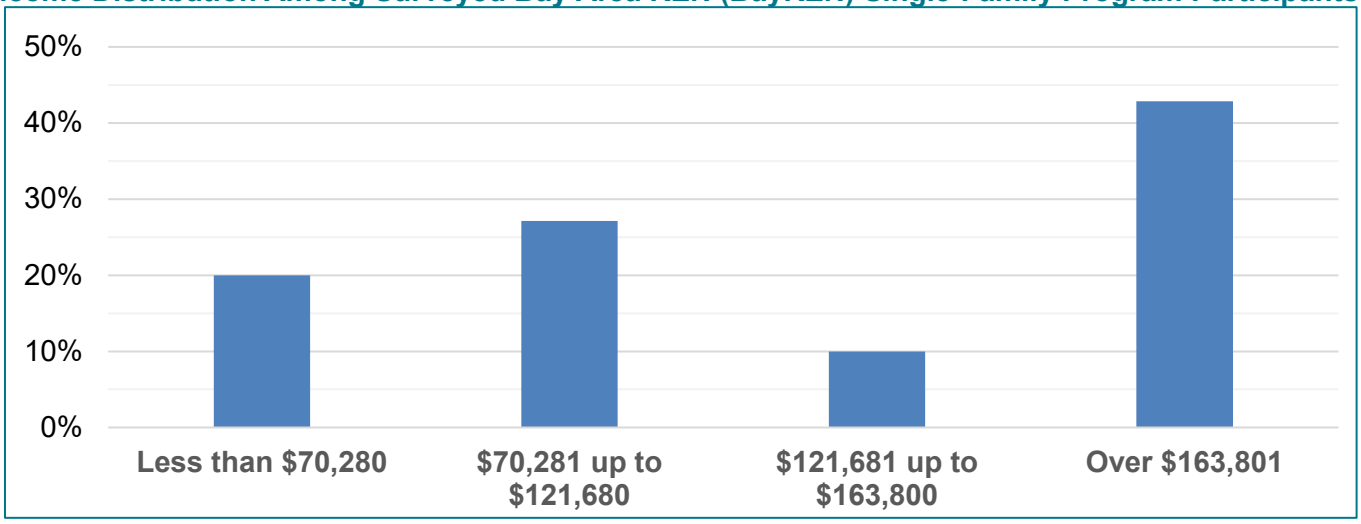
Approximately 98% of REN budgets are not cost-effective, meaning program benefits to the climate, the grid, and ratepayers are lower than the cost to administer and implement the programs.[11] This means that for every ratepayer dollar spent on REN programs, ratepayers receive only 27 cents in benefits.[12] While these initiatives may provide benefits for a select group of participants, the increasing burden of high energy bills necessitates a reconsideration of how such programs are funded, ensuring they do not rely on ratepayer contributions.

Furthermore, while RENs were initially established to serve “hard to reach customers,” they are not required to focus on lower-income households. As a result, higher-income homeowners have disproportionately benefited from fully subsidized upgrades, with the costs spread across all ratepayers.

REN budgets have more than tripled in five years and are projected to quintuple by 2027.[13]



Income Distribution Among Surveyed Bay Area REN (BayREN) Single-Family Program Participants[14]



3) Reforming Ratepayer Contributions to State Programs

The California Schools Healthy Air, Plumbing, and Efficiency Program (CALSHAPE) has provided grants for school infrastructure improvements, which serve an important purpose. However, its funding has come from the volumetric charges on Californians’ energy bills rather than general tax revenues and does not provide direct grid benefits to ratepayers. This funding mechanism disproportionately impacts low-income customers, as the volumetric charge is the same for all ratepayers across income brackets. Unlike the progressive income tax system typically used to fund state programs, this structure shifts costs onto those least able to afford them.

RECOMMENDATIONS FOR REDUCING CUSTOMERS' UTILITY BILLS

To mitigate rising utility costs while maintaining support for necessary energy programs, the following measures should be implemented:

- **Enhance program oversight** to ensure integration and optimization of program spending to reduce redundancies and apply consistent performance standards across all program administrators.[15]
- **Cease approval of ratepayer funding for programs that fail to deliver measurable benefits to ratepayers** – currently, there are approximately 243 energy efficiency programs funded by ratepayers that are not cost-effective.[16]
- **Cap energy efficiency program funding to 2020 levels** to prevent unnecessary budget growth and reduce overall costs to ratepayers.
- **Set new requirements for leveraging outside funding to limit ratepayer costs.** Specifically, require program administrators to seek and utilize California Energy Commission programs funded by the California General Fund or other funding sources prior to seeking additional ratepayer funds.
- **Support, strengthen, and expand cost-effectiveness requirements** to prevent ineffective spending and ensure ratepayer funds achieve measurable benefits. Some industry groups have proposed weakening these requirements, leading to an increasing number of exemptions. Without a robust cost-benefit comparison, ratepayers cannot be certain that their dollars are being spent wisely and achieving climate benefits.

ADVANCING CLIMATE AND AFFORDABILITY GOALS

High electric rates not only impact affordability but also discourage adoption of clean energy technologies and impede electrification and decarbonization goals. Research from UC Davis indicates that **for every $0.10/kWh increase in electric rates, demand for electric vehicle usage drops by 15%.**[17]

Cost savings in demand-side programs can lower revenue requirements, and in turn, lower customer rates. To address the affordability crisis facing ratepayers and advance the state's climate and energy goals, it is critical to reevaluate funding sources for programs deemed non-cost-effective if they do not provide real benefits to ratepayers.

The Public Advocates Office represents utility customer interests before the California Public Utilities Commission and other forums. We develop recommendations that advance the state's energy and climate goals in the most affordable ways for ratepayers.

For more detailed information, please contact Mary Flannelly at mary.flannelly@cpuc.ca.gov or visit our website at www.publicadvocates.cpuc.ca.gov.

[1] The EE budgets refer to program years 2021 to 2024 for programs with TRC below 1 reported on CEDARS. Unless otherwise noted, the EE budgets exclude Codes and Standards, EM&V, and administrative costs for all portfolio administrators. For San Diego REN, the budgets include administrative costs while excluding Codes and Standards and EM&V pursuant to Decision 24-08-003. For the two Rural RENs, the budgets include Codes and Standards, EM&V, and administrative costs pursuant to Decision 24-09-031.

[2] These include PG&E, SCE, SDG&E, and SoCalGas.

[3] Demand response programs provide customers incentives in exchange for customers lowering their energy usage during specific times or events. D.23-12-005 authorized budgets totaling $5.19 billion for 2024-2027. Decision 23-06-055, Table 9, authorizes PG&E, SCE, SDG&E, and SoCalGas to collect $4.2 billion from program years 2024 through 2027 in rates on behalf of all EE program administrators. Meanwhile, Decision 24-08-003 authorizes SDREN a revenue requirement of $124 million while Decision 21-11-013 authorizes Inland REN a revenue requirement of $35 million. In total, the four IOUs would collect $4.4 billion in rates (based on the original $84 million Rural REN budget as authorized in D.23-06-055).

[4] For example, NRDC reported: "The California Energy Commission (CEC) approved a new building energy code that ensures the vast majority of new homes in the Golden State will be built without fossil fuel connections by 2026. Additionally, the new code includes provisions to strongly encourage the replacement of gas rooftop HVAC (heating ventilation air conditioning) units for existing commercial buildings with two-way heat pumps." Accessed at: https://www.nrdc.org/bio/merrian-borgeson/california-climate-energy-policy-2024-update.

[5] This is based on EE budgets for program year 2025, excluding EM&V, Codes and Standards, administrative costs (those which are separate line items), regardless of program status. These budgets include those of SDREN, Central California Rural REN, and Rural REN North which are under Commission's review. Data from CEDARS, accessed on March 3, 2025.

[6] See analysis from the Bank of America Institute Report, "Will rising utility bills increase the heat on consumers?", pages 4-5. Accessed at: https://institute.bankofamerica.com/content/dam/economic-insights/utilities-update.pdf.

[7] These budget figures for program years 2021 through 2025, regardless of program status, exclude administrative costs (those which are separate line items), Codes and Standards, and EM&V. These figures include the program years 2024 and 2025 budgets for SDREN, Central California Rural REN, and Rural REN North which are under Commission's review. Data from CEDARS, accessed on March 3, 2025.

[8] D.23-04-035.

[9] Specifically, as heat pumps would increase electric load, they could be fitted with direct load-control technologies to reduce demand during peak periods. For an overview, see: https://www.iea.org/reports/the-future-of-heat-pumps/executive-summary.

[10] In D.23-06-055, the Commission approved the following EE budgets to be collected in rates: $3.6 billion for the four large IOUs, $78 million for Marin Clean Energy, and $471 million for BayREN, 3C-REN, and SoCalREN. Alongside the updated budgets of $69 million for the bifurcated Rural RENs and the approved budget of $124 million for San Diego REN, the Commission has approved a total of $(471 + 69 + 124) million = $664 million for the RENs. These budget figures cover the costs of all segments, including EM&V, Codes and Standards, and administrative costs.

[11] The percentage of REN budgets being non-cost-effective refers to the budgets for program years 2024 through 2027, excluding EM&V, Codes and Standards, and administrative costs. The budgets are based on the data available on CEDARS, accessed on March 3, 2025, and include the budgets of Rural REN North, Central California Rural REN, and San Diego REN which are currently under Commission's review. Without including the budgets of Rural REN North, Central California Rural REN and San Diego REN, over 99 percent of REN budgets are not cost-effective.

[12] 0.27 is the average cost-effective score for the following RENs: BayREN, Inland REN, SoCalREN, and Tri-County REN. For Rural REN North, Central California Rural REN, and San Diego REN, their cost and benefit figures are available on CEDARS and are under review as of March 3, 2025. Including these three RENs will lead to an average cost-effective score of 0.26 for all the abovementioned RENs. These cost-effectiveness scores exclude costs and benefits associated with EM&V, Codes and Standards, and administrative costs (those which are separate line items).

[13] The budget figures cover all program costs, including administrative costs, EM&V, and Codes and Standards, for the following RENs: BayREN, Inland REN, SoCalREN, Tri-County REN, Rural REN North (under review), Central California Rural REN (under review), and San Diego REN (under review). CEDARS data, accessed on March 3, 2025.

[14] Among those surveyed participants who chose to share their income level. DNV, *EM&V GROUP A Regional Energy Networks, Program Year 2022*, May 8, 2024, at 40-41. Available at: https://pda.energydataweb.com/api/view/3969/CPUC%20Group%20A%20REN%20Evaluation%20Report_DNV_FINAL_PDA.pdf.

[15] The CPUC's upcoming energy efficiency rulemaking could serve as one potential forum for addressing these issues.

[16] Regardless of programs status. Data available on the CPUC's CEDARS website, accessed on March 3, 2025.

[17] See presentation of David Rapson, "Electric Vehicles: Demand and Usage", CPUC En Banc, February 24, 2021. Accessed at: rates-en-banc_panel-1_updated.pdf (Slide 37).

Attachment

Auditor of the State of California

Report 2023-127

The California Public Utilities Commission

Without Improving Its Oversight, the Benefits of Energy Efficiency Programs May Not Be Worth Their Cost to Ratepayers

March 2025

REPORT 2023-127

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Grant Parks *State Auditor*

Mike Tilden *Chief Deputy*

March 18, 2025
2023-127

The Governor of California
President pro Tempore of the Senate
Speaker of the Assembly
State Capitol
Sacramento, California 95814

Dear Governor and Legislative Leaders:

The Joint Legislative Audit Committee directed my office to conduct an audit of the California Public Utilities Commission (CPUC) and its role in overseeing energy efficiency programs (efficiency programs), which aim to reduce energy usage in California. For the period 2012 through 2022, we reviewed portfolios of efficiency programs (program portfolios) that four large utilities—Pacific Gas & Electric, San Diego Gas & Electric, Southern California Edison, and Southern California Gas Company—maintain, and we selected a total of 20 efficiency programs to examine in greater detail. We identified several concerns about the effectiveness of the utilities' program portfolios and efficiency programs, and with the effectiveness of the CPUC's oversight of these program portfolios and efficiency programs.

The CPUC expects utilities to develop cost-effective program portfolios and to meet or exceed the CPUC's annual goals for electricity and natural gas savings. The utilities report to the CPUC efficiency program costs and energy savings information, which allows the CPUC to measure energy savings relative to its established goals and cost-effectiveness. We compared utilities' reported savings and found that utilities' program portfolios generally fell short of achieving goals. We found that the four utilities' program portfolios were rarely cost-effective and that 20 efficiency programs we reviewed did not achieve expected energy savings and were also generally not cost-effective.

The CPUC's limited oversight of utilities' efficiency programs creates a risk that may result in the State missing opportunities to achieve meaningful energy savings. To address these shortcomings, we recommend that the CPUC could better protect ratepayers by increasing its monitoring of utilities' efficiency programs, proactively identifying underperforming efficiency programs, and eliminating those that do not save sufficient energy or do not prove to be cost-effective. We also recommend that the Legislature consider amending state law to require the CPUC to eliminate funding for chronically underperforming programs.

Respectfully submitted,

GRANT PARKS
California State Auditor

Selected Abbreviations Used in This Report

CalSHAPE	School Energy Efficiency Stimulus Program
CPUC	California Public Utilities Commission
EM&V	Evaluation, Measurement, and Verification
ETP	emerging technologies program
HVAC	heating, ventilation, and air-conditioning
PG&E	Pacific Gas & Electric
SCE	Southern California Edison Company
SDG&E	San Diego Gas & Electric
SoCalGas	Southern California Gas Company
TRC	Total Resource Cost

Contents

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Summary

Results in Brief

The California Public Utilities Commission (CPUC) is responsible for regulating public utilities, including the Pacific Gas & Electric (PG&E), Southern California Edison (SCE), San Diego Gas & Electric (SDG&E) and Southern California Gas Company (SoCalGas). To assist the State in saving energy and developing new energy saving technologies, the State established energy efficiency programs (efficiency programs) that ratepayers fund through a surcharge on their bills. Our audit period was from 2012 through 2022, and our review focused on efficiency programs that PG&E, SCE, SDG&E, and SoCalGas funded that aimed to reduce energy use. Utilities use many different types of efficiency programs, such as those that replace inefficient appliances or that identify new technologies that can reduce energy use to achieve energy-savings goals that the CPUC establishes each year. These energy savings contribute to California meeting its greenhouse gas reduction goals because when those in the State use less energy, energy suppliers produce fewer emissions. The utilities administer portfolios of efficiency programs (program portfolios), which the CPUC approves as part of its regulatory oversight. In our review, we identified several concerns with the effectiveness of utilities' efficiency programs and the CPUC's oversight of these programs.

Decreased Spending on and Effectiveness of Efficiency Programs

Utilities' spending on efficiency programs has significantly decreased during the last 10 years. When we reviewed the amount of ratepayer funds that utilities spent from 2012 through 2022, we found that utilities' total spending on efficiency programs declined by nearly half, decreasing from its peak of more than $900 million in 2015 to just over $480 million in 2022.[1] The CPUC has performed little oversight in this area, but it asserted that identifying alternative approaches to generate energy savings has become a challenge for utilities. It appears that utilities have begun to exhaust more straightforward energy-savings approaches—such as the installation of LED lighting—because an increasing number of ratepayers have already adopted these technologies, and therefore demand for these types of efficiency programs, and the resulting spending, are decreasing. Further, as the State has increased the rigor of energy efficiency standards for buildings and appliances, opportunities to save energy have lessened because utilities no longer receive credit for certain reductions in energy usage.

The CPUC establishes goals for the amount of electricity and natural gas savings utilities' program portfolios should achieve each year, and it requires utilities to report on their progress in achieving these goals. However, we found that utilities'

[1] The Audit Committee directed the California State Auditor to identify total expenditures on efficiency programs from 2012 through 2022, which was the most recent year that complete expenditure information was available. Accordingly, we report total expenditures that include more than just the four utilities in the figure. In all other cases, excluding Figures 3, 4, and 5 and Table B.1, we identify spending only by the four utilities. This aligns with our analysis of their energy savings and cost-effectiveness. The four utilities make up the vast majority of total expenditures, such as in 2022 when these utilities spent $425 million on their programs, which represented 88 percent of total expenditures.

program portfolios typically do not achieve energy-savings goals. When we compared the reported actual energy savings to the goals, we found that utilities generally fell short, particularly for electricity savings goals. For example, SCE's program portfolio achieved less than half of its expected electricity savings in 2021 and 2022. When we reviewed the performance of a selection of 20 specific efficiency programs, we found that they also did not generally achieve the expected amount of energy savings. For example, a SDG&E efficiency program that offers no-cost or discounted energy efficiency improvements to small commercial customers never achieved its annual projected energy savings from 2018 through 2022.

The TRC Calculation for One SoCalGas Residential Efficiency Program:

Benefits: $29.8 million
- This value reflects the benefit to the utility of reduced costs to supply energy, such as purchasing fuel to generate electricity, but excludes benefits to participants.

Costs: $42.6 million
- Includes costs to the utility, such as $1.6 million for administration, and net costs to participants, totaling $15.6 million.

TRC (Benefits Divided by Costs): 0.7

Source: CPUC data.

We also found that the costs to operate efficiency programs frequently outweighed the resulting benefits, which results in utilities' using ratepayer dollars for efficiency programs that do not perform well. State law requires the CPUC to identify all potentially achievable cost-effective electricity and natural gas efficiency savings for electrical and gas corporations as part of its supervision of utilities' efficiency programs. To measure cost-effectiveness, the CPUC has established a measure called the Total Resource Cost (TRC), which divides efficiency program benefits that a program provides by the costs of the program. The result of this calculation is a number, and a value of 1 or greater means that an efficiency program is cost-effective. The text box shows the calculation of the TRC for one of SoCalGas's efficiency programs. When we reviewed the TRC of utilities' program portfolios from 2012 through 2022, we found that they were rarely cost-effective.

Weaknesses in the CPUC's Oversight

The CPUC could better protect ratepayers by implementing certain improvements to its oversight of utilities' efficiency programs. Currently, the CPUC neither monitors whether utilities' program portfolios achieved the energy-savings goals that it sets, nor whether efficiency programs are cost-effective, despite having this information readily available. Given its broad authority and oversight role, we expected the CPUC to review the performance of utilities' efficiency programs, direct utilities to identify and take corrective action when they fall short of expected savings and cost-effectiveness measures, and not allow utilities to continue operating underperforming efficiency programs year after year. Instead, the CPUC indicated that it asks utilities to use actual energy savings achieved to inform their planning of future program portfolios rather than direct the utilities to change efficiency programs. The CPUC's lack of oversight in this area creates a risk that the State will miss opportunities to achieve meaningful energy savings and greenhouse gas reductions and potentially undermine its progress toward these goals.

The CPUC uses ratepayer dollars to fund independent studies of the effectiveness of efficiency programs but does not ensure that utilities use the results of the studies to improve their program portfolios. In 2022 the utilities collected about $29 million to pay for the CPUC's studies. Such studies result in recommendations that could help utilities save energy. Nevertheless, the CPUC neither ensures that utilities respond to the recommendations, nor tracks when utilities implement them, all of which limits the potential value these studies could provide in improving efficiency programs.

Finally, the approach the CPUC takes to measure cost-effectiveness with its calculation of the TRC may discourage utilities from implementing certain efficiency programs, and the approach may contribute to utilities regularly not having cost-effective program portfolios. We found that the TRC calculation does not include certain non-energy-related benefits realized by the participants of efficiency programs. For example, when an efficiency program provides rebates to a business for replacement of its heating, ventilation, and air-conditioning system with a more energy efficient system, the TRC includes the *costs* to that business for installing the system but does not include the *benefits* to that business, such as clearer air and a healthier workforce. When we reviewed the practices of other states, we found that Vermont increases benefits by 15 percent to estimate non-energy benefits. Even though the actual non-energy benefits participants receive could be different than 15 percent, Vermont's estimate at least attempts to account for these benefits.

The absence of participant benefits in the CPUC's TRC calculation also produces lower TRC values for certain programs that provide efficiency benefits directly to program participants, such as programs that install equipment in ratepayer homes. Although the CPUC noted that such benefits are difficult to estimate, we found that other states, such as Massachusetts, use various estimation methods to account for these non-energy benefits, which ultimately increase the values in their cost-effectiveness calculations. The lack of non-energy participant benefits in the CPUC's TRC calculation contributes to the challenges utilities have experienced in achieving cost-effective program portfolios. Because the CPUC requires utilities to operate program portfolios that have a TRC of 1 or higher, meaning the benefits outweigh the costs, the utilities have little incentive to expand the use of programs that benefit participants if those benefits are not included in the TRC calculation. Without the CPUC exercising greater oversight to improve the performance of efficiency programs, including requiring utilities to take corrective action to address underperforming programs and following up on recommendations for program improvement, it is unclear whether the required funding ratepayers provide to pay for these programs continues to be justified.

To address these findings, and to protect ratepayers from utilities using funds on ineffective or underperforming efficiency programs, our overall recommendations are that the CPUC do the following:

- Monitor the energy-savings performance of utility program portfolios, proactively identify efficiency programs that are underperforming, and eliminate them.

- Track and ensure that utilities implement recommendations to improve efficiency programs and adjust its TRC calculation to account for participant non-energy benefits.

We also recommend that the Legislature consider amending state law to require the CPUC to eliminate funding for chronically underperforming programs.

Agency Comments

The CPUC generally agreed to implement our recommendations. The California Energy Commission (Energy Commission) disagreed with the one recommendation we made to it and some of our conclusions.

Introduction

Background

The California Constitution established the California Public Utilities Commission (CPUC) as the entity responsible for regulating public utilities, including investor-owned utilities (utilities). Three utilities—PG&E, SCE, and SDG&E—provide a majority of electricity to ratepayers in California. PG&E and SDG&E also provide natural gas service to their ratepayers; SoCalGas—which is affiliated with SDG&E (both are subsidiaries of Sempra Energy)—provides natural gas service primarily in SCE's service area. Our audit period was from 2012 through 2022, and our review focused on energy efficiency programs (efficiency programs) that PG&E, SCE, SDG&E, and SoCalGas funded which aim to reduce energy use.

CPUC and Efficiency Programs

State law requires the CPUC to supervise the administration of efficiency programs. The legislative intent of CPUC's supervision of such programs is to produce cost-effective energy savings, reduce ratepayer demand, and contribute to the safe and reliable operation of the distribution grid. The law also requires the CPUC to identify all potentially achievable cost-effective electricity and natural gas efficiency savings and to establish efficiency targets for electricity and natural gas corporations, including the utilities we examined. As further evidence of the importance of efficiency programs, in 2003 the CPUC, the Energy Commission, and the California Consumer Power and Conservation Financing Authority adopted the *Energy Action Plan*, which identified reduction of energy use as one of six actions of critical importance that require immediate action. Energy savings from efficiency programs can help the State meet its greenhouse gas reduction goals, which include reducing greenhouse gas emissions to 40 percent below 1990 levels by 2030.

To measure progress toward savings, the CPUC established numerical electricity and natural gas savings goals (energy-savings goals) for each utility's service territory.[2] The CPUC periodically sets energy-savings goals after having an independent consulting firm study achievable potential energy savings. The studies assess different technologies and strategies the utilities could use in their efficiency programs. The studies also use engineering calculations and policy analysis to determine achievable potential energy efficiency savings and assess the cost-effectiveness of those different strategies. See the specific electricity and natural gas savings for each utility from 2012 through 2022 in appendix Tables A.1 and A.2.

To fund their efficiency programs, state law requires utilities to add a surcharge—a separate rate component—to ratepayers' bills and requires the CPUC to approve the amount of the surcharge. Efficiency programs represent only a small portion of the total that utilities' collect from ratepayers to provide electricity and natural gas.

[2] *Energy-savings goals* are expressed in terms of saving gigawatt hours (GWh) of electricity and saving million-therms (MMTherms) of natural gas.

The Four Utilities We Reviewed Collected $812 Million From Ratepayers for Efficiency Programs in 2022 (in Millions)

PG&E	$325
SCE	$329
SoCalGas	$104
SDG&E	$54
Total	**$812**

Source: CPUC data.

Specifically, in 2022 efficiency programs accounted for $812 million, or 3 percent, of the approximately $27 billion collected by all utilities from ratepayers.[3] The text box shows the amounts the four utilities collected from ratepayers for efficiency programs that year. Table 1 demonstrates how the utilities collectively spent those funds, although as we discuss in the Audit Results, there is a significant difference between the four utilities' spending and collections in 2022. Figure 1 provides information on the economic areas, such as agricultural and commercial, in which utility efficiency programs spent ratepayer funds in 2022. Table B.1 in Appendix B provides this information for each year from 2012 through 2022.

Table 1
Utilities Spent Most Ratepayer Funds in 2022 on Resource Acquisition Programs (in Millions)

Efficiency Program Segment	PG&E	SCE	SOCALGAS	SDG&E	TOTAL
Resource Acquisition	$107	$64	$67	$22	$260
Market Support	36	20	13	10	79
Equity	3	1	5	0.2	9
Codes and Standards	35	15	1	4	55
Evaluation Measurement and Verification	10	7	0.4	3	21
Totals	**$192**	**$106**	**$87**	**$39**	**$425**

Segment Definitions

Resource Acquisition: Programs that achieve measurable energy savings, such as a program that directly installs energy-efficient products, like a SMART thermostat, for program participants.

Market Support: Programs that educate program participants, train contractors, build partnerships, or move beneficial technologies towards greater cost-effectiveness. A program that provides marketing support to help home builders and sales agents effectively communicate the value of a home's energy-efficient features to potential homebuyers.

Equity: Programs that provide energy efficiency improvements to hard-to-reach and underserved program participants and disadvantaged communities. Such a program could include educating communities about a utility's services and making referrals to energy savings assistance programs.

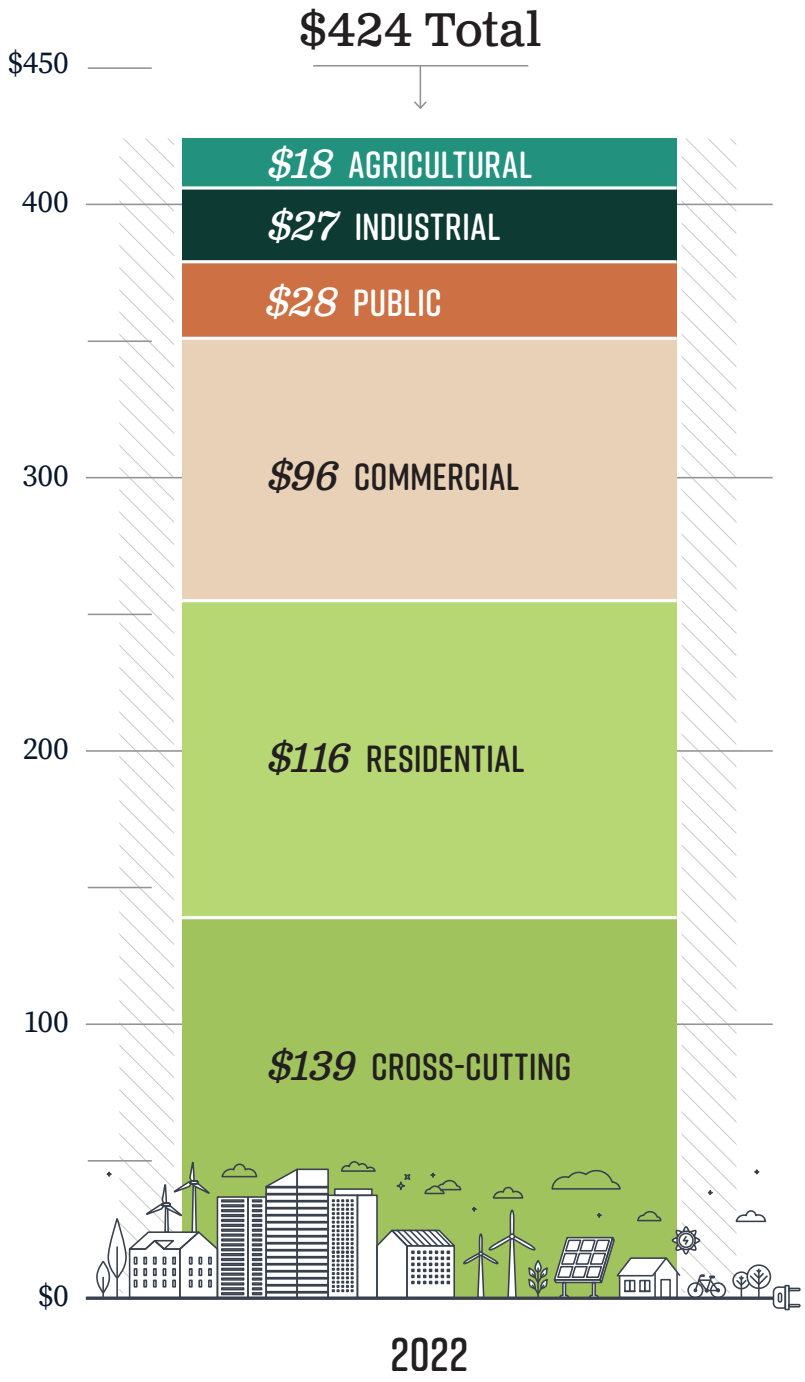
Codes and Standards: Programs that influence standards and code-setting bodies, such as the California Energy Commission, to strengthen energy efficiency regulations and improve compliance with existing regulations.

Evaluation, Measurement, and Verification (EM&V studies): Among other objectives, programs that evaluate the performance of utilities and third-party implementers, verify energy savings, and support the design and improvement of future efficiency programs.

Source: CPUC decisions, energy efficiency policy manual, and data.
Note: Totals may differ slightly due to rounding.

[3] At the time of our audit, the most current and accurate energy efficiency data available was for the year 2022.

Figure 1
Utilities' Efficiency Program Spending in 2022 Focused on Residential and Commercial Ratepayers (in Millions)



Source: CPUC expenditure data.

Note: Sectors are categories of industries associated with their respective economic establishments and activities. For example, expenditures categorized under the *agricultural* sector include an efficiency program offering rebates for agricultural irrigation pumps that help farmers' operations. Further, expenditures in the *cross-cutting* sector include efficiency programs that offer services across multiple sectors, such as commercial and industrial.

Utilities also collected funds from ratepayers to pay for the School Energy Efficiency Stimulus Program (CalSHAPE), in accordance with state law. The Energy Commission—an entity that is separate from the CPUC—administers CalSHAPE. The Legislature created this program, which began in 2021, to provide grants to school districts and other local educational agencies (school districts) to assess, maintain, repair, and replace their heating, ventilation, and air-conditioning (HVAC) systems and to replace plumbing fixtures and appliances. State law directed the CPUC to require utilities with program portfolios to provide a portion of their program budgets for 2021, 2022, and 2023, and any unspent efficiency program funds from 2020 through 2022, to the Energy Commission to fund CalSHAPE. In just 2022, utilities provided nearly $320 million for the administration and funding of CalSHAPE.[4] In total, the utilities have collected and delivered nearly $1 billion in ratepayer funds to the Energy Commission to fund the CalSHAPE program. We describe the administration of this program further in the Other Areas Reviewed section of this report.

Efficiency Program Administration

The CPUC does not administer or manage individual efficiency programs. Rather, the CPUC requires utilities to administer individual efficiency programs as part of a larger portfolio of such programs. The CPUC has made decisions in the past to establish its independence from directly managing utilities' program portfolios and individual efficiency programs, instead delegating this management to the utilities. Further, it does not prescribe the technology mix, such as LED lighting or electric water heaters, that must be a part of utilities' program portfolios. Instead, the CPUC has authorized the utilities to develop their own program portfolios, which are a collection of a utility's efficiency programs, ranging from roughly 70 to 120 programs depending on the utility, managed together to achieve energy-savings goals. In 2022, the four utilities we reviewed had program portfolios containing a total of nearly 380 efficiency programs.

The CPUC expects the utilities to base their selection of which efficiency programs to include in their program portfolios on whether they are cost-effective and can meet or exceed the energy-savings goals it established. In two separate CPUC decisions, in 2016 and 2018, the CPUC noted that the utilities' role should focus on the design and management of their overall program portfolios. The CPUC indicated that having utilities focus less on implementing individual efficiency programs would both encourage innovation and allow for cost savings in program delivery. The CPUC believes that competitive solicitation of efficiency programs can help utilities identify innovative approaches or technologies for meeting energy-savings goals with improved performance, which may not emerge during the program portfolio planning process. The CPUC also stated that the State's investments in energy efficiency have enhanced private sector activity to deliver programs, drawing from the skill, experience, and creativity of the energy efficiency community, such as third-party implementers, and could lead to additional cost-effective energy savings. Additionally, the CPUC requires the utilities

[4] These funds include the utilities' unspent and uncommitted funds for efficiency programs. Additionally, the utilities transferred a portion of the difference between the budget the CPUC authorized for efficiency programs and the budget utilities request for their programs. As an example, in 2021, if the CPUC authorized a utility to collect $100 million, but the utility only requested a budget of $80 million for efficiency programs, the utilities were required to collect from ratepayers and transfer to the Energy Commission 80 percent of the difference, or in this example, $16 million.

to allocate at least 60 percent of their budgets for efficiency programs to third-party implementers. We describe in the text box activities that third-party implementers conduct.

Third-Party Implementer Activities:

- Develop an efficiency program implementation plan.
- Design strategies or tactics to reduce barriers related to the efficiency program.
- Deliver the efficiency program in accordance with its plan to reach program participants, including hard-to-reach or disadvantaged communities.

Source: CPUC.

The CPUC requires utilities to file applications for approval of the utilities' annual program portfolios and business plans. Each utility's application must include the utility's plan for how its program portfolio will meet annual energy-savings goals and cost-effectiveness measures. Each utility's application must also include all costs associated with the delivery of its efficiency programs. Any unspent funds from previous years, and any associated interest collected on those funds, must be included in the utility's application and business plan as an offset to the amount of ratepayer funds it plans to collect in the following year. For instance, if a utility has $50 million in unspent funds from what it collected from ratepayers from previous years, and it then requests a budget of $300 million for the current year, the CPUC will authorize the utility to collect only $250 million from ratepayers.

The CPUC also directs studies of efficiency programs as part of its efforts to oversee and improve those programs. The CPUC contracts with third-party evaluators to complete EM&V studies. The text box describes some of the purposes of the EM&V studies. The EM&V studies provide recommendations for improvements to the design of efficiency programs and helps to ensure that the energy savings information that utilities report is accurate.

Purposes of EM&V Studies Include the Following:

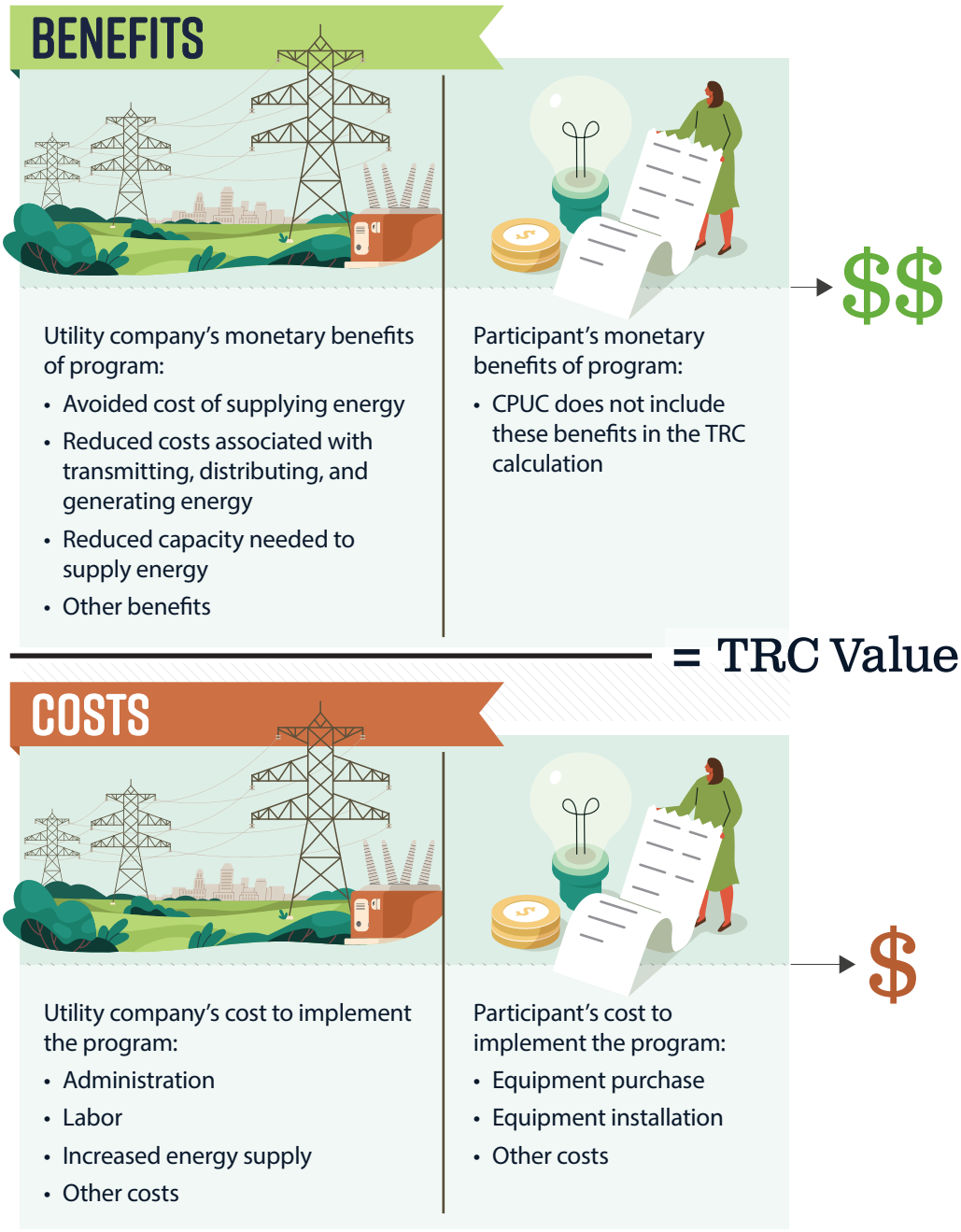
- Verify energy savings for efficiency programs.
- Measure and evaluate the performance of third-party implementers and utilities.
- Improve the design and success of future efficiency programs and development of new technology.
- Generate data for savings estimates and cost-effectiveness inputs.

Source: CPUC policy manual and commission decisions.

Cost-Effectiveness Measurement

State law requires the CPUC to identify all potentially achievable cost-effective electricity and natural gas efficiency savings for electrical and gas corporations, including the utilities we examined, and it has established a measure to determine whether the efficiency programs are, in fact, cost-effective. To ensure that utilities responsibly allocate ratepayer funds and to measure the cost-effectiveness of utilities' efficiency programs, the CPUC primarily uses the TRC test. As Figure 2 shows, the TRC calculation that the CPUC uses divides the benefits that an efficiency program provides by the costs of the program. The TRC allows the CPUC to understand whether a program or portfolio of programs provides more benefits than costs. A TRC value of 1 or higher indicates that a program provides more benefits than costs, and a value below 1 means that the program offers fewer benefits than its costs. Therefore, the CPUC requires utilities to submit portfolios with a TRC of 1 or higher. We describe some shortcomings we observed in the CPUC's TRC calculation methodology in the Audit Results.

Figure 2
The TRC Calculation Determines Whether Efficiency Program Benefits Exceed Their Costs



TRC at or above 1: The monetary value of energy saved is equal to or greater than the cost of the program.

TRC below 1: The cost of the program is greater than the monetary value of energy saved.

Source: CPUC Standard Practice Manual and CPUC website.

The CPUC exempted certain types of programs from having to meet a TRC of 1. These are programs whose benefits the TRC does not capture but that the CPUC still considers important. Among such excluded programs are some that support long-term energy efficiency objectives. Others that are exempt from having to meet a TRC of 1 are equity programs, which support low-income Californians by, for example, upgrading HVAC systems in areas with high outdoor pollution. Programs like these may not have significant energy savings but provide other benefits not captured by the TRC, such as allowing low-income communities to access other efficiency programs through foreign language translations, educating customers about energy efficiency techniques and knowledge for installing and maintaining energy efficiency technology. The remaining programs that must meet the TRC requirement, known as resource acquisition programs, represent the majority of efficiency programs and are primarily responsible for delivering energy savings.

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Audit Results

Utilities' Spending on Efficiency Programs Has Significantly Declined, and Programs Frequently Underperform Established Goals

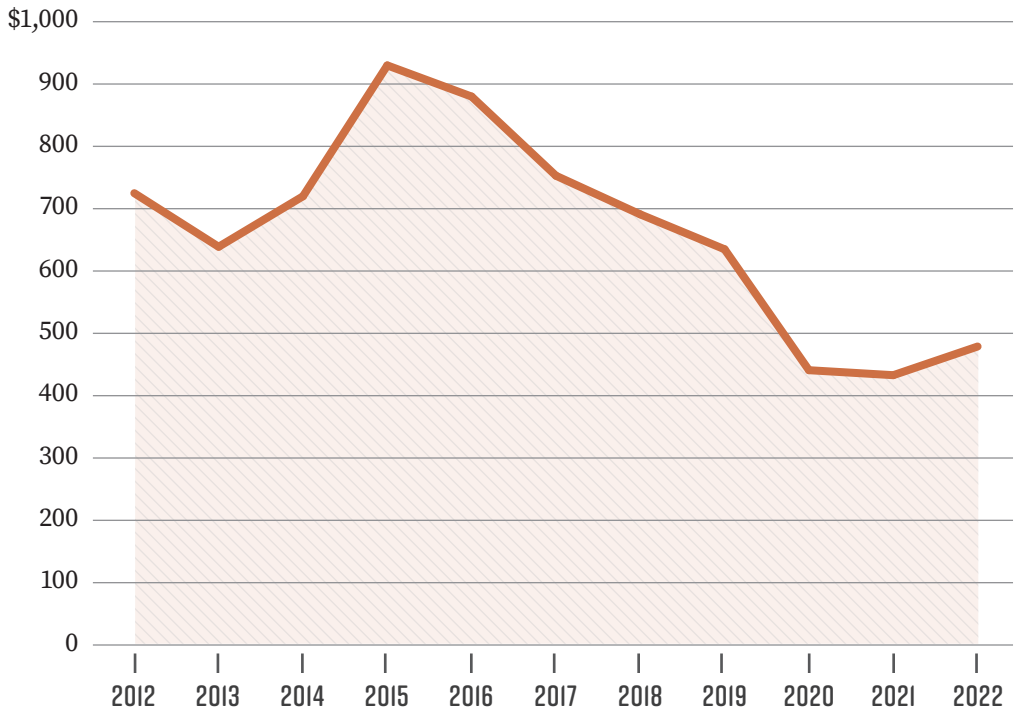
Energy Efficiency Programs (efficiency programs) aim to produce cost-effective energy savings, reduce ratepayer demand for energy, and support the State's energy policy and greenhouse gas emissions limit. As such, we reviewed the spending, energy savings, and cost-effectiveness of efficiency program portfolios (program portfolios) administered by four large utilities: Pacific Gas & Electric (PG&E), San Diego Gas & Electric (SDG&E), Southern California Edison (SCE), and Southern California Gas Company (SoCalGas). We found that utilities' spending on efficiency programs has decreased significantly over the last several years, largely because utilities have begun to exhaust the use of straightforward energy-saving technologies—such as efficient lighting—and California's efficiency standards have grown increasingly strict. Additionally, we reviewed whether utilities' program portfolios achieve the energy-savings goals established by the California Public Utilities Commission (CPUC) and found that they rarely achieve energy-savings goals or cost-effectiveness. To pay for their efficiency programs, utilities collect funds from ratepayers by adding a surcharge to their energy bills. In 2022 we found that utilities significantly overcollected from ratepayers; however, we attribute a large part of this cumulative overcollection to one utility—SCE—which was not able to spend as much as projected on efficiency programs in that year. A key contributing factor to the numerous shortcomings we identified in the performance of utilities' efficiency programs is the CPUC's inadequate oversight of these programs, which we describe later in the report.

Utilities' Spending on Efficiency Programs Has Decreased by Nearly Half Since 2015

Since 2015 total spending on efficiency programs has decreased significantly, dropping from $934 million in 2015 to just $483 million in 2022, as Figure 3 shows.[5] We also found that the mix of technologies aimed at increasing energy savings, such as more efficient lighting or water heaters, that utilities' fund as part of their program portfolios has changed over time. For example, the installation of lighting technologies comprised more than half of all such installations in 2016, but as Figure 4 shows, it made up only 7 percent in 2022. We reviewed available documentation and interviewed CPUC staff to identify the reasons utilities' spending has drastically declined from 2012 through 2022 and why the types of technologies their efficiency programs install have changed so significantly. We identified two primary factors contributing to these changing conditions: utilities have exhausted installation of straightforward energy efficiency technologies, and California's energy efficiency standards have increased.

[5] The Joint Legislative Audit Committee (Audit Committee) directed the California State Auditor to identify total expenditures on efficiency programs from 2012 through 2022, which was the most recent year that complete expenditure information was available. Accordingly, we report total expenditures that include more than just the four utilities we reviewed. In all other cases, excluding Figures 3, 4, and 5 and Table B.1, we identify spending only by the four utilities.

Figure 3
Total Spending on Efficiency Programs Has Decreased Significantly Since 2015 (in Millions)



Source: CPUC data.

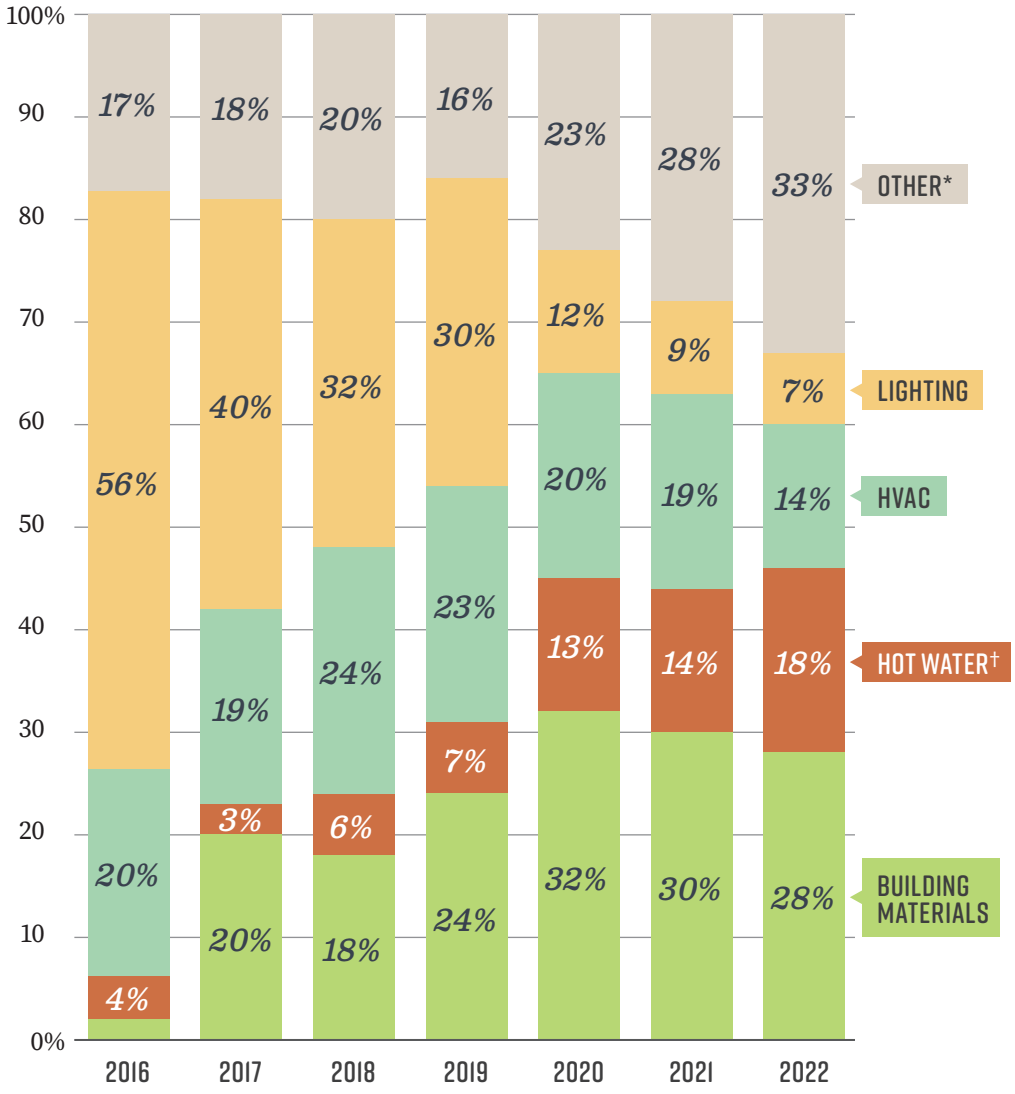
Note: The Audit Committee directed the California State Auditor to identify total expenditures on efficiency programs from 2012 through 2022, which was the most recent year that complete expenditure information was available. Accordingly, we report total expenditures that include more than just the four utilities we reviewed.

The CPUC has previously acknowledged that installations of straightforward technologies that produce significant energy savings will decline; as a result, efficiency programs focused on installing such technologies will eventually become obsolete. The straightforward-to-install technologies include lighting changes, such as replacing incandescent lighting with compact fluorescent lights or LEDs, which use less energy than traditional lighting and, therefore, produce significant energy savings. In a 2008 CPUC proceeding, the CPUC acknowledged that as these straightforward energy savings are achieved, the remaining options for saving energy may become more expensive. For example, home retrofits, which can involve installing wall insulation or high-efficiency furnaces, can produce significant energy savings over time, but they are complicated to implement and have high startup costs. In a 2015 CPUC proceeding, the CPUC stated that cheaper energy-savings opportunities, which it referred to as *low-hanging fruit*, had largely been taken, which coincides with the downward trend in utilities' spending that we observed and present in Figure 3. Since then, the U.S. Energy Information Administration[6] found that the percentage

[6] The U.S. Energy Information Administration collects, analyzes, and disseminates independent and impartial energy information to promote sound policymaking, efficient markets, and public understanding of energy and its interaction with the economy and the environment.

of homes across the U.S. using LED lighting increased drastically from four to nearly 50 percent from 2015 through 2020. The U.S. Energy Information Administration also found that the use of LED lighting in commercial buildings increased across the U.S. from nine percent to 44 percent from 2012 through 2018, further suggesting that opportunities to install these inexpensive technologies were decreasing.

Figure 4
Efficiency Programs That Include Installations Have Shifted Away From Lighting Technologies Since 2016



Source: CPUC data.

Note: In 2016, the utilities did not indicate the type of installation used by half of their efficiency programs because the CPUC changed data systems that year.

* The *Other* category includes several small categories, none of which made up more than 2.5 percent of total spending. These small categories include recreation, irrigation, and commercial refrigeration.

† The *Hot Water* category includes several different types of technologies or methods to save energy, including insulation for water tanks and smart thermostats on water heaters, to ensure that they only operate during hours of lower energy use.

As utilities have installed straightforward efficiency technologies, there are fewer ways for utilities to save energy in a cost-effective manner, contributing to decreased utility spending on efficiency programs. Specifically, as methods to save energy become increasingly expensive and the benefits they provide do not commensurately increase, the cost-effectiveness of efficiency programs, as measured by the Total Resource Cost (TRC), declines. As we describe in the Introduction, the CPUC requires utilities to operate program portfolios that are cumulatively cost-effective with a TRC of 1 or higher. As a result of the CPUC requirement, the utilities have no financial incentive to include in their program portfolios efficiency programs that have high costs with low benefits. The CPUC maintains this requirement because state law directs it to identify all potentially achievable cost-effective electricity and natural gas efficiency savings. Further, the CPUC's requirement that certain efficiency programs be cost-effective provides a key check on utilities' selection of efficiency programs to include in their program portfolios, as utilities must select a group of efficiency programs that collectively have more benefits than costs and are therefore cost-effective as a whole.

Another contributing factor for utilities' decreased spending on efficiency programs that the CPUC cited is the State's increasingly strict energy efficiency standards. California regulations establish energy efficiency standards for certain buildings and appliances. For example, the 2022 California Building Standards Code limits the lighting power of internally illuminated signs, such as a business's "open" sign, to no more than 12 watts per square foot. If a utility operates an efficiency program that replaces such signs with more efficient ones that consume only 10 watts per square foot, then the utility could only claim 2 watts per square foot in energy savings. This is even the case if the utility's efficiency program replaced signs that previously consumed 50 watts per square foot. In other words, even though the utility may achieve a 40 watt per square foot savings, the CPUC only allows the utility to count two watts of savings towards meeting their energy-savings goal.

The CPUC explained that as the State's efficiency standards become more rigorous, it becomes more difficult to achieve energy savings because the utilities cannot claim savings that fall below these standards. Therefore, as energy efficiency standards increase, the total savings utilities can claim decrease and, utilities have less of an incentive to incorporate such efficiency programs into their program portfolios because it may prevent them from achieving energy-savings goals, which we describe in greater detail in the following section. Although the CPUC is not solely responsible for establishing the State's energy efficiency standards, it does establish the method by which utilities' must calculate the cost-effectiveness of their efficiency programs. We believe the CPUC can take action to revise its cost-effectiveness calculation to encourage utilities to increase their spending on efficiency programs.

Program Portfolios Regularly Fall Short of Achieving Energy-Savings Goals and Cost-Effectiveness

The majority of utilities' program portfolios have not met energy-savings goals, are frequently not cost-effective, and individual programs have similarly fallen short of expectations. For the utilities' program portfolios we reviewed from 2016 through 2022, we evaluated three key areas: energy savings related to electricity, energy

savings related to natural gas, and their overall cost-effectiveness.[7] The text box describes these three key areas. Our review found that the three utilities that provide electricity—PG&E, SCE, and SDG&E—rarely met their electric energy-savings goals. As Table 2 shows, although all three utilities collectively met their electric energy-savings goals in 2016, none of them met their annual goals in at least five of the seven years we reviewed, and none of their program portfolios have met their electric energy-savings goals since 2019. In fact, the utilities' program portfolios in 2022 achieved from just 45 percent to 60 percent of the electric energy savings envisioned in the goals.

Key Areas We Reviewed:

Electric Energy-Savings Goals
The CPUC sets electric energy-savings goals and they are expressed in terms of saving gigawatt hours (GWh) of electricity. One GWh of electricity is equal to the average annual electricity consumption of 162 households.

Natural Gas Energy-Savings Goals
The CPUC sets natural gas energy-savings goals and they are expressed in terms of saving million-therms (MMTherms) of natural gas. One MMTherms of natural gas is equal to the average annual natural gas consumption of over 2,700 households.

Cost-Effectiveness
The CPUC divides the benefits that an efficiency program provides by its costs to produce a TRC value. This allows the CPUC to understand whether a program or portfolio of programs provides more benefits than costs. A TRC value of 1 or higher indicates that a program provides more benefits than costs. A value below 1 means the program offers fewer benefits than its cost.

Source: CPUC documentation.

Cumulatively, the amount of missed electric savings can be significant. For example, in 2022 the CPUC set the energy-savings goal at 425 GWh for SCE's program portfolio. However, SCE's portfolio only saved 192 GWh, or 45 percent, of its electric energy-savings goal for that year. From 2016 through 2022, we found that the three electric utilities' program portfolios collectively fell short of their electric energy-savings goals by 19 percent, or by more than 1,400 GWh, which is equivalent to the annual electricity use of nearly 230,000 households.

Similarly, as Table 3 shows, the program portfolios for two of the three utilities that provide natural gas—SDG&E and SoCalGas—did not meet their natural gas energy-savings goals in more than half of the years that we reviewed. Although PG&E performed slightly better, it still did not meet its goals in two of the seven years. In recent years, the program portfolios for PG&E and SoCalGas have achieved their natural gas energy-savings goals partly because the CPUC reduced those goals by nearly 40 percent from 2019 to 2020. For example, the CPUC reduced PG&E's natural gas energy-savings goal from 19 MMTherms in 2019 to 12 MMTherms in 2020.[8] This decision was informed by a 2019 study that found energy savings gained from efficient lighting technologies indirectly affects efficiency programs' potential natural gas energy savings, resulting in reduced potential energy savings that utilities could achieve. From 2016 through 2022, we found that the utilities' program portfolios collectively exceeded their natural gas energy-savings goals by 9 percent, or by 23 MMTherms, which is equivalent to the annual natural gas use of more than 60,000 households. We display the actual electricity and natural gas savings by utility in Tables A.1 and A.2, and we demonstrate the greenhouse gas reductions associated with them in Tables A.3 and A.4 in Appendix A.

[7] The Audit Committee requested that we review the effectiveness of a selection of efficiency programs from 2012 through 2022; however, during our review of available data and documentation, we identified concerns with the energy-savings goals for 2012 through 2015, which we describe in Appendix C. Thus, we focused our review of whether utilities' program portfolios met or exceeded energy-savings goals for the period 2016 through 2022.

[8] SDG&E's natural gas energy-savings goal remained unchanged at 2 MMTherms from 2019 to 2020.

Table 2
Percentage of Electric Energy-Savings Goals Achieved by Year and Utility

	2016*	2017	2018	2019	2020	2021	2022
PG&E	107%	101%	89%	75%	82%	80%	60%
SCE	107	80	81	65	56	44	45
SDG&E	111	89	150	83	92	68	49

Source: CPUC data.

Note: For each utility's program portfolio, we divided the energy savings by the energy-savings goals. Percentages represent the proportion of the goal each utility achieved.

* The 2016 efficiency program data represent utilities' claimed energy savings without independent verification. For the remaining years, the CPUC had an independent consulting firm evaluate utilities' claimed energy savings for accuracy but did not verify 100 percent of the data.

Indicates that the utility met or exceeded its energy-savings goal

= Equal to or greater than 100 percent

Indicates that the utility did not meet its energy-savings goal

= 81 percent through 99 percent
= 51 percent through 80 percent
= 34 percent through 50 percent
= 0 percent through 33 percent

Table 3
Percentage of Natural Gas Energy-Savings Goals Achieved by Year and Utility

	2016*	2017	2018	2019	2020	2021	2022
PG&E	107%	126%	80%	66%	108%	133%	147%
SoCalGas	95	58	92	98	206	163	134
SDG&E	100	67	102	55	83	97	104

Source: CPUC data.

Note: For each utility's program portfolio, we divided the energy savings by the energy-savings goals. Percentages represent the proportion of the goal each utility achieved.

* The 2016 efficiency program data represent utilities' claimed energy savings without independent verification. For the remaining years, the CPUC had an independent consulting firm evaluate utilities' claimed energy savings for accuracy but did not verify 100 percent of the data.

Indicates that the utility met or exceeded its energy-savings goal

= Equal to or greater than 100 percent

Indicates that the utility did not meet its energy-savings goal

= 81 percent through 99 percent
= 51 percent through 80 percent
= 34 percent through 50 percent
= 0 percent through 33 percent

Although the CPUC lowered its energy-savings goals for electric and natural gas in 2020, the utilities' program portfolios consistently met natural gas energy-savings goals more effectively from 2020 through 2022 than they did the electric energy-savings goals. In compliance with state law, the CPUC submits a report to the Legislature that compares the energy savings for each utility's program portfolio to energy-savings goals for the previous three years. However, the most recent report, which covers the three-year period of 2018 through 2020, does not explain why the utilities' program portfolios performed better in meeting natural gas energy-savings goals than in meeting electric energy-savings goals. Further, the CPUC does not have information readily available to explain why utilities' program portfolios have met natural gas energy-savings goals more consistently than electric energy-savings goals. As a result, there was no information available for us to evaluate, and it is therefore unclear why these programs performed better in meeting energy-savings goals.

We also found that the utilities' program portfolios rarely achieved the CPUC's calculation for cost-effectiveness. As we have explained, the CPUC's measure of cost-effectiveness for utilities' program portfolios is a TRC value of 1 or higher, which indicates that the benefits the efficiency programs provide to utilities outweighed their implementation costs. However, as Table 4 shows, each of the four utilities' program portfolios—for both electric and natural gas efficiency programs—fell short of achieving a TRC value of 1 or higher from 2012 through 2022, signifying that utilities' program portfolios were rarely cost-effective. For example, in 2021 SCE's program portfolio had a TRC value of just 0.22, failing to achieve the TRC value of 1, which would demonstrate cost-effectiveness. In other words, SCE's program portfolio incurred costs that far exceeded the benefits the programs provided. As a result, approximately $65 million, or 78 percent, of the $83 million SCE spent in 2021 on efficiency programs in its portfolio did not produce any benefit according to the CPUC's current method of measuring cost-effectiveness. Later in this report, we discuss our evaluation of the CPUC's measurement of cost-effectiveness using the TRC.

To learn more about the utilities' underperforming program portfolios, we evaluated the performance of individual programs by selecting 10 electric efficiency programs and 10 natural gas efficiency programs, for a total of 20 efficiency programs used by the four utilities. We obtained and reviewed efficiency program data from the CPUC, which utilities report to it, and selected efficiency programs for review according to factors such as program type, beneficiary type, annual budget, and amount of unspent funds. We found that few of these 20 programs met their projected energy savings from 2018 through 2022.[9] We compared the projected energy savings of the selected efficiency programs to their actual energy savings to determine if the programs met those projected energy savings each year from 2018 through 2022. As Table 5 shows, most of the electric efficiency programs did not meet their projected energy savings, with six of these programs never meeting their respective projected energy savings. We present information about the reported energy savings, cost-effectiveness, greenhouse gas reductions, and total annual bill savings for these programs in Tables A.5 and A.6 in Appendix A.

[9] Because the CPUC sets energy-savings goals for utilities' program portfolios and not for individual programs, we evaluated these programs compared to projections of the amount of energy they could save.

Table 4
The Utilities' Efficiency Program Portfolios Rarely Achieved Cost-Effectiveness

	2012	2013	2014	2015	2016*	2017	2018	2019	2020	2021	2022
PG&E	0.99	1.12	1.18	0.71	0.81	0.80	0.55	0.53	0.34	0.61	0.94
SCE	1.20	0.66	0.96	0.88	1.00	0.99	0.54	0.50	0.32	0.22	0.92
SoCalGas	1.41	1.07	0.95	0.70	0.74	0.68	0.89	0.62	1.39	0.82	1.19
SDG&E	1.19	0.89	0.81	0.61	0.96	0.99	0.48	0.32	0.34	0.45	1.05

Source: CPUC data.

* The 2016 efficiency program data represent utilities' claimed energy savings without independent verification. For the remaining years, the CPUC had an independent consulting firm evaluate utilities' claimed energy savings for accuracy but did not verify 100 percent of the data.

Indicates that the utility's program portfolio was cost-effective in that year

= Equal to or greater than 1.0

Indicates that the utility's program portfolio in that year was not cost-effective, as it fell short of achieving a TRC value of 1 or higher

= 0.81 through 0.99
= 0.51 through 0.80
= 0.34 through 0.50
= 0 through 0.33

We also determined that the majority of the individual efficiency programs had TRCs of less than 1, meaning that the program costs outweighed the benefits. For example, the SDG&E efficiency program SW-COM Direct Install—which provides comprehensive energy audits, energy planning assistance, and no-cost or discounted energy efficiency improvements to small commercial customers—never achieved its annual projected energy savings over the five-year review period. In fact, it only achieved 31 percent of the projected energy savings in 2022 and had a TRC of just 0.44. The natural gas efficiency programs performed slightly better in achieving their energy-savings projections than did the electric efficiency programs, although most natural gas efficiency programs still failed to meet their overall projected energy savings. Overall, the 20 programs that we reviewed cost ratepayers more than $51 million in 2022, but did not provide the savings or benefits that the CPUC or the utilities expected.[10] From 2018 through 2022, we estimate the amount of missed energy savings for these 20 programs is equivalent to the annual electricity use of more than 22,000 households and the annual natural gas use of nearly 16,000 households.

[10] We present in Appendix A, Tables A.5 and A.6, additional details on the 10 electric and 10 natural gas efficiency programs we reviewed, respectively, including their overall cost-effectiveness.

Table 5
Most Efficiency Programs We Reviewed Did Not Meet Projected Energy Savings or Cost-Effectiveness, 2018 Through 2022

Electric Efficiency Programs		Percentage of Projected Energy Savings Met or Exceeded					2022 Expenditures	2022 Cost-Effectiveness
		2018	2019	2020	2021	2022		
PG&E	California New Homes Multifamily	73%	44%	0%	42%	119%	$1,300,000	
	Local Government Energy Action Resources	3	0†	59	63	28	2,500,000*	
	Residential New Construction	79	35	54	9	0	1,300,000	
	University of California/California State University	43	100	172	303	12	1,300,000	0.0
	RES-Residential Energy Efficiency Program	39	10	19	14	30	26,000,000*	0.7
SCE	Comprehensive Manufactured Homes	29	18	20	4	10	1,200,000	1.1
	Residential Direct Install Program	63	182	16	15	1,157	4,400,000*	1.1
SDG&E	SW-COM Direct Install	53	48	45	24	31	720,000	0.4
	SW-AG-Calculated Incentives-Calculated	0	19	3	0	0	60,000	0.0
	Local-IDSM-ME&O-Behavioral Programs	120	78	114	106	88	3,600,000*	1.2
Natural Gas Efficiency Programs								
PG&E	Local Government Energy Action Resources	100%	0%†	92%	97%	78%	$2,500,000*	
	Commercial Deemed Incentives	126	64	112	327	238	3,900,000	0.3
	Industrial Calculated Incentives	5	134	7	806	0	2,500,000	0.0
	Residential Energy Efficiency	45	15	21	315	218	2,100,000	0.7
SCE	Residential Direct Install Program	164	4	26	56	14	4,400,000*	1.1
SoCalGas	RES-Residential Energy Efficiency Program	485	57	118	162	203	26,000,000*	0.7
SDG&E	SW-AG-Deemed Incentives	0	114	143	0	0	80,000	0.0
	SW-IND-Deemed Incentives	0	0	17	0	43	140,000	0.95
	Local-IDSM-ME&O-Behavioral Programs	150	114	67	67	50	3,600,000*	1.2
	SW-COM-Calculated Incentives-Calculated	32	1	2	68	0	370,000	-0.1‡

Source: CPUC data.

Note: The CPUC had an independent consulting firm evaluate utilities' claimed energy savings for accuracy but did not verify 100 percent of the data.

* This efficiency program's expenditures include objectives to achieve both electric and natural gas energy savings and we list the combined expenditures in this table. Therefore, we list each program's cost-effectiveness value.

† This efficiency program's projected energy savings are zero, and energy savings are negative. Determining the energy savings percentage for this year's efficiency program violates the fundamental rules of arithmetic and, therefore, undefined.

‡ This efficiency program has negative electric benefits and zero natural gas benefits. We calculated the total of electric and natural gas benefits, then divided by the costs. As a result, the efficiency program reports a negative cost-effectiveness value.

= Beginning in 2022, the CPUC no longer determines the cost-effectiveness of market support or equity programs.

Indicates that the utility's efficiency program met or exceeded its projected energy-savings *or* that the utility's efficiency program was cost-effective in that year

= Equal to or greater than 100 percent *or* equal to or greater than 1.0

Indicates that the utility's efficiency program did not meet its projected energy-savings *or* that the utility's efficiency program was not cost-effective in that year

= 81 percent through 99 percent *or* 0.81 through 0.99

= 51 percent through 80 percent *or* 0.51 through 0.80

= 34 percent through 50 percent *or* 0.34 through 0.50

= 0 percent through 33 percent *or* 0 through 0.33

The CPUC explained that programs may not achieve projected energy savings for various reasons. For example, the CPUC does not count the energy savings reported by utilities unless those savings are directly related to the existence of an efficiency program. EM&V studies validate the energy savings utilities report for selected efficiency programs, and the studies may find that a residence or business would have taken the same actions envisioned by the efficiency program independently, such as by replacing a water heater, even if that efficiency program did not exist. The studies can identify the number of these program participants to determine the amount of energy savings the utility reported that would have occurred regardless of the incentives offered by the program, such as a rebate for installing a water heater. In such an instance, although the utility had planned for and reported this program's energy savings, the amount of savings associated with the program participants who would have taken action without the program are not counted. As a result, the actual energy savings achieved by the program are lower than planned and reported by the utility. This exclusion of certain energy savings could explain why some efficiency programs do not meet their projected energy savings, although the CPUC expects utilities to consider this type of effect when estimating an efficiency program's energy savings.

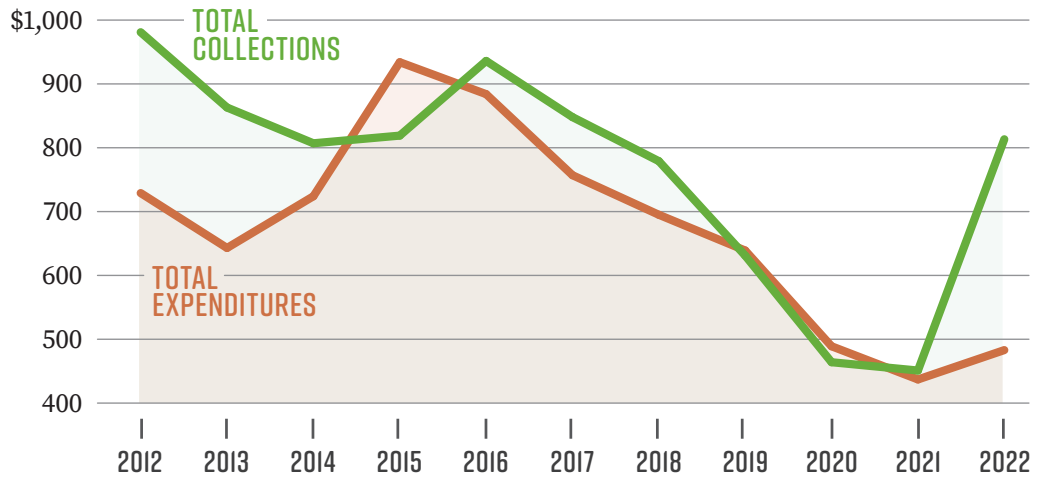
Another reason that a utility's efficiency program may appear to underperform is that the utility may use inaccurate assumptions to project an efficiency program's energy savings. For instance, consider a utility that estimates the potential energy savings of a program that installs HVAC units based on historical data and projections. If the program encounters supply chain delays and cannot acquire and install as many units as it had planned for, the program may not achieve the projected total energy savings. Although we agree that utilities should use realistic assumptions in designing and operating their efficiency programs, a program's poor performance could result from flawed program design and evaluation errors, rather than an inability to achieve energy-savings. In the following sections of this report, we discuss additional reasons efficiency programs frequently fail to achieve their goals, including significant shortcomings in the CPUC's oversight of the effectiveness of efficiency programs.

Utilities Collected Much More Efficiency Program Funding From Ratepayers Than They Spent on Programs in 2022

The CPUC authorizes utilities to collect funds from ratepayers to pay for efficiency programs, but it allowed utilities to collect hundreds of millions in ratepayer funds that the utilities did not spend in 2022. Figure 5 shows the difference between collections and spending across the audit period.[11] In 2022 the four utilities spent only $425 million to implement efficiency programs out of the $812 million they collected for such programs. The utilities had also committed to spending, but had not yet spent, $92 million. Utilities can make such additional commitments to spend funds if, for example, they have a contract with a third-party implementer for an efficiency program that obligates the utility to pay for the program in the future. In these types of cases, the utility would report to the CPUC that the related funds are *committed*.

[11] Figure 5 includes total collections and total spending for all efficiency programs. In the following text, we identify the amounts associated with the four utilities we reviewed.

Figure 5
Utility Collections and Expenditures for Efficiency Programs Diverged in 2022
(in Millions of Dollars)



Source: CPUC and utilities' data.

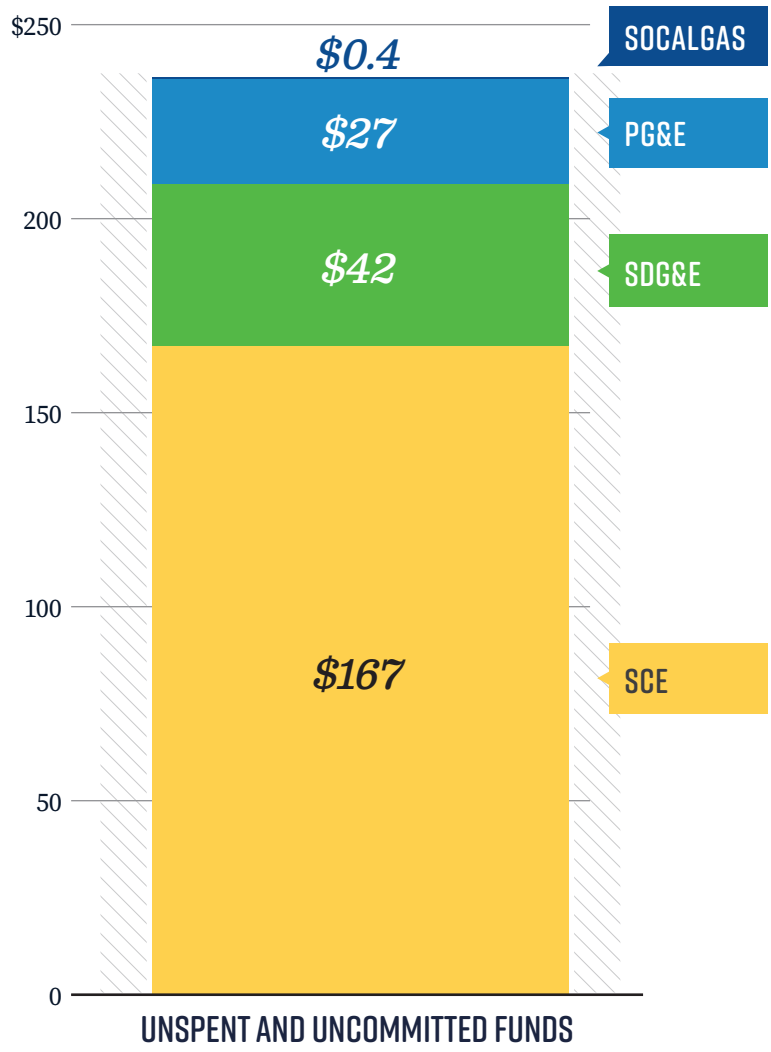
Note: We exclude collections associated with the CalSHAPE program, as those collected funds were not spent on efficiency programs.

The remaining collected balance includes more than $236 million in unspent and uncommitted funds that utilities did not ultimately use—meaning that they over collected funds from ratepayers. This amount represents nearly 30 percent of the total funds utilities collected from ratepayers for efficiency programs in 2022.[12] Utilities may have unspent and uncommitted funds when they fail to complete and execute contracts for a program, and as a result, the utility can no longer spend those funds for the intended purpose.

In interviewing staff and reviewing relevant documentation, we identified that SCE was responsible for a majority of the unspent funds and that the CPUC responded appropriately. In total, SCE represented about $167 million, or 71 percent, of the $236 million in unspent and uncommitted funds the four utilities collected from ratepayers in 2022, as Figure 6 shows. SCE found that it had trouble soliciting third-party implementers for some of its programs. In 2024, CPUC staff created a plan with SCE that identifies several points of failure in SCE's portfolio and potential corrective actions. Although we cannot disclose further detail about this corrective action plan and the issues it addresses because that information is confidential, we found that this plan includes several action items that addressed significant issues in SCE's processes for overseeing third-party implementers. It will take additional time to determine whether the corrective action plan process is effective in reducing SCE's unspent and uncommitted funds. By identifying the large amount of unspent and uncommitted funds, and working with the utility to take corrective action, we believe that the CPUC responded appropriately and provided sufficient oversight in this situation.

[12] This calculation does not include funds that utilities collected and transferred to the Energy Commission for CalSHAPE.

Figure 6
SCE Had the Largest Amount of Unspent and Uncommitted Funds in 2022 (in Millions)



Source: Utility advice letters.

We also reviewed the CPUC's budget process to determine whether it could make improvements to reduce any utilities' unspent and uncommitted funds. To determine the amount that utilities should collect from ratepayers, the CPUC uses a process of authorizing and approving utility budgets on a four-year cycle. First, each utility submits business plans to the CPUC detailing how each utility will spend funds on efficiency programs, summarizing costs at the program portfolio level, and describing information about program cost-effectiveness and contributions to energy-savings goals. Separately, the CPUC allows stakeholders, including ratepayer advocates, to analyze and scrutinize the utilities' proposed costs and budget for operating each efficiency program. CPUC staff also analyze the budget requests by

program segment, such as resource acquisition programs, and by economic sector to determine whether utilities' requests are reasonable. Finally, after it considers the results of stakeholders' analysis and its own analysis, the CPUC adjusts budgets proposed by the utilities. We did not identify any shortcomings in this process that may have contributed to the large amount of unspent and uncommitted funds in 2022. Instead, it appears that this was an isolated issue associated with one utility's, SCE's, management of its program portfolio.

The CPUC requires utilities to offset future collections in the amount of any unspent and uncommitted funds from previous years. We found that the CPUC has a process in place that identifies utilities' unspent and uncommitted funds and adjusts the authorized budgets for utility program portfolios accordingly. As an example, if the utility reported $50 million of unspent and uncommitted funds from previous years and requested a budget of $300 million to fund its program portfolio, the CPUC would authorize the utility to collect only $250 million. To make ratepayers whole, the CPUC would maintain and not reduce the spending included in that request. We find this process is sufficient to ensure utilities do not collect more than needed, and therefore accumulate excess funds, from ratepayers.

An exception to the requirement that utilities offset future collections in the amount of any unspent and uncommitted funds occurred from 2020 through 2022. State law directed the CPUC to require utilities with program portfolios to fund CalSHAPE in part with any unspent and uncommitted efficiency program funds for those years. For example, in 2022, $236 million of unspent and uncommitted funds were allocated to fund CalSHAPE and not to offset the utilities collections in 2023.

The CPUC's Lack of Appropriate Oversight Has Allowed Utility Program Portfolios to Underperform for Years

The CPUC is responsible for regulating the utilities and has broad authority to compel them to report to it information regarding their efficiency programs; thus, we expected the CPUC to actively review the performance of utilities' efficiency programs and take appropriate action to ensure that utilities improve or cease operating underperforming efficiency programs. Instead, we found that the CPUC performs little substantive oversight and has allowed utilities to operate efficiency programs—in some cases for years—that fail to meet energy-savings goals and are not cost-effective. As a result, the CPUC could not explain why utilities' efficiency programs continually fall short of expectations.

As an example of its limited oversight, the CPUC uses millions in ratepayer dollars to fund independent evaluation studies of efficiency programs, yet the CPUC takes no action to ensure that utilities implement the resulting recommendations aimed at improving program performance. Additionally, the CPUC's methodology for calculating the cost-effectiveness of efficiency programs is flawed and may discourage utilities from adopting certain efficiency programs that may provide benefits to participants that the TRC does not account for. For example, programs that install more efficient residential appliances typically have higher participant costs, which makes those programs results appear to be less than cost-effective because they don't calculate

the value of the benefit the participant realizes. Without significant improvement to the CPUC's oversight of utilities' efficiency programs, the State lacks assurance that utilities are using ratepayer funds prudently, and the Legislature should consider requiring the CPUC to eliminate funding for chronically underperforming programs.

The CPUC Does Not Consistently Ensure That Utilities Take Corrective Action to Address Efficiency Programs That Fail to Meet Goals

The CPUC establishes energy-savings goals for each utility's service territory, sets annual energy-savings goals, and expects utilities to develop their program portfolios to meet or exceed energy-savings goals and to be cost-effective. Accordingly, we expected the CPUC to determine annually, as part of its oversight, whether utilities' program portfolios achieve energy-savings goals and are cost-effective and that it would require utilities to take corrective action for program portfolios that fall short. For example, if the CPUC reviews a utility's program portfolio and finds that the utility has not met energy-savings goals or that it has a TRC value of less than 1, the CPUC should ensure that the utility takes action, such as by ceasing the operation of ineffective programs, to improve the portfolio's performance. However, we found that the CPUC neither evaluates whether utility program portfolios achieve energy-savings goals or are cost-effective, nor ensures that utilities implement corrective measures to address these shortcomings.

The CPUC's budget process does not address these expectations because it focuses on projected energy savings and cost-effectiveness—not on actual outcomes. Specifically, the CPUC explained that it approves a utility's annual budget and the utility's annual portfolio of efficiency programs in an effort to ensure that each utility's program portfolio meets its energy-savings goals and is cost-effective. A utility submits this planned portfolio of efficiency programs through a CPUC database, and the information includes budgeted costs and projected energy savings for those programs. The database processes the information utilities submit and automates cost-effectiveness calculations. This process provides information about whether the utility's program portfolio is projected to meet or exceed its energy-savings goals and will be cost-effective overall. Accordingly, the CPUC reviews the information utilities submit, along with feedback from stakeholders, such as public advocates, before approving the utility's budget and program portfolio.

A significant shortcoming in the CPUC's approach is that it does not evaluate whether utilities' program portfolios meet or exceed energy-savings goals and are cost-effective at the end of each year, despite receiving information that would allow it to do so. Annually, utilities submit information to the CPUC that includes each efficiency program's expenses, the utility's claims of how much energy savings each program produced, and each program's TRC value. We would expect that the CPUC would use this information to evaluate whether each utility's program portfolio achieves its energy-savings goals and cost-effectiveness; however, the CPUC does not do this. When we asked the CPUC about its evaluation efforts, it explained that from 2007 through 2013, it awarded utilities a financial incentive if they reported that their program portfolios met or exceeded energy-savings goals. The CPUC stated that it would provide a financial incentive to utilities using a formula based on how well

the utility reported that its program portfolio performed. Although we question whether these efforts rose to the level of a formal evaluation of the effectiveness of efficiency programs, in 2013 the CPUC eliminated this approach after finding it did not contribute to utilities performing better in meeting energy-savings goals. Since that time, the CPUC has not developed an alternative method to assess whether each utility's program portfolio meets or exceeds its energy-savings goals. Furthermore, the CPUC explained that starting in 2021, some EM&V studies began reviewing the cost-effectiveness of individual efficiency programs. However, these efforts do not evaluate the cost-effectiveness of each utility's program portfolio after each year.

The CPUC explained it does not retroactively assess whether each utility's program portfolio meets or exceeds its energy-savings goals or is cost-effective because it is focused on facilitating utility planning of program portfolios in future years. Consequently, the CPUC remains unaware of whether utilities achieve the envisioned energy savings and cost-effectiveness threshold, and therefore is ill-equipped to take action to direct utilities on the corrective actions they need to take to improve their program portfolio performance and address chronically underperforming efficiency programs. Instead, the CPUC explained that it is focused more on facilitating utility program portfolio planning in future years rather than monitoring past performance. The CPUC emphasized that utilities can best utilize the validated energy-savings data from EM&V studies through its database to facilitate planning their program portfolios in years ahead, rather than for its own monitoring of utility program portfolio performance. We agree that the utilities should use these data for program portfolio planning, but the CPUC is missing a significant opportunity to use these data to ensure utilities are operating effective program portfolios and using ratepayer funds prudently. For example, the CPUC—as a regulatory agency—could use its own validated data to determine which utilities failed to meet expected energy savings and direct those utilities to take corrective actions to adjust their program portfolios, rather than relying on utilities to use this information for only planning purposes.

The CPUC's failure to evaluate the performance of utilities' portfolios has three potential impacts. First, the CPUC cannot recognize program strengths and make recommendations for improvement, causing the State to lose potential energy savings that could further contribute to greenhouse gas reductions. Second, when utilities' program portfolios are not cost-effective, ratepayer dollars are not available for use on other, potentially more effective programs. Third, utilities will continue to collect ratepayer dollars to fund program portfolios that are underperforming.

However, there has been some recent improvements to the CPUC's oversight, albeit these improvements are minimal and in their infancy. Beginning in 2023, the CPUC asked each utility to present expenditures and energy savings at bi-monthly management meetings to assess whether each utility's program portfolio is on track to meet their projected expenses and energy savings for the year. In one example, the CPUC determined that a particular utility's spending and estimated energy savings for its program portfolio were relatively low, and that the portfolio was not on track to meet projections the utility established to achieve energy-savings goals and cost-effectiveness. The CPUC requested that the utility develop a corrective action plan outlining specific steps to improve the program portfolio's performance and establish a timeline for implementing these improvements. The utility's program portfolio has since shown

improvement when comparing energy savings in the first six months of 2024 to the same time frame in 2023. However, the CPUC will not know the extent of improvement until it receives all the data for the second half of 2024 in early 2025. The CPUC's recent steps to increase its oversight of utilities' portfolios during regular, bi-monthly meetings is a productive step and illustrates that proactive oversight is possible. If the CPUC deploys such an approach more broadly, it would be better positioned to monitor program portfolio performance throughout the year and provide utilities with valuable feedback. However, the CPUC has not formalized this process, such as through a commission decision, explaining the purpose of the bi-monthly meetings and the information it expects utilities to report regarding program portfolio performance.

Additionally, the CPUC does not comprehensively review the performance or cost-effectiveness of all individual efficiency programs. As we described earlier, the CPUC expects utilities to develop their program portfolios to meet or exceed energy-savings goals and to be cost-effective. The CPUC does not view managing individual efficiency programs as part of its responsibility. Although it did point to some ad-hoc steps it has taken to collaborate and resolve obstacles utilities may face in implementing certain efficiency programs, it stated that utilities are ultimately responsible for the success of their program portfolios, including the individual programs included in those portfolios. We disagree with this perspective.

Because the CPUC does not review the performance of individual programs or require utilities to adjust or eliminate consistently underperforming programs, the CPUC risks utilities are not using ratepayer funds on the most effective efficiency programs. As we described earlier, our review of a selection of 20 efficiency programs found that the programs generally did not achieve projected energy savings and were not cost-effective. The resulting cost to ratepayers can be significant given the efficiency programs often provide few benefits. For example, a SCE program that installs energy efficient products such as SMART thermostats and faucet aerators achieved only 23 percent of its projected electric energy savings and 21 percent of its projected natural gas energy savings from 2018 through 2022. Further, the program was only cost-effective in a single year of this five-year period. As a result, $19 million, or 58 percent, of the $33 million SCE spent from 2018 through 2022 on this efficiency program reportedly did not produce any benefit for ratepayers according to the CPUC's current method of measuring cost-effectiveness. Had the CPUC regularly monitored program performance, it could have identified programs such as these that consistently underperform and required utilities to cease operating them or create and implement action plans to improve their performance. Such oversight would help ensure ratepayer funds are used judiciously and only on efficiency programs that achieve energy savings and are cost-effective.

Although the CPUC Spends Ratepayer Dollars to Evaluate Efficiency Programs, It Neither Tracks Nor Ensures That Utilities Implement the Evaluations' Recommendations for Improvement

As mentioned previously, the CPUC conducts EM&V studies in part to evaluate the effectiveness of efficiency programs and make recommendations to improve them. These studies can serve a critical purpose, particularly by addressing the shortcomings

in program performance, such as in those instances where efficiency programs do not achieve energy-savings projections. In multiple commission decisions, the CPUC has established that EM&V studies are required in order for the CPUC to provide oversight of utilities' program portfolios. Every two years, the CPUC publishes a plan that describes the studies it will conduct and the selected programs it will evaluate. After utilities have implemented their efficiency programs, the CPUC uses a risk-based approach to select a portion of programs to evaluate, prioritizing programs that claim the highest energy savings. The evaluations themselves do not align with the two-year cycle, as the CPUC publishes them as they are completed.

The CPUC funds EM&V studies by using fees collected from ratepayers on their energy bills. Four percent of each utility's efficiency program budget, which utilities fund by collecting money from ratepayers, is reserved for EM&V studies. Although this proportion is small, the amount collected from ratepayers is not insignificant—in 2022 the four utilities reserved about $29 million to pay for EM&V studies. EM&V funds paid for the evaluation of 41 efficiency programs in 2022. Utility spending on those 41 programs represented nearly one-third of the total expenditures spent on all efficiency programs in that year. Given the investment in EM&V studies and the potential value they can provide to inform improvements to efficiency programs, we expected the CPUC to oversee utilities' timeliness in responding to, and their implementation of, the resulting recommendations. However, we found it has not effectively done so.

The CPUC has not ensured that utilities respond to EM&V recommendations within the required time frame, risking that utilities are not promptly acting on recommendations to improve efficiency programs. Specifically, within 60 days of the publication of an EM&V study, the CPUC requires utilities to submit to it a response describing any action a utility has or plans to take to address the study's findings and recommendations. We reviewed a selection of nine of the 36 EM&V studies published from 2020 through 2024 that included recommendations and required responses from utilities to determine what actions resulted from those studies' findings and recommendations. Of the nine EM&V studies we reviewed, we found that the CPUC had not ensured that utilities submitted eight responses on time, with those response times ranging from one month to more than a year overdue. For example, a 2023 EM&V study of SoCalGas's residential efficiency program recommended that the utility increase marketing of the program to expand participation and that it perform an assessment to determine the available market for a specific type of energy efficient water heater. Despite the potential improvements this recommendation could provide, SoCalGas did not submit the required response until the end of 2024—more than a year and a half after the study was published. When we asked the CPUC about the late responses, it could only explain that in two instances, the utilities requested extensions and that some utilities misinterpreted the requirement, which caused them to submit late responses.

A key contributing factor to utilities submitting responses late or not at all is that the CPUC lacks any process for monitoring the timeliness of responses. Such a process could include an alert to its staff that an upcoming response is due, the response due date, and a reminder to follow-up with the utility once that due date has passed. However, when we asked the CPUC why it had established the 60-day deadline

for utilities to submit responses but had not developed a mechanism to ensure they complied with that deadline, it could not provide an explanation. Instead, the CPUC indicated that it sees value in formalizing a process to ensure utilities submit required responses on time. Without a process that tracks the timeliness of utilities' responses to EM&V recommendations, any necessary improvements to efficiency programs could be delayed or not occur at all, potentially risking that ratepayer dollars are wasted.

Of greater concern is that the CPUC does not know whether utilities have implemented EM&V recommendations for efficiency program improvement. To identify whether utilities took the proposed corrective actions, we asked the CPUC to provide us with information on the recommendation status for the nine EM&V studies we reviewed. However, the CPUC could not provide this information because it does not track utilities' implementation of recommendations. We expected such tracking to include the date of the study, the resulting recommendations, the utilities' proposed corrective actions for each, reasoning for any rejection of the recommendations, and the CPUC's assessment of the adequacy of the utilities' actions to implement the recommendations. We found this lack of oversight concerning given the recommendations can be value-added and the studies are paid for using ratepayer dollars. For example, an EM&V study published in 2021 of the emerging technologies program (ETP), which the utilities use to evaluate emerging and underutilized energy efficiency technologies for possible inclusion in utilities' program portfolios, included key findings and recommendations to improve the ETP's performance. One such recommendation was the need for increased coordination among utilities, the CPUC, and other stakeholders in implementing the program. However, when we asked the CPUC about the status of the recommendations, it did not know whether the utilities fully implemented the recommendations. In this instance, the CPUC may have missed an opportunity to ensure that utilities coordinated effectively to identify and implement efficiency technologies that ultimately could help ratepayers and save more energy.

When we asked the CPUC about why it had not established a process to track the status of utilities' implementation of EM&V recommendations, it did not provide us with an explanation and instead pointed to recent efforts, with which we have concerns, that it has taken to increase its oversight. The CPUC noted that a recent decision requires utilities to submit formal responses separate from the required 60-day responses, describing how they have incorporated or otherwise addressed only selected EM&V recommendations. Specifically, the CPUC explained that it and its contractors noticed instances where EM&V studies resulted in recommendations that were already included in previous studies or that were repeatedly rejected by utilities. As a result of these observations, the CPUC plans to require utilities to submit formal responses explaining the status of repeated recommendations or their reasoning for rejecting recommendations, such as those instances when the utilities disagree with the evaluator's findings. The CPUC anticipates receiving utilities' first formal responses in late 2025, after it identifies those recommendations that are repeated or rejected.

We have two primary concerns with the CPUC's approach. First, the approach only applies to certain recommendations, and may exclude those that are most salient. Second, we are concerned about the CPUC's planned approach to identify repeated or rejected recommendations. Specifically, given the CPUC does not track the status of utilities' implementation of EM&V recommendations, we asked how it plans

on identifying those recommendations that are repeated or rejected. The CPUC explained that it has largely relied on the institutional knowledge of current staff, consultants, and supervisors to identify such recommendations. This approach is flawed because the CPUC lacks any centralized tracking of repeated or rejected recommendations, meaning it could inadvertently exclude some from its review. Further, the approach does not take into account the potential loss of institutional knowledge due to staff turnover. Without an effective follow-up process on the status of all EM&V recommendations for programs that were selected for review, the CPUC cannot demonstrate to ratepayers the resulting value their investment in these studies provides, raising questions about whether it is using ratepayer funds judiciously.

The CPUC's Flawed Method for Measuring Cost-Effectiveness Has Likely Discouraged Utilities' Adoption of Alternative Approaches to Achieve Energy-Savings Goals

As we describe in the Introduction, state law requires the CPUC to identify all potentially achievable cost-effective electricity and natural gas efficiency savings for electrical and gas corporations, including the utilities we reviewed. The CPUC primarily measures cost-effectiveness through the TRC. The TRC value allows the CPUC to understand whether a program or portfolio of programs provides more benefits than costs, and is therefore cost-effective, by dividing program benefits by program costs, as Figure 2 in the Introduction shows. A TRC value of 1 or higher indicates that a program provides more benefits than costs, and a TRC value of less than 1 indicates that a program's costs exceeds the benefits. This measure allows the CPUC to ensure that utilities responsibly allocate ratepayer funds and evaluate the cost-effectiveness of utilities' efficiency programs.

We evaluated the CPUC's TRC measure to determine whether its calculation met best practices. To do so, we researched best practices when designing cost-effectiveness metrics for energy efficiency programs as well as practices in other states. These best practices for calculating cost-effectiveness indicate that if an entity includes a cost in its benefit-cost calculation, it should include associated benefits. Ignoring this practice would result in costs unnecessarily outweighing benefits. For example, if the CPUC includes the costs to program participants, such as a business's cost to purchase HVAC units, it should also include the associated benefits, such as the value of cleaner air in the business's buildings. We describe examples of participant non-energy benefits that agencies can consider including in benefit-cost calculations like the TRC in the text box.

Examples of Non-Energy Benefits to Program Participants:

- Water and sewer utility savings.
- Reduced operation and maintenance costs.
- Health improvements.
- Employee productivity increases.
- Participant comfort.

Source: The National Energy Screening Project.

Despite these best practices, we found that the CPUC's TRC calculation includes costs to program participants but does not include participant non-energy benefits. This imbalance in the TRC is particularly important for programs that install equipment, such as a new water heater, because those programs have greater

participant costs, such as costs to purchase and install the equipment. Programs that install equipment may also provide greater non-energy benefits, such as increasing property values, than other types of programs. Table 6 provides a hypothetical example of the lack of participant benefits and its impact on the TRC for the hypothetical efficiency program. In this example, the hypothetical electric water heater installation program is not cost-effective, with a TRC of 0.93. By increasing benefits by an additional 15 percent to account for participant benefits, similar to Vermont's practice for estimating non-energy benefits, this program would become cost-effective with a TRC of 1.07. Because the CPUC does not include participant benefits in the TRC calculation, the cost-effectiveness of efficiency programs that install equipment appears to be lower than it could be. Although the CPUC has not ensured utilities end programs that are not cost-effective, excluding participant benefits unnecessarily discourages utilities from adopting these programs, because it may impact the cost-effectiveness of their proposed portfolios that the CPUC must approve.

Table 6
The Lack of Participant Benefits in the CPUC's TRC Calculation Lowers Cost-Effectiveness for Efficiency Programs That Install Equipment

	Electric Water Heater Installation Program	
Sample Calculation (Hypothetical)	WITHOUT PARTICIPANT BENEFITS	WITH PARTICIPANT BENEFITS
Program non-participant costs	$10,000	$10,000
Program participant costs	5,000	5,000
Program non-participant benefits	14,000	14,000
Participant benefit*	CPUC does not include	2,100
TRC (Benefits/Costs)	0.93	1.07

Source: Auditor generated.

= Indicates that the program is not cost effective.

* We estimated participant benefits using a conservative 15 percent of non-participant benefits, which is the method the state of Vermont uses to estimate these benefits for efficiency programs.

We identified a method of saving energy, called *fuel substitution*, which is susceptible to under-calculation of benefits by the CPUC and is therefore rarely used by utilities despite the benefits of efficiency programs that use this method. Fuel substitution involves replacing equipment that uses one fuel source with equipment that uses a different fuel source, such as replacing a gas water heater with an electric powered water heater. Fuel substitution methods reduce the overall consumption of natural gas and associated greenhouse gas emissions, and move California towards greater electrification, a statewide goal established by the Energy Commission. However, utilities rarely use these methods, possibly because the TRC's calculation discourages it. We reviewed spending on fuel substitution by the utilities and found that

from 2020, when the CPUC began recording such data, through 2022, spending on efficiency programs using fuel substitution comprised only 4 percent or less of annual expenditures. In total, the utilities we reviewed spent almost $14 million on efficiency programs using fuel substitution initiatives in 2022, compared with $483 million on all efficiency programs.[13] Additionally, we found that since 2020, fuel substitution methods struggle to be cost-effective under the TRC's current calculation. Specifically, fuel substitution methods had a TRC of 0.96 in 2020, 0.89 in 2021, and only 0.48 in 2022.

The cost-effectiveness of technologies and methods are a key consideration when the utilities construct their program portfolios and possibly helps to explain why utilities do not use fuel substitution more widely. Specifically, the CPUC requires utilities to submit cost-effective portfolios using approved methods to achieve energy savings, including fuel substitution methods, and decide on a mix of programs that will meet the CPUC's required cost-effectiveness requirement. As a result, if fuel substitution methods are not cost-effective, meaning they fail to achieve a TRC value above 1, the utilities are naturally discouraged from using these methods, as fuel substitution would make their proposed portfolio less cost-effective overall. This issue affects the annual portfolios that utilities submit to the CPUC for its review and approval, because the CPUC only approves cost-effective portfolios.[14] When we asked the CPUC why utilities are not adopting fuel substitution into their programs more widely, staff noted that fuel substitution could often involve high costs, such as the purchase of equipment and infrastructure upgrades to homes. This produces lower TRC values, particularly because it does not include participant benefits in the calculation, such as decreased operation and maintenance costs that new equipment provides. The inclusion of additional participant non-energy benefits would result in an overall increase in the TRC of efficiency programs that use fuel substitution methods, making these programs more attractive for utilities to include in their portfolios.

Many other parties raised similar concerns about the TRC to the CPUC, and we believe the CPUC did not adequately respond to these concerns by stakeholders. Specifically, when the CPUC established the TRC as the primary cost-effectiveness test in 2019, several parties, including advocates for ratepayers and environmental advocates, raised concerns to the CPUC about the lack of non-energy benefits in the TRC. A CPUC staff consultant white paper argued that the current TRC calculations address this concern, in part, by adjusting participant costs downward to account for some non-energy benefits. The utilities jointly argued that, in fact, the current TRC calculation methods do not properly account for participant non-energy benefits and that the adjustments to participant costs are inadequate. The CPUC ultimately made no change to the calculation of the TRC specifically regarding participant non-energy benefits and did not provide an explanation for doing so in its decision.

[13] Because the utilities or third-party implementers inconsistently reported data on the number of installations, such as by providing the weight of the appliances instead of the number of appliances installed in the reporting system, we were unable to identify the number of installations associated with this spending.

[14] As we discuss previously, the CPUC does not review portfolios at the end of each year to ensure the utility did achieve the proposed energy savings.

When we followed up with the CPUC about its exclusion of participant non-energy benefits, it noted difficulty in estimating these benefits for inclusion in the TRC. However, we researched whether other states incorporate participant non-energy benefits in cost-effectiveness and found that certain other states have developed ways to incorporate estimates of such non-energy benefits. For example, Massachusetts includes participant non-energy benefits in its cost-effectiveness measure by estimating reduced operation and maintenance costs, increased health, safety, and comfort, and increased property values, among other benefits. Additionally, Vermont simply increases the estimated benefits of efficiency programs by 15 percent to serve as a surrogate for difficult-to-quantify non-energy benefits. While participant non-energy benefits could be greater than the 15 percent increase Vermont uses, it is more appropriate to estimate these benefits than to exclude them altogether. Without corrections to the CPUC's TRC calculation, the utilities are unlikely to submit program portfolios that include significant amounts of fuel substitution methods, ultimately hindering the State's goal of electrification and the reduction of greenhouse gas emissions.

Other Areas We Reviewed

To address the audit objectives approved by the Joint Legislative Audit Committee (Audit Committee), we also reviewed the following:

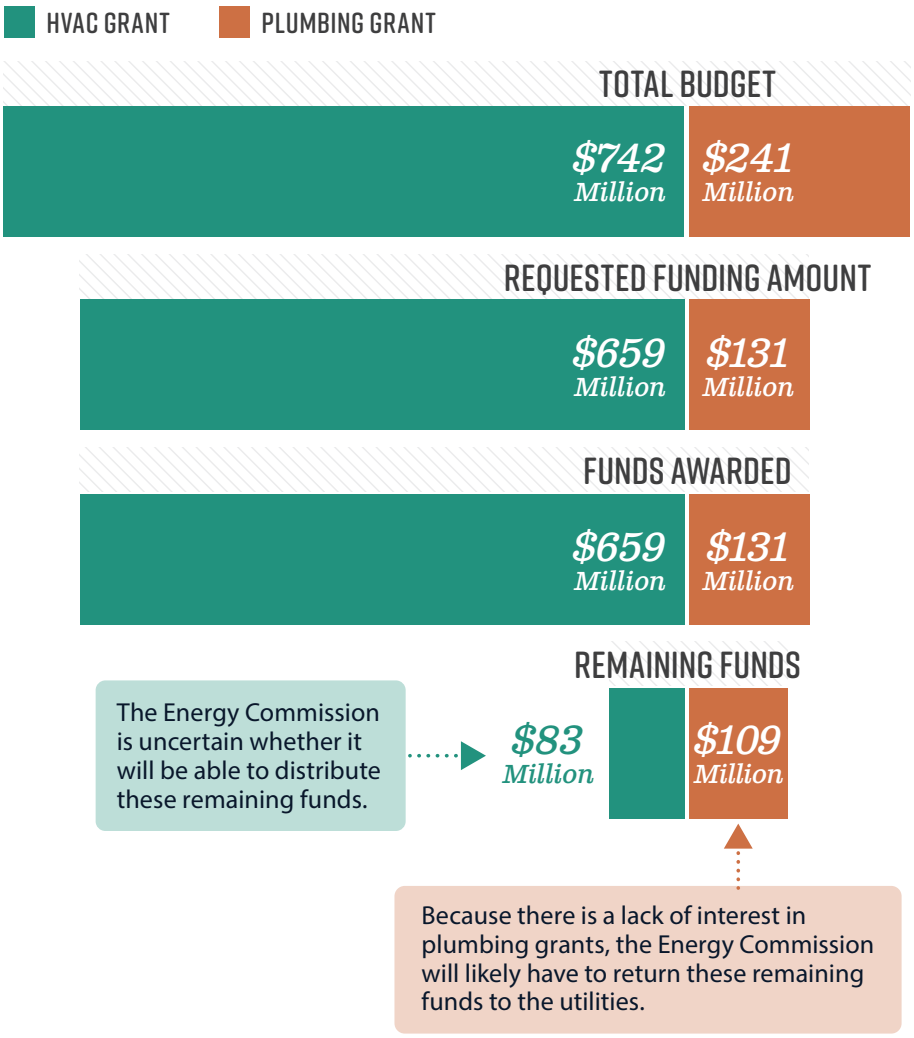
- How the Energy Commission administered the School Energy Efficiency Stimulus Program (CalSHAPE).
- The distribution of efficiency program funding to identify how utilities are spending those funds in disadvantaged communities.
- The CPUC's cost-effectiveness metric to determine whether it affects the demand for energy.
- Efficiency programs that provide incentives to program participants, which utilities refer to as *pay-for-performance programs*.

The Energy Commission Is Unlikely to Spend, and May Have to Return to Utilities, Nearly $200 Million When CalSHAPE Ends

In 2020 the Legislature passed a law establishing CalSHAPE, which the Energy Commission oversees, primarily to help school districts improve their HVAC and plumbing systems. To fund the program, state law redirected to the Energy Commission certain energy efficiency funds that utilities collected from ratepayers. CalSHAPE comprises two separate grant programs, one for HVAC improvements and another for plumbing improvements. School districts that needed to make improvements to their HVAC or plumbing systems could submit applications to the Energy Commission for either or both grants. State law requires the Energy Commission to allocate 75 percent of the program funds to the HVAC program and 25 percent to the plumbing program. Of the $983 million reserved for grant awards, the Energy Commission allocated $742 million for HVAC improvements and $241 million for plumbing improvements. As we discuss later, school districts requested significantly more funding for HVAC grants than they did for plumbing grants. Figure 7 shows the difference in funding for both grant programs, including the program's remaining unspent funds, which state law requires the Energy Commission to return to the utilities by December 1, 2026.

To identify the Energy Commission's key oversight responsibilities as they relate to CalSHAPE, we interviewed staff and reviewed program guidelines and records. We determined that the Energy Commission adequately designed and implemented the process to distribute grant funds to school districts. For example, state law requires that CalSHAPE program funds collected by each utility be used on projects located in that utility's service territory. We reviewed the Energy Commission's records and found that the Energy Commission designed its online system effectively by ensuring that it automatically assigns grant applicants to the appropriate utility fund based on the applicant's geographic location.

Figure 7
CalSHAPE Provides More Funding for HVAC Improvements Than Plumbing

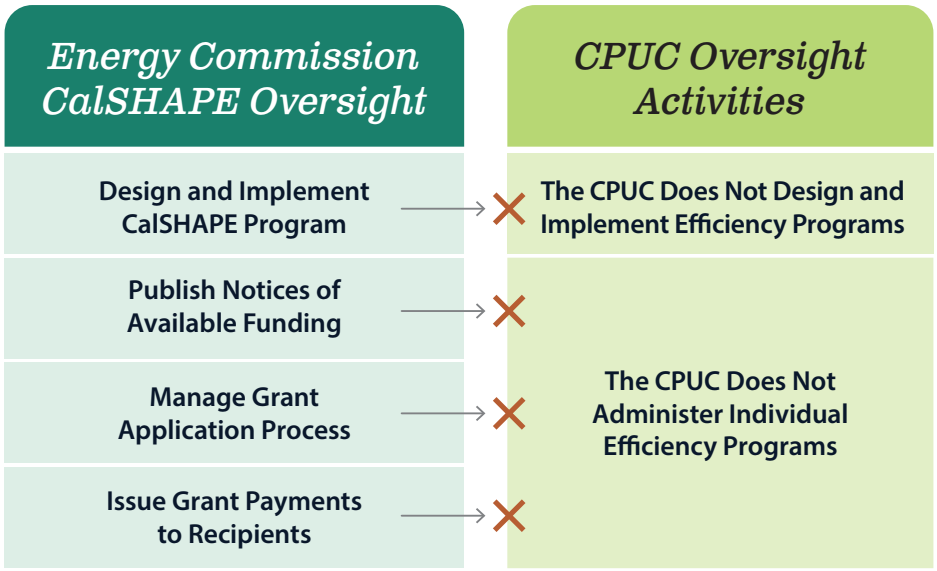


Source: CalSHAPE program documentation and interviews with the Energy Commission.
Note: Totals may differ slightly due to rounding.

The Audit Committee asked that we compare the CPUC's process for overseeing its efficiency programs with the processes the Energy Commission uses to oversee CalSHAPE. However, as Figure 8 illustrates, because the CPUC does not directly administer utilities' efficiency programs, its role in overseeing such programs is not comparable to that of the Energy Commission. Instead, utilities are responsible for administering the efficiency programs within their program portfolios with direction and very limited oversight from the CPUC. In contrast, the Energy Commission administers and oversees CalSHAPE without any involvement from the utilities, apart from providing a portion of its energy efficiency funds to the Energy Commission for its administration. The Energy Commission's responsibilities include announcing funding for CalSHAPE, reviewing and approving applications for grant funds, and awarding grant funds to school districts—all of which are administrative

functions that the CPUC does not perform. Because the CPUC does not administer efficiency programs or issue any type of grant funding to recipients, we cannot compare the Energy Commission's administration of CalSHAPE to the CPUC's role in overseeing efficiency programs.

Figure 8
Unlike the Energy Commission, the CPUC Does Not Administer Efficiency Programs



Source: State law, CalSHAPE program guidelines and public notices, CPUC energy efficiency documents and interviews.

We found that the Energy Commission's process for distributing CalSHAPE funds to school districts for the improvement of their HVAC systems has been lengthy, causing some school districts to be at risk of not completing all grant-funded improvement projects before October 31, 2026, which is the deadline the Energy Commission has set for districts' final reporting. Even though the program does not end until January 1, 2027, the Energy Commission needs these three months to ensure that school districts do not have any unspent funds when the program ends because state law requires all unspent funds—those it has not awarded and those that the recipient school districts have not spent—to be returned to the utilities. The Energy Commission's grants for HVAC improvements are in two parts, for which school districts must apply for and complete the associated requirements in succession, and it gives school districts two years to complete each grant agreement. The first is an assessment grant, which requires school sites to use licensed professionals to determine the HVAC improvements they need and to submit an assessment report to the Energy Commission. After school districts complete the first grant agreement, they can apply for the second grant, which they must use to pay for their HVAC improvement projects. The Energy Commission reported that it has distributed more than 1,100 grant awards to school districts on a partial-reimbursement basis, meaning that the school districts must spend some of their own funds on these HVAC improvement projects and then request

reimbursement from the Energy Commission.[15] To receive CalSHAPE funding to actually complete HVAC improvements, a school district would need to have completed the assessment grant and applied for the second grant by June 2024. However, at that time, many school districts were still completing the required first assessment, and some had only recently applied for the assessment grant. The tight deadline means that those school districts and any later applicants are at risk of not completing projects before the program ends.

Further, the Energy Commission may not be able to distribute all grant funds to school districts for improvements to their HVAC systems before CalSHAPE funding is returned in 2026. In 2024, the Energy Commission reported to the Legislature that school districts would need to complete all HVAC projects by June 30, 2026 to avoid the December 1, 2026 deadline to return unspent funds. Therefore, the Energy Commission stopped accepting applications for ventilation funding on July 31, 2024, to ensure that school districts had two years to complete improvements. Awarding grants any later than that date may have allowed school districts to continue projects without assurance that they would spend all of their grant awards before the program ended. The Energy Commission also reported in 2024 that those school districts that immediately applied for HVAC program funding in 2021 had only just completed the required assessments of their HVAC systems and were applying for the second grant to make the necessary HVAC improvements. At the end of 2024, the Energy Commission had roughly $83 million in HVAC funds that it had not yet awarded. To ensure that school districts complete improvements before the program ends, the Energy Commission stated that it is providing technical assistance to school districts and communicating program requirements and timelines to address any delays. The Energy Commission believes that if it executes the HVAC program effectively—specifically, by providing technical support to schools, maintaining accurate accounting, and adhering to all statutory guidelines—it may be able to distribute the remaining funds before the deadline. Despite these efforts, it is still uncertain whether the Energy Commission will be able distribute all funding or whether schools will complete their improvements before the program ends.

Further, the Energy Commission has accumulated $109 million in unspent funds reserved for the plumbing program that it likely will not use before the program ends. School districts have not shown as much interest in plumbing grants as compared to HVAC grants. The Energy Commission suspects that many school districts already have low-flow plumbing fixtures and would not benefit from the program. However, we did not identify efforts that the Energy Commission has taken to extend the program after it distributed the final round of funding for plumbing grants in 2024. The Energy Commission determined that issuing additional funding rounds at this stage would not allow school districts enough time to complete projects within the allotted two-year period. State law does not permit the Energy Commission to use funds reserved for the plumbing program for HVAC grants. However, the Energy Commission expanded eligibility for plumbing grants to state agencies in 2022 and informed the Legislature that an expansion of the types of

[15] The Energy Commission issues a portion of the total grant award to school districts when it initially approves a school district's application. The Energy Commission only issues a final disbursement of the grant award to a school district when it submits a final report and supporting documentation for approval to the Energy Commission.

plumbing fixtures and appliances eligible for replacement would increase the number of school districts requesting plumbing grants. However, we did not identify any subsequent statutory changes to the types of plumbing fixtures and appliances eligible to be replaced under the plumbing program. Changing the percentage of program funds allocated to the plumbing program or expanding the list of plumbing fixtures and appliances eligible for replacement, both of which are set in law, would require legislative action, and the Energy Commission has not pursued changes to program guidelines in this area. Therefore, the remaining $109 million will likely remain unspent and then be returned to the utilities in 2026.

Utilities Spend Proportionate Amounts on Efficiency Programs in Disadvantaged Communities

The Audit Committee requested that we determine total funds spent through efficiency programs from 2012 through 2022 across census tracts, which are small geographic areas established by the U.S. Census, and to determine the amount of ratepayer funds spent to assist low-income Californians. Although we identified some concerns with the efficiency program spending data that utilities reported to the CPUC, which limited our ability to accurately analyze spending across census tracts, we identified the proportion of funds that utilities spent in disadvantaged communities.[16] We identified such disadvantaged communities using criteria established in state law. State law requires the California Environmental Protection Agency (CalEPA) to use geographic, socioeconomic, public health, and environmental hazard criteria to identify these communities. To do so, CalEPA created the CalEnviroScreen mapping tool, which provides scores for each of California's census tracts using 21 indicators, such as unemployment levels, air quality evaluations, and the amount of hazardous waste generators and facilities within each census tract. We used this information to identify whether utilities spent efficiency program funds in these areas and found that at least one-fourth of the total expenditures between 2012 and 2022 have been within disadvantaged communities. This is equal to the 25 percent of the State's census tracts that the CalEPA has designated as disadvantaged communities. Therefore, we were able to determine that these communities are receiving a proportionate amount of utilities' efficiency program spending.

The CPUC's Cost-Effectiveness Metric Accounts for Energy Demand at Peak Hours

The Audit Committee directed us to evaluate whether the CPUC's cost-effectiveness measure for efficiency programs—the TRC—takes into account and affects energy demand. To evaluate the measure and its impact on demand for energy, we examined how the CPUC calculates the TRC and determined whether the factors in that calculation related to the demand for energy. Specifically, we reviewed benefits in the calculation and found that the CPUC establishes certain monetary benefits for

[16] We explain in Appendix C our concerns about the data and that we were unable determine the census tract of about 26 percent of expenditures. We only considered expenditures that we were confident were located in a single census tract.

saving energy at various times of the day and year, which relates to the demand for energy at those times. To estimate these benefits, the CPUC created a calculator that assigns dollar values per megawatt hour to every hour in a year. This establishes the benefit, in dollars, of the energy not used at those times for inclusion in the TRC.

Because of the CPUC's calculation methodology for the TRC, utilities' programs achieve greater TRC values when the utilities save energy during peak hours. Specifically, the CPUC's method for calculating benefits for the TRC—the avoided cost calculator—assigns greater dollar values during peak hours of energy use, which occur from 4 p.m. to 9 p.m. As a result, programs that save energy during the middle of the day provide less benefit in the TRC than do programs that save energy during peak hours. For example, if a program has a TRC value of 1.2 during the peak hours of energy use, that same program's TRC value would be lower at other times and may not meet the cost-effectiveness threshold of 1 or higher.

Because the CPUC has incorporated benefits into the TRC for saving energy during times of peak energy use, and because utilities must operate program portfolios with a TRC of 1 or higher, the TRC encourages utilities to achieve energy savings during those hours of the day that have higher benefits, such as during peak hours. For example, the 2022 avoided cost calculator assigns $42.46 of benefit for each megawatt hour saved at 7 a.m. on September 15. On the same day at 7 p.m., the calculator assigned $94.47 for each megawatt hour saved. Therefore, utilities achieve greater benefit, and thus a greater TRC, by achieving energy savings at 7 p.m. during peak demand hours. Because the CPUC requires portfolios to be cost-effective, the CPUC is incentivizing utilities to save energy during higher value hours of the day to obtain greater benefits for their program portfolios. As a result, we conclude that the TRC can be a tool to reduce energy demand during peak hours.

Utilities Rarely Use Pay-for-Performance Efficiency Programs, Which Provide Financial Incentives to Ratepayers

Effective in 2016, state law directed the CPUC to require electrical and gas corporations to develop a program that provides financial incentives to customers to acquire products, services, or software that allows those customers to better understand and manage the energy usage in their homes or businesses. This statute does not establish a specified dollar amount of spending on such programs that utilities must meet. In 2017, the CPUC required utilities to implement *pay-for-performance* efficiency programs to meet the requirement. Pay-for-performance programs shift risk away from the utility to a third-party implementer because utilities only have to pay third-party implementers when the utility achieves an agreed-upon amount of energy savings. An example of such a program is PG&E's Comfortable Home Rebates Program, which aims to save energy by installing energy efficient fixtures, including smart thermostats and attic insulation, in customers' homes. The program implementer, Franklin Energy, only receives payment from PG&E when the program saves energy. However, despite the CPUC requirement, the utilities have not expanded the use of pay-for-performance programs significantly. For example, in 2022, utilities only spent $23.5 million on pay-for-performance programs, or 5.5 percent of the $425 million in ratepayer funds

the four utilities spent on efficiency programs that year. Table B.2 in Appendix B shows that utility spending on pay-for-performance programs across all economic sectors has increased steadily from 2017 through 2022. The CPUC is uncertain why utilities have not more greatly expanded the use of pay-for-performance programs because it does not directly manage the program portfolios or review specific efficiency programs, as we describe in our Audit Results.

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Recommendations

Legislature

To better ensure that energy efficiency funds are either used prudently or returned to ratepayers, and to ensure that the CPUC does not continue to authorize efficiency programs that do not meet energy-savings goals and cost-effectiveness measures, the Legislature should consider amending state law to require the CPUC to eliminate funding for chronically underperforming efficiency programs. For example, the Legislature could set the expectation that the CPUC will eliminate funding for certain efficiency programs that consistently fail to meet energy-savings goals and are not cost-effective over a three-year period.

CPUC

To improve its oversight of the effectiveness of utility program portfolios and individual efficiency programs, the CPUC should begin monitoring the actual performance of utilities' program portfolios and individual efficiency programs. Specifically, the CPUC should do the following:

- Annually evaluate the performance of each utilities' program portfolios to determine whether they are achieving energy-savings goals and are cost-effective.
- Require utilities to create corrective action plans when their program portfolios do not meet energy-savings goals or are not cost-effective.
- Formalize, such as through a CPUC commission decision, its plans to hold bi-monthly meetings with utilities and specify the information utilities must provide regarding the performance of their program portfolios. At a minimum, this information should include the progress utilities make in meeting energy-savings goals and cost-effectiveness of their program portfolios.
- Annually review the data utilities submit about energy savings and cost-effectiveness for all efficiency programs to identify those that are underperforming, including those that consistently fall short of goals.
- Work with utilities to determine why efficiency programs may be underperforming and propose corrective actions to address the causes of underperforming programs.
- End efficiency programs that consistently fail to meet cost-effectiveness or energy-savings goals, such as by issuing a CPUC decision prohibiting utilities from using such programs in their program portfolios.

To ensure that it tracks the timeliness and status of utilities' implementation of EM&V recommendations and to improve efficiency program performance, the CPUC should do the following by September 2025:

- Develop and implement a process to track and follow-up on the timeliness of utilities' 60-day responses to recommendations. This tracking should include the EM&V publication date, the due date of the 60-day response, the date the CPUC received the response, and the follow-up that the CPUC took to ensure timely responses.
- As part of this process, track the status of utilities' implementation of the recommendations. This tracking should include a utility's proposed corrective actions and the CPUC's assessment of the adequacy of the utility's implementation of the recommendation.

- Memorialize this new tracking process in policies and procedures that detail how and when utilities should respond to recommendations and the actions the CPUC will take to follow-up on those responses.

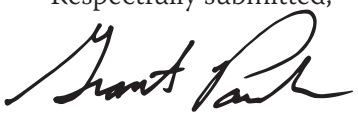
By March 2026, using guidance from best practices and stakeholders, the CPUC should begin revisiting its consideration of participant non-energy benefits and costs in the TRC calculation, such as by including or excluding both factors in the calculation.

Energy Commission

To ensure that utilities use ratepayer funds effectively, the Energy Commission should by May 2025 create a plan to use all remaining CalSHAPE funds before the deadline in state law, such as by finding additional applicants or requesting that the Legislature change state law to allow the Energy Commission to return the leftover funding to utilities—and ultimately ratepayers—immediately.

We conducted this performance audit in accordance with generally accepted government auditing standards and under the authority vested in the California State Auditor by Government Code section 8543 et seq. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on the audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

Respectfully submitted,



GRANT PARKS
California State Auditor

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Appendix A

Utilities' Efficiency Program Portfolio Energy Savings, 2012 Through 2022

The Audit Committee directed our office to measure the electric and natural gas energy savings of efficiency programs from 2012 through 2022. Table A.1 presents information for electric energy savings in the program portfolios of the four utilities we reviewed. Table A.2 provides information about natural gas savings.

Table A.1
Utilities' Efficiency Program Portfolio Electric Energy Savings From 2012 Through 2022

	Gross GWh						Net GWh				
Utility	**2012**	**2013**	**2014**	**2015**	**2016***	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**
PG&E	915	752	748	690	671	642	400	394	253	288	331
SCE	1,178	642	936	804	722	554	333	289	165	147	192
SoCalGas	13	3	12	13	9	8	7	5	1	5	3
SDG&E	262	164	165	159	201	165	114	75	73	61	51
Totals	**2,367**	**1,561**	**1,860**	**1,666**	**1,603**	**1,369**	**853**	**762**	**492**	**501**	**577**

Source: CPUC data.

Note: Totals may differ slightly due to rounding. Electric energy savings are expressed in terms of saving gigawatt hours (GWh) of electricity. One GWh of electricity is equal to the average annual electricity consumption of 162 households. During our audit period, from 2012 through 2017, the CPUC measured energy savings on a gross basis. This means measuring the amount of energy savings without considering the reasons for participation in the efficiency program. From 2018 through 2022, the CPUC shifted to measuring energy savings on a net basis. This means measuring the amount of energy savings directly caused by the efficiency program.

* The 2016 efficiency program data represent utilities' claimed energy savings without independent verification. For the remaining years, the CPUC had an independent consulting firm evaluate utilities' claimed energy savings for accuracy but did not verify 100 percent of the data.

Table A.2
Utilities' Efficiency Program Portfolio Natural Gas Energy Savings From 2012 Through 2022

	Gross MM Therms						Net MM Therms				
Utility	**2012**	**2013**	**2014**	**2015**	**2016***	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**
PG&E	20	21	20	14	14	16	14	13	13	19	19
SCE	-3	-3	-6	-4	-3	-2	0.07	0.05	0.3	0.3	0.3
SoCalGas	39	15	15	12	16	10	18	21	27	23	26
SDG&E	4	0.02	1	1	3	2	2	1	2	2	2
Totals	**59**	**33**	**30**	**23**	**30**	**27**	**34**	**35**	**42**	**44**	**47**

Source: CPUC data.

Note: Totals may differ slightly due to rounding. Natural gas energy savings are expressed in terms of saving million-therms (MMTherms) of natural gas. One MMTherm of natural gas is equal to the average annual natural gas consumption of over 2,700 households. During our audit period, from 2012 through 2017, the CPUC measured energy savings on a gross basis. This means measuring the amount of energy savings without considering the reasons for participation in the efficiency program. From 2018 through 2022, the CPUC shifted to measuring energy savings on a net basis. This means measuring the amount of energy savings directly caused by the efficiency program. Additionally, an efficiency program that results in positive electric energy savings may inadvertently lead to an increase in natural gas usage. Consequently, this efficiency program reports its natural gas energy savings as negative.

* The 2016 efficiency program data represent utilities' claimed energy savings without independent verification. For the remaining years, the CPUC had an independent consulting firm evaluate utilities' claimed energy savings for accuracy but did not verify 100 percent of the data.

The Audit Committee also directed us to measure the greenhouse gas reductions provided by electric and natural gas efficiency programs from 2012 through 2022. We provide in Tables A.3 and A.4 breakdowns of reported greenhouse gas reductions in the program portfolios of the utilities we reviewed. To provide context for these reductions, nearly 500,000 metric tons of carbon dioxide (CO_2) is equivalent to CO_2 emissions from nearly 100,000 homes' electricity use for one year.

Table A.3
Utilities' Efficiency Program Portfolio Electric Greenhouse Gas Reductions (metric tons of Carbon Dioxide (CO_2) equivalent) From 2012 Through 2022

	Utility				
Year	PG&E	SCE	SOCALGAS	SDG&E	TOTAL
2012	323,442	436,775	5,479	88,549	**854,245**
2013	251,426	196,861	1,717	45,991	**495,995**
2014	259,482	276,277	6,596	48,642	**590,997**
2015	239,163	268,312	4,490	52,675	**564,640**
2016*	282,135	271,044	3,138	73,579	**629,895**
2017	243,611	217,597	3,258	63,295	**527,761**
2018	201,300	167,763	3,830	53,280	**426,172**
2019	183,622	139,590	2,613	32,534	**358,359**
2020	91,296	63,777	389	25,266	**180,729**
2021	71,922	38,475	1,213	14,397	**126,007**
2022	84,872	48,874	962	12,095	**146,803**
Totals	**2,232,271**	**2,125,345**	**33,684**	**510,303**	**4,901,603**

Source: CPUC data.

Note: Totals may differ slightly due to rounding.

* The 2016 efficiency program data represent utilities' claimed energy savings without independent verification. For the remaining years, the CPUC had an independent consulting firm evaluate utilities' claimed energy savings for accuracy but did not verify 100 percent of the data.

The Audit Committee directed us to measure electricity savings, cost-effectiveness, greenhouse gas reductions, and total annual bill savings for a selection of efficiency programs from 2012 through 2022. As we describe in the Audit Results, we selected 20 efficiency programs to review in greater detail. We present in Table A.5 information about the reported electricity savings, cost-effectiveness, greenhouse gas reductions, and total annual bill savings for these programs. We provide the same information in Table A.6 for natural gas efficiency programs that we reviewed. For example, from 2012 through 2022, the SDG&E efficiency program SW-COM Direct Install—which provides comprehensive energy audits, energy planning assistance, and no-cost or discounted energy efficiency improvements to small commercial

customers—reduced emissions by more than 50,000 metric tons of carbon dioxide (CO_2), which is equivalent to the emissions associated with the electricity use of about 11,000 homes in a single year.

Table A.4
Utilities' Efficiency Program Portfolio Natural Gas Greenhouse Gas Reductions (metric tons of Carbon Dioxide (CO_2) equivalent) From 2012 Through 2022

	Utility				
Year	PG&E	SCE	SOCALGAS	SDG&E	TOTAL
2012	57,180	-12,530	125,986	10,791	**181,428**
2013	83,219	-9,298	58,301	1,787	**134,009**
2014	74,876	-18,463	55,666	5,225	**117,304**
2015	63,921	-18,357	42,191	3,844	**91,599**
2016*	69,001	-14,983	57,949	10,999	**122,966**
2017	68,152	-8,909	41,692	8,559	**109,494**
2018	79,630	387	108,162	10,104	**198,283**
2019	73,692	265	125,706	6,472	**206,135**
2020	75,871	1,806	156,326	9,698	**243,701**
2021	109,274	1,531	133,413	12,420	**256,639**
2022	114,220	2,671	150,208	12,333	**279,432**
Totals	**869,036**	**-75,881**	**1,055,601**	**92,232**	**1,940,988**

Source: CPUC data.

Note: Totals may differ slightly due to rounding. An efficiency program that results in positive electric energy savings may inadvertently lead to an increase in natural gas usage. Consequently, this efficiency program reports its natural gas energy savings as negative.

* The 2016 efficiency program data represent utilities' claimed energy savings without independent verification. For the remaining years, the CPUC had an independent consulting firm evaluate utilities' claimed energy savings for accuracy but did not verify 100 percent of the data.

Table A.5
Utilities' Efficiency Program Electric Energy Savings

		Gross GWh						Net GWh					
Utility	Efficiency Program	2012	2013	2014	2015	2016*	2017	2018	2019	2020	2021	2022	TOTAL
PG&E	California New Homes Multifamily		2.5	2.4	1.3	0.7	0.2	0.1	-0.2	-0.01	0.1	0.0	**7**
PG&E	Local Government Energy Action Resources (LGEAR)	1.9	8.0	12.5	19.0	12.0	4.3	0.4	3.7	8.8	3.0	0.7	**74**
SCE	Comprehensive Manufactured Homes		2.7	3.8	10.5	8.3	11.2	3.5	1.5	0.7	0.1	0.7	**43**
SDG&E	SW-COM Direct Install	15.8	13.4	18.7	18.7	26.9	13.6	13.9	11.5	5.8	0.7	0.2	**139**
SDG&E	SW-AG-Calculated Incentives-Calculated	0.5	0.0	0.2		0.0	0.0	0.0	0.2	0.03	0.0	0.0	**1**
PG&E	Residential New Construction							0.5	0.2	0.1	0.0	-0.02	**1**
PG&E	University of California/California State University							1.5	1.1	1.2	2.6	0.1	**6**
SCE	Residential Direct Install Program							7.4	2.5	1.9	0.6	3.2	**16**
PG&E	RES-Residential Energy Efficiency Program							1.8	1.8	0.4	0.1	0.4	**5**
SDG&E	Local-IDSM-ME&O-Behavioral Programs (EE)							52.2	33.5	47.7	42.3	37.8	**213**

Source: CPUC data.

Note: Totals may differ slightly due to rounding. During our audit period, from 2012 through 2017, the CPUC measured energy savings on a gross basis. This means measuring the amount of energy savings without considering the reasons for participation in the efficiency program. From 2018 through 2022, the CPUC shifted to measuring energy savings on a net basis. This means measuring the amount of energy savings directly caused by the efficiency program. Additionally, an efficiency program that results in positive natural gas energy savings may inadvertently lead to an increase in electric usage. Consequently, some efficiency programs report their electric energy savings as negative.

= For 2012 through 2017, indicates the program did not operate in the corresponding year. For 2018 through 2022, our review focused on the performance of programs during this timeframe.

* The 2016 efficiency program data represent utilities' claimed energy savings without independent verification. For the remaining years, the CPUC had an independent consulting firm evaluate utilities' claimed energy savings for accuracy but did not verify 100 percent of the data.

Utilities' Efficiency Program Total Resource Cost Value

Utility	Efficiency Program	2012	2013	2014	2015	2016*	2017	2018	2019	2020	2021	2022
PG&E	California New Homes Multifamily		2.14	2.52	2.42	0.72	0.72	0.46	0.35	0.25	0.26	NA
PG&E	Local Government Energy Action Resources (LGEAR)	0.28	0.75	0.91	0.76	0.68	0.38	0.13	0.55	0.29	0.22	NA
SCE	Comprehensive Manufactured Homes		0.40	0.76	0.88	1.47	1.26	0.96	0.30	0.36	0.09	1.08
SDG&E	SW-COM Direct Install	0.77	0.99	1.04	1.09	1.99	1.67	0.63	0.56	0.42	0.18	0.44
SDG&E	SW-AG-Calculated Incentives-Calculated	0.20	0.29	0.34		0.00	0.00	0.00	0.25	0.05	0.00	0.00
PG&E	Residential New Construction							0.51	0.39	0.17	0.24	NA
PG&E	University of California/California State University							0.39	0.13	0.12	0.18	0.03
SCE	Residential Direct Install Program							0.83	0.25	0.23	0.09	1.06
PG&E	RES-Residential Energy Efficiency Program							1.05	0.41	0.39	0.56	0.70
SDG&E	Local-IDSM-ME&O-Behavioral Programs (EE)							1.48	0.66	1.31	1.38	1.20

Source: CPUC data, decisions.

* The 2016 efficiency program data represent utilities' claimed energy savings without independent verification. For the remaining years, the CPUC had an independent consulting firm evaluate utilities' claimed energy savings for accuracy but did not verify 100 percent of the data.

NA = Starting in 2022, the CPUC does not determine the cost-effectiveness of market support or equity programs.

= For 2012 through 2017, indicates the program did not operate in the corresponding year. For 2018 through 2022, our review focused on the performance of programs during this timeframe.

Indicates that the utility's efficiency program was cost-effective in that year.

= Equal to or greater than 1.0

Indicates that the utility's efficiency program in that year was not cost-effective, as it fell short of achieving a TRC value of 1 or higher.

= 0.81 through 0.99

= 0.51 through 0.80

= 0.34 through 0.50

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Utilities' Efficiency Program Greenhouse Reductions (metric tons of Carbon Dioxide (CO_2) equivalent)

Utility	Efficiency Program	2012	2013	2014	2015	2016*	2017	2018	2019	2020	2021	2022	TOTAL
PG&E	California New Homes Multifamily		1,042	1,044	579	288	110	41	-114	-4	30	7	**3,023**
PG&E	Local Government Energy Action Resources (LGEAR)	701	2,529	4,056	5,366	4,400	1,236	207	1,661	3,106	707	163	**24,133**
SCE	Comprehensive Manufactured Homes		1,303	1,738	4,134	3,054	4,587	1,861	705	276	39	191	**17,887**
SDG&E	SW-COM Direct Install	6,539	4,695	6,435	6,692	7,873	4,097	6,089	4,618	1,665	141	54	**48,898**
SDG&E	SW-AG-Calculated Incentives-Calculated	140	0	65		0	0	0	83	9	0	0	**296**
PG&E	Residential New Construction							270	86	30	4	-7	**383**
PG&E	University of California/California State University							726	496	411	635	20	**2,288**
SCE	Residential Direct Install Program							3,904	1,156	724	168	908	**6,859**
PG&E	RES-Residential Energy Efficiency Program							1,131	1,077	184	27	109	**2,528**
SDG&E	Local-IDSM-ME&O-Behavioral Programs (EE)							25,548	15,624	17,934	10,162	9,482	**78,750**

Source: CPUC data.

Note: Totals may differ slightly due to rounding.

* The 2016 efficiency program data represent utilities' claimed energy savings without independent verification. For the remaining years, the CPUC had an independent consulting firm evaluate utilities' claimed energy savings for accuracy but did not verify 100 percent of the data.

= For 2012 through 2017, indicates the program did not operate in the corresponding year. For 2018 through 2022, our review focused on the performance of programs during this timeframe.

Utilities Efficiency Program Participant Total Annual Bill Savings

Utility	Efficiency Program	2012	2013	2014	2015	2016*	2017	2018	2019	2020	2021	2022	TOTAL
PG&E	California New Homes Multifamily		$286,084	$307,449	$179,195	$99,531	$37,587	$14,045	-$45,313	-$1,183	$27,489	$7,604	**$912,488**
PG&E	Local Government Energy Action Resources (LGEAR)	$197,158	780,940	1,437,219	1,952,802	1,611,155	485,502	83,793	771,735	1,961,091	689,470	182,377	**10,153,242**
SCE	Comprehensive Manufactured Homes		376,699	526,908	1,283,431	854,665	1,239,209	576,194	239,726	114,577	25,205	120,701	**5,357,315**
SDG&E	SW-COM Direct Install	1,447,028	1,249,141	2,967,019	3,016,454	4,063,384	2,314,771	3,298,722	2,830,135	1,391,094	178,262	72,670	**22,828,678**
SDG&E	SW-AG-Calculated Incentives-Calculated	31,810	0	28,573		0	0	0	44,871	6,035	0	0	**111,290**
PG&E	Residential New Construction							96,524	33,238	14,894	2	2	**144,660**
PG&E	University of California/California State University							289,219	230,344	261,316	605,023	21,779	**1,407,681**
SCE	Residential Direct Install Program							1,202,478	404,674	309,410	108,557	567,288	**2,592,406**
PG&E	RES-Residential Energy Efficiency Program							0	0	0	0	0	**0**
SDG&E	Local-IDSM-ME&O-Behavioral Programs (EE)							12,380,105	8,228,759	11,455,183	11,509,904	11,606,791	**55,180,741**

Source: CPUC data.

Note: Totals may differ slightly due to rounding. For each efficiency program, we multiplied the electric energy savings by the utility's reported average electric rate for that year. The amount represents an estimate of efficiency program participants' total annual bill savings.

* The 2016 efficiency program data represent utilities' claimed energy savings without independent verification. For the remaining years, the CPUC had an independent consulting firm evaluate utilities' claimed energy savings for accuracy but did not verify 100 percent of the data.

= For 2012 through 2017, indicates the program did not operate in the corresponding year. For 2018 through 2022, our review focused on the performance of programs during this timeframe.

Table A.6
Utilities' Efficiency Program Natural Gas Energy Savings

		Gross MMTherm						Net MMTherm					
Utility	Efficiency Program	2012	2013	2014	2015	2016*	2017	2018	2019	2020	2021	2022	TOTAL
PG&E	Local Government Energy Action Resources (LGEAR)	-0.004	-0.01	-0.05	-0.11	-0.07	-0.005	0.00	-0.01	-0.02	-0.01	-0.004	**-0.30**
PG&E	Commercial Deemed Incentives	0.80	1.90	2.33	2.05	1.90	2.31	1.69	1.40	1.82	1.27	0.23	**17.67**
PG&E	Industrial Calculated Incentives	6.60	5.25	2.06	2.49	2.51	3.89	0.28	0.67	0.02	5.01	0.00	**28.78**
SDG&E	SW-AG-Deemed Incentives			0.18	0.19	0.12	0.06	-0.001	0.02	0.01	0.00	0.00	**0.57**
SDG&E	SW-IND-Deemed Incentives	0.01	-0.002	0.01	0.02	0.05	-0.002	-0.004	-0.01	0.01	-0.004	0.01	**0.08**
PG&E	Residential Energy Efficiency							0.22	0.03	0.02	0.10	0.10	**0.45**
SCE	Residential Direct Install Program							0.06	0.02	0.02	0.06	0.09	**0.25**
SoCalGas	RES-Residential Energy Efficiency Program							3.05	0.68	0.96	1.52	1.86	**8.07**
SDG&E	Local-IDSM-ME&O-Behavioral Programs (EE)							1.20	0.91	1.18	0.68	0.53	**4.50**
SDG&E	SW-COM-Calculated Incentives-Calculated							0.18	0.01	0.04	0.06	0.00	**0.29**

Source: CPUC data.

Note: Totals may differ slightly due to rounding. During our audit period, from 2012 through 2017, the CPUC measured energy savings on a gross basis. This means measuring the amount of energy savings without considering the reasons for participation in the efficiency program. From 2018 through 2022, the CPUC shifted to measuring energy savings on a net basis. This means measuring the amount of energy savings directly caused by the efficiency program. Additionally, an efficiency program that results in positive electric energy savings may inadvertently lead to an increase in natural gas usage. Consequently, some efficiency programs report their natural gas energy savings as negative.

* The 2016 efficiency program data represent utilities' claimed energy savings without independent verification. For the remaining years, the CPUC had an independent consulting firm evaluate utilities' claimed energy savings for accuracy but did not verify 100 percent of the data.

= For 2012 through 2017, indicates the program did not operate in the corresponding year. For 2018 through 2022, our review focused on the performance of programs during this timeframe.

Utilities' Efficiency Program Total Resource Cost Value

Utility	Efficiency Program	2012	2013	2014	2015	2016*	2017	2018	2019	2020	2021	2022
PG&E	Local Government Energy Action Resources (LGEAR)	0.28	0.75	0.91	0.76	0.68	0.38	0.13	0.55	0.29	0.22	NA
PG&E	Commercial Deemed Incentives	1.25	2.69	3.14	1.17	0.82	1.03	1.17	1.14	0.78	0.78	0.29
PG&E	Industrial Calculated Incentives	1.5	1.25	1.40	0.74	2.12	2.21	0.48	0.75	0.18	3.39	0.00
SDG&E	SW-AG-Deemed Incentives			0.99	1.26	1.10	0.34	0.06	0.32	0.21	0.00	0.00
SDG&E	SW-IND-Deemed Incentives	1.34	1.08	1.01	0.6	0.74	0.29	0.40	0.53	0.92	0.14	0.95
PG&E	Residential Energy Efficiency							0.60	0.18	0.21	0.46	0.70
SCE	Residential Direct Install Program							0.83	0.25	0.23	0.09	1.06
SoCalGas	RES-Residential Energy Efficiency Program							1.05	0.41	0.39	0.56	0.70
SDG&E	Local-IDSM-ME&O-Behavioral Programs (EE)							1.48	0.66	1.31	1.38	1.20
SDG&E	SW-COM-Calculated Incentives-Calculated							0.58	0.34	0.36	0.15	-0.12†

Source: CPUC data, decisions.

* The 2016 efficiency program data represent utilities' claimed energy savings without independent verification. For the remaining years, the CPUC had an independent consulting firm evaluate utilities' claimed energy savings for accuracy but did not verify 100 percent of the data.

† This efficiency program has negative electric benefits and zero natural gas benefits. We calculated the total of natural gas and electric benefits, then divided by the costs. As a result, the efficiency program reports a negative cost-effectiveness value.

NA = Starting in 2022, the CPUC does not determine the cost-effectiveness of market support or equity programs.

= For 2012 through 2017, indicates the program did not operate in the corresponding year. For 2018 through 2022, our review focused on the performance of programs during this timeframe.

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Indicates that the utility's efficiency program in that year was not cost-effective, as it fell short of achieving a TRC value of 1 or higher.

= 0.81 through 0.99

= 0.51 through 0.80

= 0.34 through 0.50

= 0 through 0.33

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Utilities' Efficiency Program Greenhouse Reductions (metric tons of Carbon Dioxide (CO2) equivalent)

Utility	Efficiency Program	2012	2013	2014	2015	2016*	2017	2018	2019	2020	2021	2022	TOTAL
PG&E	Local Government Energy Action Resources (LGEAR)	-16	-32	-182	-361	-295	-15	0	-73	-141	-55	-22	**-1,192**
PG&E	Commercial Deemed Incentives	2,965	6,840	8,747	7,965	7,196	7,916	9,864	8,163	10,664	7,418	1,321	**79,059**
PG&E	Industrial Calculated Incentives	21,501	18,433	6,755	8,438	10,138	13,426	1,624	3,935	137	29,299	0	**113,684**
SDG&E	SW-AG-Deemed Incentives			652	681	458	256	-6	101	35	0	0	**2,177**
SDG&E	SW-IND-Deemed Incentives	16	-8	26	73	184	-5	-22	-42	43	-2	49	**311**
PG&E	Residential Energy Efficiency							1,259	159	96	558	580	**2,653**
SCE	Residential Direct Install Program							355	111	105	353	555	**1,480**
SoCalGas	RES-Residential Energy Efficiency Program							17,870	3,981	5,602	8,919	10,858	**47,231**
SDG&E	Local-IDSM-ME&O-Behavioral Programs (EE)							6,995	5,337	6,902	3,995	3,105	**26,335**
SDG&E	SW-COM-Calculated Incentives-Calculated							1,068	48	231	342	0	**1,689**

Source: CPUC data.

Note: Totals may differ slightly due to rounding.

* The 2016 efficiency program data represent utilities' claimed energy savings without independent verification. For the remaining years, the CPUC had an independent consulting firm evaluate utilities' claimed energy savings for accuracy but did not verify 100 percent of the data.

= For 2012 through 2017, indicates the program did not operate in the corresponding year. For 2018 through 2022, our review focused on the performance of programs during this timeframe.

Utilities Efficiency Program Participant Total Annual Bill Savings

Utility	Efficiency Program	2012	2013	2014	2015	2016*	2017	2018	2019	2020	2021	2022	TOTAL
PG&E	Local Government Energy Action Resources (LGEAR)	-$3,336	-$6,485	-$45,703	-$96,827	-$77,529	-$4,576	$0	-$20,199	-$40,616	-$17,394	-$8,922	**-$321,586**
PG&E	Commercial Deemed Incentives	631,929	1,527,640	1,863,716	104,914	1,827,006	2,089,320	2,571,521	2,252,855	3,082,666	2,357,140	534,260	**18,842,968**
PG&E	Industrial Calculated Incentives	4,583,151	3,919,854	1,441,012	1,915,293	2,574,109	3,543,450	423,258	1,085,922	39,467	9,310,431	0	**28,835,948**
SDG&E	SW-AG-Deemed Incentives			65,429	68,290	45,999	19,567	-292	24,318	5,918	0	0	**229,227**
SDG&E	SW-IND-Deemed Incentives	2,346	-1,024	2,582	1,740,305	18,477	-609	-1,117	-10,042	7,194	-489	12,944	**1,770,569**
PG&E	Residential Energy Efficiency							328,323	5,746	3,640	22,291	27,793	**387,793**
SCE	Residential Direct Install Program							0	0	0	0	0	**0**
SoCalGas	RES-Residential Energy Efficiency Program							3,360,260	803,941	1,245,934	2,550,873	3,481,567	**11,442,576**
SDG&E	Local-IDSM-ME&O-Behavioral Programs (EE)							358,528	1,288,254	1,161,019	814,210	826,500	**4,448,511**
SDG&E	SW-COM-Calculated Incentives-Calculated							54,711	11,640	38,861	69,786	0	**174,999**

Source: CPUC data.

Note: Totals may differ slightly due to rounding. For each efficiency program, we multiplied the natural gas energy savings by the utility's reported average natural gas rate for that year. The amount represents an estimate of efficiency program participants' total annual bill savings.

* The 2016 efficiency program data represent utilities' claimed energy savings without independent verification. For the remaining years, the CPUC had an independent consulting firm evaluate utilities' claimed energy savings for accuracy but did not verify 100 percent of the data.

= For 2012 through 2017, indicates the program did not operate in the corresponding year. For 2018 through 2022, our review focused on the performance of programs during this timeframe.

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Appendix B

The Amount of Ratepayer Funds Spent Across Economic Sectors and Pay-for-Performance Programs, 2012 Through 2022

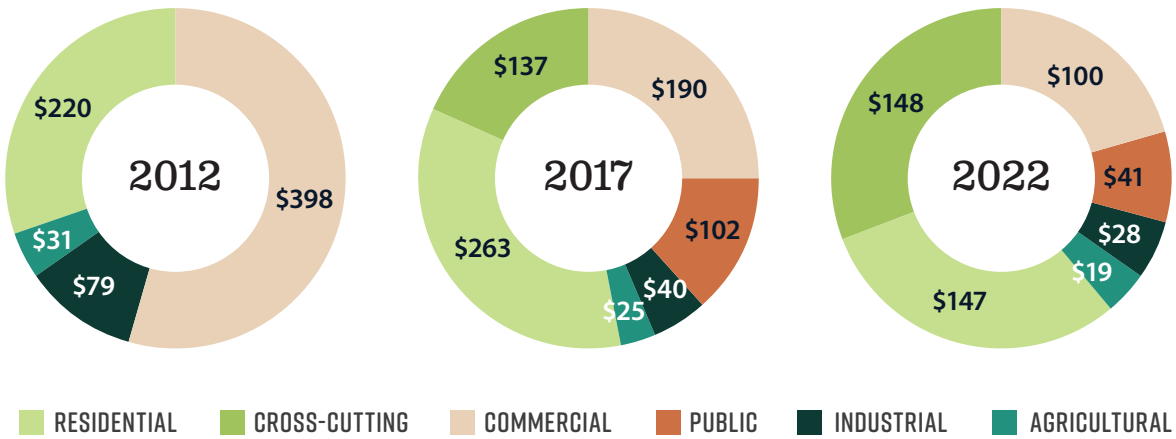
The Audit Committee directed us to determine the amount of ratepayer funds spent across various economic sectors from 2012 through 2022. Accordingly we present in Table B.1 the amount of ratepayer funds spent across the following economic sectors: public, commercial, residential, industrial, agricultural, and cross-cutting. The cross-cutting sector represents spending directed to more than one sector, such as a program that assists both residential and commercial participants.

Table B.1
Spending Across Economic Areas From 2012 Through 2022 Concentrated on the Commercial and Residential Sectors (in Millions)

Year	RESIDENTIAL	CROSS-CUTTING	COMMERCIAL	PUBLIC	INDUSTRIAL	AGRICULTURAL	TOTAL
2012	$220	$0	$398	$0	$79	$31	$729
2013	201	4	326	0.03	69	43	642
2014	254	4	370	0	63	33	724
2015	407	0.2	394	0	86	47	934
2016	271	127	297	99	60	31	884
2017	263	137	190	102	40	25	757
2018	263	112	177	88	37	18	695
2019	244	116	147	80	37	15	639
2020	172	118	90	57	37	15	489
2021	169	112	76	33	34	12	437
2022	147	148	100	41	28	19	483

Source: CPUC data.

Note: Totals may differ slightly due to rounding. Sectors are categories of industries associated with their respective economic establishments and activities. For example, expenditures categorized under the *agricultural* sector include an efficiency program offering rebates for agricultural irrigation pumps that help farmers' operations. Further, expenditures in the *cross-cutting* sector include efficiency programs that offer services across multiple sectors, such as commercial and industrial.



The Audit Committee also directed us to determine the amount of ratepayer funds spent on pay-for-performance programs from 2012 through 2022. However, the CPUC only began requiring utilities to have such programs in 2017. Efficiency programs that use pay-for-performance incentives provide payments to the third-party implementer that manages the program based on its performance delivering energy savings. For example, if an efficiency program does not lead to a reduction in energy use as planned, the utility will not provide full payment to the third-party implementer responsible for that efficiency program. Table B.2 presents the amount of ratepayer funds spent on pay-for-performance programs across the commercial, residential, industrial, and agricultural sectors.

Table B.2
Utilities' Pay-for-Performance Program Expenditures by Economic Sector

Year	AGRICULTURAL	COMMERCIAL	INDUSTRIAL	RESIDENTIAL	TOTAL	All Efficiency Program Spending	Percentage Pay-for-Performance
2017	$0	$0	$563,941	$346,104	**$910,045**	$719,850,939	0.1%
2018	0	39,232	1,952,142	1,041,259	**3,032,634**	664,561,056	0.5
2019	0	47,714	4,005,119	1,678,229	**5,731,063**	592,049,774	1.0
2020	0	105,022	6,610,454	6,025,263	**12,740,738**	445,245,241	2.9
2021	0	8,685	12,081,753	8,060,991	**20,151,428**	384,001,079	5.2
2022	0	0	13,619,099	9,887,157	**23,506,255**	425,026,804	5.5
Totals	**$0**	**$200,653**	**$38,832,507**	**$27,039,003**	**$66,072,163**	**$3,230,734,893**	**2.0%**

Source: CPUC data.

Note: Totals may differ slightly due to rounding. The CPUC stated that efficiency program data does not specifically categorize pay-for-performance programs. However, some efficiency programs include keywords that identify them as pay-for-performance. Therefore, the table includes only those efficiency programs clearly identifiable as pay-for-performance and may not represent all pay-for-performance programs.

Appendix C

Scope and Methodology

The Audit Committee directed our office to conduct an audit of the CPUC to determine what challenges it faces in administering energy efficiency funds and identify opportunities to improve efficiency program performance. Specifically, the audit committee requested that we review the CPUC's process for prioritizing efficiency programs and evaluating the effectiveness of programs. The committee also asked us to determine whether the CPUC provides adequate oversight of efficiency program adoption and implementation. The table below lists the objectives that the Audit Committee approved and the methods we used to address them. Unless otherwise stated in the table or elsewhere in the report, statements and conclusions about items selected for review should not be projected to the population.

Table C
Audit Objectives and the Methods Used to Address Them

	AUDIT OBJECTIVE	METHOD
1	Review and evaluate the laws, rules, and regulations significant to the audit objectives.	Reviewed various laws and CPUC decisions related to the audit.
2	Determine the amount of funds collected from ratepayers for energy efficiency programs overseen by the CPUC from 2012 through 2022 and how much those programs have expended and perform the following related analyses: a. To the extent possible, determine the amount of ratepayer funds spent in the following ways: i. Across various economic sectors, including public, commercial, residential, industrial, agricultural. ii. Across census tracts and geographic regions. iii. On low-income Californians. iv. On gas appliances. v. On pay-for-performance programs by type. b. Determine what technologies and improvements energy efficiency programs are funding and incentivizing, including natural gas and HVAC technologies and appliances and pay for-performance programs. Identify any programs that enable fuel substitution to electricity versus programs that do not include electrification.	• Made data requests to CPUC and utilities to collect information on spending. • Analyzed that data, including by economic sector, and identified trends in spending. • Analyzed energy efficiency spending by census tract to identify the amount of funds spent in disadvantaged communities. • Reviewed available data in an attempt to identify spending on gas appliances. Ultimately, we determined that the CPUC's historical data cannot provide this information. • Reviewed the Energy Savings Assistance Program and its associated expenditures. • Identified and analyzed funds spent on programs and interventions with performance related incentives. • Reviewed available data to identify the amount of funds spent on specific technologies that energy efficiency programs have installed. • Reviewed fuel substitution guidelines and related data to determine how efficiency programs encourage electrification.

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	AUDIT OBJECTIVE	METHOD
3	To the extent possible, review the effectiveness of a selection of the CPUC's energy efficiency programs by measuring energy savings, greenhouse gas reductions, and cumulative savings on energy bills from 2012 through 2022, distinguishing between electricity and gas.	• Used utilities' reported efficiency program data that we obtained from the CPUC to determine the following: – From 2012 through 2022, we judgmentally selected five electric and five natural gas energy efficiency programs. From 2012 through 2022, we determined whether the programs were cost-effective, their greenhouse gas reductions, and total annual bill savings. From 2012 through 2016, the CPUC data does not contain projected energy savings. Therefore, we focused our review on the period from 2017 through 2022 to identify if the selected programs met energy-savings projections. – Using utilities' energy efficiency program data obtained from the CPUC, from 2018 through 2022, we judgmentally selected five electric and five natural gas energy efficiency programs. We determined whether the programs met energy-savings projections and cost-effectiveness, including their greenhouse gas reductions and total annual bill savings. – From 2012 through 2022, we determined whether portfolios met electric and natural gas energy-savings goals and cost-effectiveness, and determined their greenhouse gas reductions. • Interviewed staff from the CPUC and reviewed relevant documentation to assess whether the CPUC monitors energy efficiency programs selected from 2018 through 2022, which do not meet projected energy savings or cost-effectiveness.
4	Review the CPUC's processes for overseeing the design of energy efficiency programs and determine their effects on the adoption of new technology.	• Reviewed relevant CPUC documents and interviewed CPUC staff to determine whether the CPUC's development of the energy efficiency program design process and its program evaluation process follows industry best practices, whether the CPUC abides by these processes, and whether these processes affect programs adopting new technologies. We found the CPUC's efforts to develop new efficiency programs through its evaluation process are reasonable and that the CPUC effectively oversees them. As a result, the CPUC's processes lead utilities to adopt new technologies, but do not lead to utilities expanding their use to a significant level. • Reviewed three EM&V impact studies and interviewed CPUC staff and determined whether the CPUC took action to ensure the implementation of study recommendations.
5	For a selection of programs, determine whether policies or regulatory requirements may have led to some of the programs not spending all of their funding or limiting program participation.	• Selected five energy efficiency programs that operated from 2018 through 2022. • Reviewed a variety of utility documents related to the selected programs and assessed whether policies or regulatory requirements are barriers that could lead some programs not to spend all funding or limit participation. We did not identify any significant barriers that could lead some programs not to spend all of their funding or to limit participation. In most instances, the barriers to spending and participation related to the consolidation or replacement of programs.

	AUDIT OBJECTIVE	METHOD
6	Review the adequacy of the CPUC's process for determining the effectiveness of energy efficiency programs it oversees and perform the following related analyses: a. To the extent possible, evaluate the CPUC's current, historical, and proposed cost-effectiveness measures for energy efficiency programs, including their effects on the demand for energy and the adoption of new technology, and how recently enacted changes to the law in Assembly Bill 205 (Chapter 61, Statutes of 2022) will affect these processes. b. Compare the CPUC's process for overseeing its energy efficiency programs with the processes used by the California Energy Commission to oversee the California Schools Healthy Air, Plumbing, and Efficiency Program.	• Reviewed the CPUC's policy documents, best practices from other agencies, and the CPUC's documentation of cost-effectiveness calculations to assess whether the CPUC's process is adequate. • Interviewed staff to understand CPUC's cost-effectiveness measurements. • Reviewed the Emerging Technology Programs that introduce and adopt new technologies and interviewed staff to learn how the program relates to cost-effectiveness. We did not identify any direct relationship between the adoption of new technology and the CPUC's cost-effectiveness measure, the TRC. • Reviewed CPUC's memo and decision interpreting AB 205 to determine potential effects on cost-effectiveness. We determined that AB 205 will likely not have an impact on CPUC's current cost-effectiveness measure. Specifically, AB 205 will change how ratepayers pay their energy bills, and CPUC's current cost-effectiveness measure does not include any components related to ratepayer bills. • To understand the CPUC's oversight of efficiency programs, we did the following: – Interviewed CPUC staff to determine the process used to evaluate programs. – Reviewed energy efficiency framework and protocols to determine requirements for conducting EM&V studies. – Reviewed CPUC evaluation data to determine how many energy efficiency programs they evaluated and whether the CPUC uses a risk-based approach to select programs for evaluation. – Reviewed 12 EM&V studies and documented evidence to determine whether the CPUC's oversight ensures studies are conducted properly. – Interviewed staff and reviewed documentation to determine what actions resulted from the findings and recommendations of EM&V studies. – Interviewed staff at the CPUC and collected documentation to identify the CPUC's oversight of energy efficiency programs and determine whether the process ensures that utilities do not accumulate unspent and uncommitted funds. • To understand the process used by the Energy Commission to oversee the CalSHAPE program, we did the following: – Interviewed the program manager and other staff at the Energy Commission and reviewed the program guidelines, notices, and other collected program documentation to identify the CalSHAPE grant process and the Energy Commission's oversight activities as well as whether the process ensures that the program does not accumulate unspent and uncommitted funds. – Reviewed applications from school districts and evaluated the Energy Commission's application review and grant award process by reviewing their internal records. – Reviewed the Energy Commission's accounting records as well as utility fillings to verify program funding. – Compared the CPUC's oversight to the Energy Commission's oversight in order to determine whether there are any best practices from either agency. As we describe in the Audit Results, the two agencies have very different oversight responsibilities.
7	Review and assess any other issues that are significant to the audit.	We did not identify any other issues to review during the course of the audit.

Source: Audit workpapers.

Assessment of Data Reliability

The U.S. Government Accountability Office, whose standards we are statutorily obligated to follow, requires us to assess the sufficiency and appropriateness of computer-processed information we use to support our findings, conclusions, or recommendations. In performing this audit, we relied on energy efficiency programs' expenditure data obtained from the CPUC. To evaluate the data, we performed electronic testing and identified issues with address information in the data. Specifically, the data contained blank and invalid addresses, and we were unable to determine the location for about 26 percent of the expenditures. Consequently, we found the data to not be sufficient reliability for the purposes of determining precise amounts of expenditures in disadvantaged communities and because of this, we do not present spending by census tract in a table or graphic. As a result, we limited the level of detail we report by aggregating 11 years of data and provide this information with the caveat that it represents the lower limit of expenditures in disadvantaged communities. However, the amount of spending in disadvantaged communities could be higher. Specifically, we excluded any expenditures when we lacked confidence in accurately locating the appropriate census tract, although they may have been within disadvantaged communities. We also identified problems with the energy-savings goals in the data for 2012 through 2015, and therefore do not present those goals or information derived from them, such as energy-savings performance, for those years. Although we recognize that these limitations may affect the precision of the numbers we present, there is sufficient evidence in total to support our audit findings, conclusions, and recommendations.

STATE OF CALIFORNIA – NATURAL RESOURCES AGENCY Gavin Newsom, *Governor*

CALIFORNIA ENERGY COMMISSION
715 P STREET
SACRAMENTO, CA 95814-5512
www.energy.ca.gov

February 14, 2025 *transmitted via email*

Grant Parks, California State Auditor*
California State Auditor
621 Capitol Mall, Suite 1200
Sacramento, CA 95814

Subject: 2023-127—Response to Draft Audit Report for CEC's Oversight of the California Schools Healthy Air, Plumbing, and Efficiency Program

The California Energy Commission (CEC) appreciates the California State Auditor's audit of CEC's oversight of the California Schools Healthy Air, Plumbing and Efficiency Program (CalSHAPE).

We provide the following responses to the report findings and recommendations.

Summary of Findings:

The audit report states that:

- CEC may not be able to distribute all grant funds to school districts for improvements to their HVAC systems before CalSHAPE ends in 2026.
- CEC has accumulated $100 million in unspent funds reserved for the plumbing program that it likely will not use before the program ends.

Recommendation:

By May 2025, CEC should create a plan to use all remaining CalSHAPE funds before the deadline in state law, such as by finding additional applicants or requesting that the Legislature change state law to allow CEC to return the leftover funding to utilities—and ultimately ratepayers—immediately.

CEC's Response to Findings and Recommendations:

1. Recommendations, pages 9 – 10. We agree that the CEC may not distribute all funds before the program ends. Pursuant to Public Utilities Code (PUC) Section 1615(f), the CEC shall return leftover funding to the utilities by December 1, 2026. The law is silent on requiring a request to the legislature to change to state law. CEC will follow legislative and Governor's Office direction regarding the use of the remaining CalSHAPE funds. ① ②

* California State Auditor's comments appear on page 69.

2. Plumbing outreach, pages 8 – 9. The audit report states that it "did not identify any efforts that the [CEC] has taken to raise awareness among school districts about the [Plumbing P]rogram after it distributed the initial round of funding for plumbing grants in 2024." The CEC did, however, make several efforts to raise awareness among school districts about the Plumbing Program including presenting information on the Plumbing Program at many public workshops, conferences, tradeshows, and webinars throughout the duration of the program to increase awareness, which includes, but is not limited to:

    - Public workshops where information on the available funding, application process, and program requirements was presented.[1]

    - Public notices of funding availability were sent to the CEC's CalSHAPE email distribution list, which had almost 800 individual subscribers, and posted on the CEC webpage at the beginning of each of the five funding rounds (Fall 2021, March 2022, June 2022, December 2022, July 2023).[2]

    - Individual meetings with stakeholders, including industry groups, contractors, county offices of education, and school districts.

    - Outreach booth at the California School Boards Association Annual Education Conference in 2022 where we advertised both the Ventilation and Plumbing programs to over 1,000 attendees which included school board members, parents of students, teachers, and various school district employees.

    - County of San Diego webinar in January of 2023 and the Sustainable Building Working Group (SBWG) webinar in February 2023 where we provided information on both Ventilation and Plumbing programs, as well as current issues applicants were facing during the application process.

    - Coalition for Adequate School Housing Conferences in February 2023 and February 2024 where we discussed the funding available for both programs.

    - Green Schools Summit in October 2023 where we presented about the funding available for both programs.[3]

[1] *See, e.g.*, https://www.energy.ca.gov/programs-and-topics/programs/california-schools-healthy-air-plumbing-and-efficiency-program-0; and https://www.energy.ca.gov/events/past-events?field_program_target_id%5B167%5D=167&field_event_type_target_id=All.
[2] *See, e.g.*, https://efiling.energy.ca.gov/Lists/DocketLog.aspx?docketnumber=20-RENEW-01
[3] *See* https://www.rateitgreen.com/green-building-resources/sustainable-building-events/green-ca-schools-and-higher-education-summit/6624

3. Oversight and Quality Assurance, page 6, paragraph 1. The audit report describes the CEC's responsibilities in administering the CalSHAPE Program. Beyond the responsibilities mentioned, the CEC also provides oversight of ventilation and plumbing projects, which include quality assurance and quality control reviews of grantee's projects, to ensure program requirements are met. On page 6, paragraph 1, CEC recommends the following edit, "The Energy Commission's responsibilities include…approving applications for grant funds, ***providing oversight and quality control of retrofits,*** and distributing funds to schools. . . . " ① ④

4. Expanded eligibility to plumbing, page 9. The audit report states CEC expanded plumbing eligibility to state agencies. This expansion was done at statutory direction pursuant to PUC Section 1631. CEC recommends the following edit on page 9, first paragraph, "However, ***based upon statutory direction,*** the Energy Commission expanded eligibility for plumbing grants to state agencies in 2022...***."*** ① ⑤

5. Length of process, pages 6-7. The audit report states CEC's lengthy process for distributing funds to school districts is the reason some school districts are at risk of not completing their ventilation grant project before the October 31, 2026, final reporting deadline. CEC staff believe this is an incomplete explanation of the administrative and implementation timeline that schools navigate. While there is a process for applying and receiving funds that takes time, some school districts are at risk of not completing the grant projects due primarily to the lengthy process for local education agencies to hire a contractor, perform the work, prepare documents, and submit final reports prior to the October 31, 2026, deadline, which was put in place to meet the statutory deadline to return unspent funds to the utilities. Below are several considerations for this section: ① ⑥

    - The CalSHAPE process was informed by stakeholders' comments requesting additional time at various stages of the process to accommodate the administrative processes of schools. The initial draft of the program guidelines, presented at a scoping workshop on January 22, 2021, proposed a maximum 18-month project term with an additional 3-month term extension. The CEC received comments from industry groups, contractors, and school districts stating 18 months was not long enough to complete the assessment process and reporting required by the Ventilation Program. In response to these comments, the CEC extended the time frame to complete the grant work to 2 years with an option for a 6-month extension in the first edition of the program guidelines and an 18-month extension in the fifth edition of the program guidelines. Recently, contractors and school districts have requested additional time to complete project work. ⑥

- The CalSHAPE payment process was designed to efficiently distribute grant funds while maintaining good stewardship of public funds. The CEC issues 50 percent of the award upon execution of the grant agreement for the Ventilation Program, 25 percent when the initial reporting is submitted, and the final 25 percent is issued after the final reporting, including project cost invoices and receipts, is submitted. The CEC coordinated with the State Controller's Office (SCO) to develop a streamlined process for issuing payments to ensure that funds are distributed as quickly as possible. At the time that a grant project reaches a payment milestone, program staff create an invoice for the grant award payment, the CEC's accounting office schedules the invoice, and SCO is notified to begin their process for issuing a check.

① 6. Program budget, Pages 4 – 6. The audit report provides CalSHAPE budget information, including the amount of funding available for ventilation and plumbing grant awards. As shown in the latest CalSHAPE program budget table below, the program includes $19 million from the greenhouse gas reduction fund (GGRF), allocated by the California Budget Act of 2022, Section 2, Item 3360-101-3228, which are statutorily restricted to be used for the Ventilation Program Upgrade & Repair grants. The CalSHAPE Activities and Expenditures, Annual Report on Program Year 2024, which includes a detailed description of the program budget, grant awards, and remaining funding, will be available on the CalSHAPE Program webpage in the second quarter of 2025.

CalSHAPE Program Budget (As of February 12, 2025)	
Plumbing	$240,960,161
Ventilation	$722,880,504
@Ventilation - GGRF	$19,000,000
Administration	$31,000,000
Total	$1,013,840,665

Thank you for this opportunity to respond to this draft report. Should you have any questions, please contact CEC's Audit Director, Mindy Patterson at mindy.patterson@energy.ca.gov or (916) 980-7937.

Respectfully,

Drew Bohan
Executive Director

cc: Jennifer Martin-Gallardo, Deputy Executive Director, California Energy Commission
Amanda Martin, Deputy Assistant Secretary, Administration & Finance, California Natural Resources Agency
Christina Evola, Assistant Chief Council, California Energy Commission
Mindy Patterson, Audit Director, California Energy Commission
Deana Carrillo, Director, California Energy Commission
Jennifer Nelson, Deputy Director, California Energy Commission
Jonathan Fong, Program Manager, California Energy Commission
Blake Campbell, Energy Commission Specialist, California Energy Commission
Rosemary House, Administrative Assistant for Commissioner Gallardo, California Energy Commission
Lyndsay Jackson-Ross, Administrative Assistant to Chair Hochschild, California Energy Commission

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Comments

CALIFORNIA STATE AUDITOR'S COMMENTS ON THE RESPONSE FROM THE CALIFORNIA ENERGY COMMISSION

To provide clarity and perspective, we are commenting on the Energy Commission's response to our audit. The numbers below correspond to the numbers we have placed in the margin of its response.

When delivering the draft report to the Energy Commission we included only the portions relevant to it in a redacted draft. Therefore, the page numbers that the Energy Commission cites in its response do not correspond to the final report. (1)

We are disappointed that the Energy Commission implies that it will not implement our recommendation. Specifically, as we describe on page 38, the Energy Commission has accumulated $109 million in unspent funds reserved for the plumbing program that it will likely not use before the deadline to spend program funds on December 1, 2026. Nothing precludes the Energy Commission from requesting the Legislature change state law to allow it to return this leftover funding to utilities—and ultimately ratepayers—earlier than the deadline. Therefore, we stand by our recommendation that the Energy Commission create a plan by May 2025 to use all remaining CalSHAPE funds before the deadline in state law, such as by finding additional applicants or requesting that the Legislature change state law to allow the Energy Commission to return the leftover funding to utilities immediately. (2)

During the course of the Energy Commission's review of our draft report, we updated our report text to clarify that the Energy Commission has not taken action since distributing its final round of funding in 2024, rather than after its initial round of funding. (3)

Our description of the Energy Commission's responsibilities on page 36 is not intended to be all encompassing, and is only meant to give examples of its responsibilities in administering the CalSHAPE program. Thus, we did not make any changes to our report text as the Energy Commission recommends. (4)

The Energy Commission incorrectly implies that state law required it to expand eligibility for the plumbing program to state agencies in 2022. On the contrary, state law requiring it to extend eligibility for plumbing grants to state agencies became effective one year earlier in 2021. Thus, we did not make any changes to our report text as the Energy Commission recommends. (5)

We disagree with the Energy Commission's assertion that some school districts' lengthy processes—not its own for distributing funds—place them at risk of not completing their ventilation grant projects before the deadline. As the entity required by state law to administer the CalSHAPE program, we expected the Energy Commission to use feedback it received from stakeholders and make adjustments to its distribution of funding, such as by seeking changes to the spending deadline, to provide school districts with enough time to comply with program requirements. Instead, to help school districts meet this deadline, and as we state on page 53, the Energy Commission is only providing technical assistance to school districts and communicating program requirements and timelines to address spending delays. Thus, we stand by our conclusion. (6)

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PUBLIC UTILITIES COMMISSION
STATE OF CALIFORNIA
505 VAN NESS AVENUE | SAN FRANCISCO, CALIFORNIA 94102

February 14, 2025

Grant Parks*
California State Auditor
621 Capitol Mall, Suite 1200
Sacramento, CA 95814

CALIFORNIA PUBLIC UTILITIES COMMISSION RESPONSE TO CSA AUDIT (2023-127) – ENERGY EFFICIENCY PROGRAMS AUDIT

Dear Grant Parks:

The California Public Utilities Commission (CPUC) provides our response to the draft report findings of the California State Auditor's (CSA) report entitled *Energy Efficiency Programs Audit.*

Californians have been saving energy and money through energy efficiency for decades. California's programs led by the CPUC consistently rank at the top of the American Council for an Energy Efficiency Economy's national standings for state energy efficiency policies and programs that save energy, advance fairness, and produce environmental and economic benefits.

The CPUC is also continuously seeking ways to limit increases or reduce ratepayer costs and bills. We appreciate CSA's focus on cost-effective energy efficiency in the report, because we are pursuing the same goal.

There are broad changes happening in the energy efficiency marketplace as California pursues additional, harder-to-achieve energy savings. Broadly speaking, ratepayer-funded energy efficiency programs provide rebates for cost-effective and energy efficient technologies that are novel when first introduced into the marketplace. Consumers use the rebates to be the first to try out the technologies. Within months or a few years, consumer adoption brings technologies like LED lighting into wide availability at competitive prices. Once adoption is sufficiently widespread and the market grows robust, the California Energy Commission (CEC) can adopt more stringent building codes and standards incorporating the technologies.

These market changes have benefited Californians, who save energy and money. At all points in the journey of market transformation for numerous appliances, devices, and building technologies, the CPUC always presses utilities, industry, and the private sector to innovate so that ratepayer-funded programs deliver cost-effective energy savings.

* California State Auditor's comment appears on page 79.

The challenge is to keep finding such opportunities once the easiest technology standards are moved into code. Heat pump technologies are examples of technologies undergoing intentional efforts at market transformation today.

California's values of fairness also drive the CPUC to ensure that we distribute resources fairly among Californians, which means managing programs that deliver energy efficiency to people, small businesses, and communities for whom affordability presents a significant barrier. Such programs do not always yield the highest cost-effectiveness scores, yet are an important piece of delivering the benefits of saving energy and money to all Californians.

As the CSA report points out, these policy and program designs have implications for the cost-effectiveness of energy efficiency programs.

The CPUC is Adapting Energy Efficiency to California's Changing Needs as Climate Change Impacts the State

As California's needs change, so do our programs. In 2024, after an extensive public stakeholder
① process, the CPUC switched to a new energy efficiency metric that values long term benefits such as the avoided cost of energy over the efficient equipment's lifetime. This is called the Total System Benefit—it recognizes the long-term benefits that the equipment delivers, as well as the fact that homes and businesses using such equipment help California keep the lights on during our more-frequent heat waves that stress the electric grid. We anticipate that our portfolio of programs will have produced $533 million in Total System Benefits in 2024. In addition, our energy efficiency programs are expected to deliver 3.9 million metric tons of lifecycle CO2 reductions and 14.6 million metric tons of lifecycle CO2 reductions from building codes and standards.

The CPUC is committed to the continuous improvement of its operations. The CPUC appreciates the work performed by the CSA and the opportunities for improvement. The CPUC will establish a corrective action plan and timelines toward implementing the recommendations identified in this report as set out in our response below.

If you have further questions, please contact me at (415) 757-7844.

Sincerely,

Rachel Peterson

Rachel Peterson
Executive Director

Enclosure

cc: Alice Reynolds, President
California Public Utilities Commission

Christine Hammond, General Counsel
Legal Division

Angie Williams, Director
Utility Audits, Risk and Compliance Division

Recommendation 1: Annually evaluate the performance of each utilities' program portfolios to determine whether they are achieving energy savings goals and are cost effective.

CPUC Response: ☒ Agrees ☐ Disagrees with the recommendation or partially agrees.

The CPUC agrees and will implement this recommendation.

CPUC staff will assign a team to annually evaluate the performance of each utilities' program portfolio to determine if energy savings goals are met and if the portfolio is cost effective. Starting with the next program year, CPUC staff will create a portfolio spreadsheet of evaluated performance. Based on this first year, CPUC staff will develop a cadence and frequency of the evaluation performance spreadsheets going forward.

Recommendation 2: Require utilities to create corrective action plans when their program portfolio does not meet energy savings goals or are not cost-effective.

CPUC Response: ☒ Agrees ☐ Disagrees with the recommendation or partially agrees.

The CPUC agrees and will implement this recommendation.

Using the analysis completed from Recommendation 4, CPUC staff will create a memo based on 2024 quarterly data and report program Total System Benefit targets versus reported Total System Benefit, by utility. The memo will also include the end of year Total Resource Cost (TRC) ratio by utility. The memo will highlight programs where Total System Benefit was not met and if the portfolio TRC is less than 1. CPUC staff will meet to discuss the memo results with the utilities at the next scheduled bi-monthly (every two months) meeting. After that meeting, CPUC staff will request the utilities to confirm the results from the memo and either develop a corrective action plan to address deficiencies in their portfolio or describe in their annual report their strategies to achieve their 4-year Total System Benefit and cost effectiveness goals. The corrective action plan will have timelines to fix the deficiencies.

Recommendation 3: Formalize, such as through a CPUC commission decision, its plans to hold bi-monthly meetings with utilities and specify the information utilities must provide regarding the performance of their program portfolios. At a minimum, this information should include the progress utilities make in meeting energy savings goals and cost effectiveness of their program portfolios.

CPUC Response: ☒ Agrees ☐ Disagrees with the recommendation or partially agrees.

The CPUC agrees and will implement this recommendation.

Beginning in 2020, CPUC staff have conducted bi-monthly (every two months) meetings with PGE, SCE and jointly with SCG/SDGE. To formalize these meetings, CPUC staff will reach agreement with each utility on the schedule of these meetings for 2025 and will maintain the schedule of

recurring meetings. CPUC staff can require, as a standing item, that each meeting begin with a presentation of the programs meeting energy savings goals and an analysis of the current drivers of cost effectiveness of their portfolios. CPUC staff will create an internal share point folder to store the agenda and materials for each of these bi-monthly meetings, starting with the next bi-monthly meeting after the audit report is public.

Recommendation 4: Annually review the data utilities submit about energy savings and cost effectiveness for all efficiency programs to identify those that are underperforming, including those that consistently fall short of goals.

CPUC Response: ☒ Agrees ☐ Disagrees with the recommendation or partially agrees.

The CPUC agrees and will implement this recommendation.

CPUC staff can utilize 2024 quarterly reports that are available on the California Energy Data and Reporting System (CEDARS) website. CPUC will assign staff to create a comparison table of programs that generate energy savings and compare the Total System Benefit forecasts for 2024 by utility to the 2024 year-end Total System Benefit reported on CEDARS. While the CPUC adopts goals at the portfolio-level and not at the program-level, this will create an initial indication of performance compared to 2024 Total System Benefit forecasts.

For cost effectiveness, CPUC staff will utilize 2024 quarterly reports that will be available on CEDARS. CPUC staff will add a portfolio level cost effectiveness result for 2024 by each utility. This process will continue annually.

Recommendation 5: Work with utilities to determine why efficiency programs may be underperforming and propose corrective actions to address the causes of underperforming programs.

CPUC Response: ☒ Agrees ☐ Disagrees with the recommendation or partially agrees.

The CPUC agrees and will implement this recommendation.

As part of Recommendation 3 (every two-month meetings) and the corrective action plans created from Recommendation 2, CPUC staff and the utilities will have the opportunity to discuss underperforming programs in more detail. From the meetings in Recommendation 3, CPUC staff will assign a team to work with each utility once programs have been identified as underperforming, per Recommendation 2. This team will track and follow up on corrective actions as appropriate.

Recommendation 6: End efficiency programs that consistently fail to meet cost-effectiveness or energy savings goals, such as by issuing a CPUC decision prohibiting utilities from using such programs in their program portfolios.

CPUC Response: ☐ Agrees ☒ Disagrees with the recommendation or partially agrees.

The CPUC cannot implement this recommendation as written but agrees with its spirit and will take the steps identified below to partially implement it.

The CPUC notes the existing rules of the energy efficiency program do not grant CPUC staff the authority to end a specific program. Only an order from the Commission can require the utilities to end a program or set rules on when programs must be terminated. And the Commission can only consider this type of order substantially changing the rules of the energy efficiency program in a formal proceeding. In addition, based on the CPUC's quasi-judicial structure and legal requirements, the Commission cannot commit to a particular proceeding outcome in advance. Instead, the Commission must fairly make its decision based on the arguments and record made by parties in the proceeding. As a result, the CPUC cannot commit to implement this recommendation as written.

However, the CPUC agrees that programs that consistently underperform should be reviewed and ended absent other compelling circumstances and will implement steps to do so. Based on the outcomes of Recommendations 2-5, CPUC staff will work with the utilities to identify programs that may be removed from the portfolio through an existing procedural mechanism, and why. This process can be documented publicly as required by Decision 21-05-031, Ordering Paragraph 12: "All energy efficiency program administrators shall file a Tier 2 advice letter when opening a new program or closing an existing program." In addition, CPUC staff will develop a proposal for consideration in a CPUC proceeding on how to identify consistently underperforming programs and options for program conclusion.

Recommendation 7: By September 2025, develop and implement a process to track and follow-up on the timeliness of utilities' 60-day responses to recommendations. This tracking should include the Evaluation, Measurement and Verification (EM&V) publication date, the due date of the 60-day response, the date the CPUC received the response, and the follow-up that the CPUC took to ensure timely responses.

CPUC Response: ☒ Agrees ☐ Disagrees with the recommendation or partially agrees.

The CPUC agrees and will implement this recommendation.

CPUC staff will use the evaluation reports issued in 2024 and the program administrators' corresponding responses to recommendations for each of those reports to develop the template required for this recommendation. CPUC staff will create a spreadsheet that includes the EM&V publication date, the due date of the 60-day response, and the date the CPUC staff received the response. CPUC staff will include a column for CPUC follow-up. Once this template is created with 2024 impact evaluations, CPUC staff will test the template with any upcoming published response to recommendations. CPUC staff will make refinements if necessary and complete the tracking by September 2025. CPUC staff will store the response to recommendation tracker on a CPUC related website.

Recommendation 8: As part of this process, by September 2025, track the status of utilities' implementation of the recommendations. This tracking should include a utility's proposed corrective actions and the CPUC's assessment of the adequacy of the utility's implementation of the recommendation.

CPUC Response: ☒ Agrees ☐ Disagrees with the recommendation or partially agrees.

The CPUC agrees and will implement this recommendation.

CPUC staff will compile the program administrators' responses to recommendations submitted during the 2024 year. The program administrators utilize a common template that lists the recommendations and how the program administrator responded. CPUC staff will assign a team to determine the adequacy of the utility response and develop follow-up steps and tracking tools for CPUC staff to ensure the recommendation is implemented.

Recommendation 9: By September 2025, memorialize this new tracking process in policies and procedures that detail how and when utilities should respond to recommendations and the action the CPUC will take to follow up on those responses.

CPUC Response: ☒ Agrees ☐ Disagrees with the recommendation or partially agrees.

The CPUC agrees and will implement this recommendation.

In the process of creating the trackers and templates for Recommendations 7 and 8, CPUC staff will develop a procedures checklist for both internal and external staff. This procedures checklist for how and when the utilities should respond to recommendations will be stored on the CPUC energy efficiency website, and available to program administrator staff as a resource. The procedures and guidance for actions the CPUC may take to follow up on those responses will be developed in tandem with Recommendation 8 and added to the CPUC's EM&V training materials.

Recommendation 10: By March 2026, using guidance from best practices and stakeholders, the CPUC should begin revisiting its consideration of participant non-energy benefits and costs in the TRC calculation, such as by including or excluding both factors in the calculation.

CPUC Response: ☒ Agrees ☐ Disagrees with the recommendation or partially agrees.

The CPUC agrees with and will implement this recommendation.

CPUC will begin revisiting its consideration of participant non-energy benefits and costs in the energy efficiency cost effectiveness calculation by March 2026. CPUC staff will analyze guidance from best practices and receive feedback from stakeholders and will develop a proposal regarding how to consider participant non-energy benefits and costs.

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Comment

CALIFORNIA STATE AUDITOR'S COMMENT ON THE RESPONSE FROM THE CALIFORNIA PUBLIC UTILITIES COMMISSION

To provide clarity and perspective, we are commenting on the CPUC's response to our audit. The number below corresponds to the number we have placed in the margin of its response.

We appreciate that the CPUC introduced a new metric to measure the value of energy savings in 2024. Because it was adopted by the CPUC after the period of our review, which was from 2012 through 2022, we do not discuss Total System Benefit in our report. ①

Attachment

Order Instituting Rulemaking

For Oversight of Energy Efficiency Portfolios, Policies, Programs, and Evaluation

BEFORE THE PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA

Order Instituting Rulemaking for Oversight of Energy Efficiency Portfolios, Policies, Programs, and Evaluation.	R._____

ORDER INSTITUTING RULEMAKING

Summary

This Order Instituting Rulemaking is established as the forum for regulatory issues related to the ongoing oversight and administration of energy efficiency programs by the Commission. This will be the primary venue for all issues relating to the energy efficiency policies, programs, and evaluation efforts for oversight of the portfolio administrators conducting and implementing energy efficiency programs under the Commission's jurisdiction. This rulemaking does not include in scope the Energy Savings Assistance Program or any of the energy efficiency programs administered by the small and/or multi-jurisdictional utilities. This rulemaking is the successor proceeding to Rulemaking 13-11-005, which was closed in January 2025. The Commission welcomes comments on the preliminary scope of issues and schedule identified in this rulemaking.

1. Background

This proceeding is a successor to a set of energy efficiency rulemaking proceedings dating back several decades, including most recently Rulemaking

(R.) 13-11-005, with the prior rulemakings being R.09-11-014, R.06-04-010, and R.01-08-028. Now, as in the past, there is a need for a procedural home for all matters involved in setting policy for and overseeing the administration and implementation of energy efficiency portfolios and programs.

The immediate predecessor proceeding (R.13-11-005) resulted in numerous changes to the energy efficiency portfolios, including, but not limited to, the following:

- Adding several new Regional Energy Networks (RENs) as portfolio administrators;
- Overseeing a shift toward statewide program implementation of at least 25 percent of the portfolio;
- Overseeing a shift toward the majority of the portfolios being designed and implemented by third parties;
- Setting out a schedule for portfolio filings and mid-cycle improvements and milestones;
- Setting Total System Benefit as the primary goal for the portfolios;
- Modifying fuel substitution policy to remove barriers to adoption of energy efficiency measures that save both energy and emissions;
- Imposing a moratorium on any shareholder earnings by investor-owned utilities from successful energy efficiency efforts;
- Launching emergency efforts to assist with electric reliability in the summers of 2022 and 2023; and
- Launching a statewide market transformation portfolio, with a new third-party administrator and five-year portfolio.

2. Preliminary Scoping Memo

This order instituting rulemaking (OIR) will be conducted in accordance with Article 6 of the Commission's Rules of Practice and Procedure, "Rules."[1] As required by Rule 7.1(d), this OIR includes a preliminary scoping memo as set forth below, and preliminarily determines the category of this proceeding and the need for hearing.

We expect this proceeding, like its predecessors, will evolve as issues arise with respect to energy efficiency programs and implementation. As a preliminary structure, we have divided the issues expected to be addressed in this proceeding into two main categories: policy issues and implementation issues, both associated with our focus on cost-effective energy efficiency portfolios.

2.1. Policy Issues

2.1.1. Natural Gas Measure Policy and Definition of Viable Electric Alternatives

In the Portfolio Administrators' 2024-2027 portfolio application proceeding (Application (A.) 22-02-005 et al.), the Commission addressed policy with respect to incentives offered for certain measures that save natural gas, in light of California's aggressive clean energy goals. Decision (D.) 23-04-035 addressed some issues related to this policy and directed additional processes, including a working group to, among other things, define and identify "viable electric alternatives" (VEA) to gas measures. A staff proposal is expected to be issued in

[1] All references to "Rules" are to the Commission's Rules of Practice and Procedure unless otherwise indicated.

2025 for stakeholder input. Ongoing policy development associated with this natural gas measure policy, in the context of the broader state policy toward building decarbonization, will be needed.

2.1.2. Community Choice Aggregator Oversight

Following modifications to Public Utilities Code Section[2] 381.1, D.14-01-033 was adopted providing guidance to community choice aggregators (CCAs) who wish to either apply to administer energy efficiency programs in their geographic area, or elect to administer programs only for their own electricity customers. Now that numerous CCAs have elected to administer energy efficiency programs under the provisions of Section 381.1(e)-(f), the Commission has more experience with the implementation of that policy. In particular, we are aware that the budget formula for CCAs that elect to administer energy efficiency programs may need to be modified or refined. There may also be other aspects of CCA portfolio and/or program administration rules that require refinement. A staff proposal is expected to be issued in 2025 for stakeholder input.

2.1.3. Policy Guidance for 2026 Portfolio Applications

All current portfolio administrators are expected to file applications in 2026 for new portfolios to begin implementation in 2028. In advance of those applications, the Commission may want to provide additional policy guidance

[2] All references to "Section" are to the Public Utilities Code Section unless otherwise indicated.

on the contents of the applications. An Administrative Law Judge (ALJ) ruling with staff recommendations is expected to be issued in 2025.

2.1.4. Portfolio Oversight and Cost-Effectiveness

This proceeding will provide a venue for the Commission to review energy efficiency portfolios for consistency with policy objectives, including affordability, decarbonization, and reliability, and to establish processes for continued Commission oversight. The proceeding is consistent with the March 2025 California State Auditor report, which included recommendations on how the Commission can improve its oversight of energy efficiency portfolios.[3] In addition, this proceeding aligns with the Commission's response to Governor Newsom's Executive Order N-5-24 regarding electricity affordability, which notes plans to "open a new rulemaking on energy efficiency in 2025" with "a focus on cost-effectiveness."[4]

2.1.4.1. Portfolio Oversight

The last energy efficiency rulemaking (R.13-11-005) resulted in numerous changes to the energy efficiency portfolios, such as establishing portfolio segments for programs depending on their primary objectives and setting specific requirements by segment. This proceeding plans to build on that work to consider enhancements to the Commission's oversight of the energy efficiency

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[3] *See* the Auditor's report 2023-127 at the following link: https://www.auditor.ca.gov/reports/2023-127/

[4] *See* "CPUC Response to Executive Order N-5-24," February 18, 2025, at 18, available at the following link: https://www.cpuc.ca.gov/-/media/cpuc-website/industries-and-topics/reports/cpuc-response-to-executive-order-n-5-24.pdf

portfolios and programs to ensure they provide maximum benefits to ratepayers. This will include (among other related issues) actions to identify and improve or conclude programs that consistently underperform.

2.1.4.2. Cost-Effectiveness

Cost-effectiveness policy is critical to the design and evaluation of energy efficiency portfolios which, like several other public benefit programs, are funded by ratepayers. Work to refine the Avoided Cost Calculator, which underpins much of the cost-effectiveness analysis, is ongoing in R.22-11-013. As part of a process of continual improvement of energy efficiency programs, adjustments may be needed to cost-effectiveness policies and their application within energy efficiency portfolios and programs. In addition, energy-efficiency-specific cost-effectiveness policy should be coordinated with the broader distributed resource cost-effectiveness work being undertaken in R.22-11-013. This proceeding may also evaluate actions that could improve the efficacy of energy efficiency portfolios and explore ways to reduce ratepayer funding for programs.

2.1.5. Treatment of Multifamily Buildings and Programs

In D.25-01-006, the decision which closed the predecessor proceeding (R.13-11-005), the Commission denied a motion by Bay Area Regional Energy Network (BayREN) and Tri-County Regional Energy Network (3CREN) on the treatment of multifamily buildings, for purposes of the custom project review process and some other aspects of energy efficiency policy. While the particular solution proposed by BayREN and 3CREN was rejected, we recognize there is a

need to address the needs of the multifamily sector more directly and potentially craft new approaches to address this sector that is complex and challenging to serve. We expect this issue to receive attention in this proceeding in 2025, and Commission staff will likely begin by hosting a workshop to solicit ideas on the best approaches.

2.1.6. Other Policy Issues

Though we do not intend to schedule specific activities related to other policy issues, it is possible that during our oversight of this proceeding, issues may arise related to the following topics: modifications or refinements to third-party solicitation requirements; modifications or refinements to statewide program rollout or policy; modifications or refinements to REN requirements and continued oversight; guidance related to financing programs (coordinated with R.20-08-022); and Normalized Metered Energy Consumption Rulebook modifications.

2.2. Implementation Issues

2.2.1. Potential and Goals

Every two years, the Commission undertakes an updated study to determine the energy efficiency potential that should be included by the California Energy Commission as part of its Integrated Energy Policy Report demand forecast. This study also determines the goals that the energy efficiency portfolio administrators should be expected to meet in overseeing and implementing their programs. The next potential and goals study is expected to be completed in early 2025. Parties will have an opportunity to comment on the

draft study prior to a proposed decision being issued proposing its adoption by the Commission no later than August 2025.

2.2.2. Oversight of 2024-2027 Portfolios

The Commission authorized the energy efficiency portfolios for the period 2024-2027 in D.23-06-055. Any ongoing oversight of these approved portfolios will be conducted in this rulemaking.

2.2.3. Other Implementation Issues

Though we do not intend to schedule specific activities related to other program or portfolio implementation issues at this time, it is possible that in the course of our oversight of this proceeding, issues may arise related to the following topics: market transformation program rollout and oversight (coordinated with A.24-12-009); integrated demand-side management (coordinated with R.22-11-013 and/or R.21-06-017); strategic energy management program updates; emerging technology program updates; oversight and improvements to the Database for Energy Efficiency Resources; program evaluation oversight, conducted by Energy Division, and implications of evaluation outcomes for programs going forward; and program synergies and duplication, among different types of administrators (CCAs, RENs, utilities) and/or program categories (resource acquisition, equity, and market support).

3. Preliminary Schedule

Section 2 above lays out the expected priorities in this proceeding, which include: VEA policy; potential and goals activities; guidance on 2026 portfolio applications; multifamily policy; and the budget formula for CCAs who elect to administer energy efficiency programs for their own retail customers.

The preliminary schedule for those items is as follows in the table below, with categories for the above near-term priorities. Activities related to the other topics will be scheduled, as needed, after these items or in parallel.

PRELIMINARY SCHEDULE

EVENT	DATE
Comments on OIR filed and served	20 days from issuance of OIR
Reply comments on OIR filed and served	30 days from issuance of OIR
Prehearing conference	To be scheduled, ~45 days from issuance of OIR
Scoping memo	~60 days from issuance of OIR
Energy Efficiency Potential and Goals	
ALJ Ruling issued with consultant report for party comments	2nd Quarter 2025
Opening comments filed and served	2nd Quarter 2025
Reply comments filed and served	2nd Quarter 2025
Proposed Decision	3rd Quarter 2025
Commission Decision	No sooner than 30 days after the PD
VEA Policy	
ALJ Ruling issued with staff proposal for party comments	3rd Quarter 2025
Opening comments filed and served	3rd Quarter 2025
Reply comments filed and served	3rd Quarter 2025
Proposed Decision (PD)	4th Quarter 2025
Commission Decision	No sooner than 30 days after the PD
Multifamily Programs and Policy	

EVENT	DATE
Workshop	3rd Quarter 2025
ALJ Ruling issued with staff proposal for party comments	3rd Quarter 2025
Opening comments filed and served	4th Quarter 2025
Reply comments filed and served	4th Quarter 2025
Proposed Decision	4th Quarter 2025
Commission Decision	No sooner than 30 days after the PD
CCA Elect-to-Administer Budgets and Policy	
ALJ Ruling issued with staff proposal for party comments	4th Quarter 2025
Opening comments filed and served	4th Quarter 2025
Reply comments filed and served	4th Quarter 2025
Proposed Decision	1st Quarter 2026
Commission Decision	No sooner than 30 days after the PD
Guidance for 2026 Portfolio Applications (if needed)	
ALJ ruling with staff recommendations	2nd Quarter 2025
Opening comments filed and served	2nd Quarter 2025
Reply comments filed and served	2nd Quarter 2025
Proposed Decision	3rd Quarter 2025
Commission Decision	No sooner than 30 days after the PD

A prehearing conference (PHC) will be held for the purposes of (1) taking appearances, (2) discussing schedule and process, and (3) informing the scoping

memo. The PHC will be scheduled after the adoption of the OIR and notice will be served on the service list.

The assigned Commissioner or the assigned ALJ may change the schedule to promote efficient and fair administration of this proceeding. Today's decision sets the due date for comments on the OIR. The schedule for the remainder of the proceeding will be adopted in the Assigned Commissioner's Scoping Memo following the PHC.

Due to the complexity and number of issues in this proceeding, it is the Commission's intent to complete this proceeding within 24 months of the date this OIR is adopted. (Public Utilities Code § 1701.5(b).)

If there are any workshops in this proceeding, notice of such workshops will be posted on the Commission's Daily Calendar to inform the public that a decision-maker or an advisor may be present at those meetings or workshops. Parties shall check the Daily Calendar regularly for such notices.

4. Categorization; *Ex Parte* Communications; Need for Hearing

The Commission's Rules of Practice and Procedure require that an OIR preliminarily determine the category of the proceeding and the need for hearing. As a preliminary matter, we determine that this proceeding is ratesetting, similar to its predecessor R.13-11-005, because the policy and programmatic issues within the scope are likely to result in revenue requirement changes and ratepayer costs and savings. Accordingly, *ex parte* communications are restricted and must be reported pursuant to Article 8.

We are also required to preliminarily determine if hearings are necessary. We preliminarily determine that hearings may be necessary. If issues arise where parties raise disputed issues of fact, we will make a provision for parties to request evidentiary hearings. Initially, we have not provided for evidentiary hearings in the preliminary schedule, since no issues have yet been identified that would require hearings.

5. Respondents

Pacific Gas and Electric Company, Southern California Edison Company, Southern California Gas Company, and San Diego Gas & Electric Company are the utilities named as respondents to this proceeding. The other energy efficiency portfolio administrators are named as respondents as well, including: Marin Clean Energy, BayREN, Inland Regional Energy Network, Southern California Regional Energy Network, Central California Rural Regional Energy Network, Northern California Rural Regional Energy Network, San Diego Regional Energy Network, and 3CREN.

6. Addition to Official Service List

Addition to the official service list is governed by Rule 1.9(f) of the Commission's Rules of Practice and Procedure. Respondents are parties to the proceeding (*see* Rule 1.4(d)) and will be immediately placed on the official service list.

Any person will be added to the "Information Only" category of the official service list upon request, for electronic service of all documents in the proceeding, and should do so promptly in order to ensure timely service of comments and other documents and correspondence in the proceeding. (*See*

Rule 1.9(f).) The request must be sent to the Process Office by e-mail (process_office@cpuc.ca.gov) or letter (Process Office, California Public Utilities Commission, 505 Van Ness Avenue, San Francisco, California 94102). Please include the Docket Number of this rulemaking in the request.

Persons who file responsive comments thereby become parties to the proceeding (*see* Rule 1.4(a)(2)) and will be added to the "Parties" category of the official service list upon such filing. In order to assure service of comments and other documents and correspondence in advance of obtaining party status, persons should promptly request addition to the "Information Only" category as described above; they will be removed from that category upon obtaining party status.

7. Service of OIR

This OIR shall be served on all respondents.

In addition, in the interest of broad notice, this OIR will be served on the official service lists for the following proceedings:

- R.13-11-005 (previous energy efficiency rulemaking);
- A.22-05-002 et al. (2024-2027 energy efficiency portfolio applications); and
- A.24-12-009 (market transformation initiatives application).

Service of the OIR does not confer party status or place any person who has received such service on the Official Service List for this proceeding, other than respondents. Instructions for obtaining party status or being placed on the official service list are given in Section 6 above.

8. Filing and Service of Comments and Other Documents

Filing and service of comments and other documents in the proceeding are governed by the Commission's Rules of Practice and Procedure. Rule 1.10 requires only electronic service on any person on the official service list. When serving documents on the ALJs, Commissioners, or their personal advisors, whether or not they are on the official service list, parties must only provide electronic service. Parties must not send hard copies of documents to Commissioners, their personal advisors, or the ALJs unless specifically instructed to do so. Parties should also pay particular attention to Rule 13.7(f) governing the treatment of prepared testimony and exhibits.

9. Subscription Service

Persons may monitor the proceeding by subscribing to receive electronic copies of documents in this proceeding that are published on the Commission's website. There is no need to be on the official service list in order to use the subscription service. Instructions for enrolling in the subscription service are available on the Commission's website at http://subscribecpuc.cpuc.ca.gov/.

10. Public Advisor

Any person or entity interested in participating in this rulemaking who is unfamiliar with the Commission's procedures should contact the Commission's Public Advisor in San Francisco at (415) 703-2074 or (866) 849-8390 or e-mail public.advisor@cpuc.ca.gov. The TTY number is (866) 836-7825.

11. Intervenor Compensation

Intervenor Compensation is permitted in this proceeding.

Pursuant to Section 1804(a)(1), a customer who intends to seek an award of compensation must file and serve a notice of intent to claim compensation by 30 days after the prehearing conference. Parties new to participating in Commission proceedings may contact the Commission's Public Advisor, described in Section 10 above, for more information.

12. Public Outreach

Section 1711(a) states:

> "Where feasible and appropriate, except for adjudication cases, before determining the scope of the proceeding, the commission shall seek the participation of those who are likely to be affected, including those who are likely to benefit from, and those who are potentially subject to, a decision in that proceeding. The commission shall demonstrate its efforts to comply with this section in the text of the initial scoping memo of this proceeding."

Public outreach will be described in the scoping memo of the assigned Commissioner.

O R D E R

IT IS ORDERED that:

1. This Order Instituting Rulemaking is adopted pursuant to Rule 6.1 of the Commission's Rules of Practice and Procedure.
2. The preliminary categorization is ratesetting.
3. The preliminary determination is that hearings may be needed.
4. The preliminary scope of issues is as stated above in Section 2.
5. Pacific Gas and Electric Company, Southern California Edison Company, Southern California Gas Company, and San Diego Gas & Electric Company are respondents to this Order Instituting Rulemaking.

6. Marin Clean Energy, Bay Area Regional Energy Network, Inland Regional Energy Network, Southern California Regional Energy Network, Central California Rural Regional Energy Network, Northern California Rural Regional Energy Network, San Diego Regional Energy Network, and Tri-County Regional Energy Network are respondents to this Order Instituting Rulemaking.

7. Respondents shall, and any other person may, file comments responding to this Order Instituting Rulemaking (OIR) by no later than 20 days after the issuance date of the OIR. Reply comments may be filed no later than 30 days after the issuance date of the OIR.

8.The Executive Director will cause this Order Instituting Rulemaking to be served on all respondents and on the service lists for the following Commission proceedings: Rulemaking 13-11-005, Application (A.) 22-02-005 et. al., and A.24-12-009.

9. Any party that expects to claim intervenor compensation for its participation in this Order Instituting Rulemaking must file its notice of intent to claim intervenor compensation any time after the start of the proceeding until no later than 30 days after the prehearing conference is held. (*See* Rule 17.1(a)(2).)

This order is effective today.

Dated _____, at Sacramento, California.

Attachment

Executive Department

State of California

Executive Order N-5-24

EXECUTIVE DEPARTMENT
STATE OF CALIFORNIA

EXECUTIVE ORDER N-5-24

WHEREAS California has responded forcefully to the climate crisis with ambitious plans for a clean energy future—one in which the State will achieve carbon neutrality economywide by 2045, and run on 90% clean electricity by 2035 and 100% clean electricity by 2045; and

WHEREAS clean energy will power more of the daily lives of Californians as we move closer to those goals, from our cars and trucks and trains, to our homes and buildings, to our industrial sector; and

WHEREAS it is essential that electric service remains affordable, reliable, and safe for all Californians during our clean energy transition; and

WHEREAS California's over four decades of work to advance appliance and building energy efficiency standards has kept electric bills lower on average in California than many other states, but Californians have seen their electric bills rise in recent years, outpacing the rate of inflation; and

WHEREAS Californians' electric rate increases have been driven largely by the cost of some programs added over time, such as the subsidy provided through the legacy Net Energy Metering program for rooftop solar photovoltaic systems; and

WHEREAS electric rate increases have also been driven by historic investments that are critical to reduce wildfire risk and improve the safety and reliability of the electric grid, particularly in the wake of catastrophic wildfires that devastated communities throughout California in recent years and have been exacerbated by the increasing impacts of climate change; and

WHEREAS in 2023, I released the *Building the Electricity Grid of the Future: California's Clean Energy Transition Plan* to provide a roadmap for keeping electric costs affordable, while effectively managing our energy supply through this transition; and

WHEREAS California regulatory agencies have taken important actions within their authority to advance the cost-effective procurement and deployment of clean energy resources while pursuing opportunities to limit and stabilize costs to Californians, including actions by the California Public Utilities Commission to adjust the Net Energy Metering program subsidies to reflect the growth of the rooftop solar photovoltaic market and the value these systems provide to all customers, and through improved oversight and the imposition of cost controls on private utility expenses; and

WHEREAS the critical work of upgrading and expanding the aging electric transmission and distribution infrastructure that makes up our electric grid to meet future demand is well underway — investments that will ultimately increase the base of electricity customers and help address rising electricity rates while growing the State's economy; and

WHEREAS the upcoming legislative session provides a critical opportunity to take decisive action to rein in those costs by ensuring that private electric utilities and State programs alike are prioritizing the most efficient and effective opportunities to meet energy demand with clean energy resources, informed by the analyses required and requested under this Order; and

WHEREAS the California Climate Credit, a bill credit funded by California's Cap-and-Trade Program, has helped offset hundreds of dollars of electric and natural gas costs on individual ratepayer bills, totaling over $12 billion since 2014.

NOW, THEREFORE, I, GAVIN NEWSOM, Governor of the State of California, in accordance with the authority vested in me by the State Constitution and statutes of the State of California, do hereby issue the following Order to become effective immediately:

IT IS HEREBY ORDERED THAT:

1. The California Energy Commission is directed to examine all electric ratepayer-funded programs it oversees or administers and to identify any programs, and any other regulations that may be unduly adding to rates, for which the electricity system benefits may not be justified by the costs they impose on electric ratepayers, or whose funding might more appropriately come from a source other than ratepayers. The commission shall report to me by January 1, 2025, the results of its analysis and its recommendations for statutory and/or regulatory changes, including the modification or elimination of any Underperforming or underutilized programs and whether any ratepayer funds in any programs remain unused and can be considered for possible return to ratepayers.

2. The California Public Utilities Commission is requested to examine the benefits and costs to electric ratepayers of programs it oversees and rules and orders it has promulgated pursuant to statutory mandates that may be unduly adding to electric rates, or whose funding might more appropriately come from a source other than ratepayers. The commission is requested to report to me by January 1, 2025, the results of its analysis and its recommendations for modifying or repealing any statute that would reduce costs to electric ratepayers without compromising public health and safety, electric grid reliability, or the achievement of the State's 2045 clean electricity goal and the State's 2045 economywide carbon neutrality goal.

3. The California Public Utilities Commission is requested to take immediate action under existing authorities to modify or sunset any underperforming or underutilized programs or orders whose costs exceed the value and benefits to electric ratepayers. The commission is requested to return any unused funds collected from ratepayers for underperforming programs and utility investments in the form of a bill credit, if it identifies such funds.

4. The California Air Resources Board is directed, and the California Public Utilities Commission is requested, to consult with each other on options to maximize the effectiveness of California's Climate Credit—which returned an average of $71 to electric ratepayers on their utility bills this fall. Options to improve the credit, particularly for low-income Californians, should be reported to me by January 1, 2025.

5. The Office of Energy Infrastructure Safety is directed, and the California Public Utilities Commission is requested, to consult with each other on adjustments to utility wildfire safety oversight processes, procedures, and practices that would yield administrative efficiencies and focus utility investments and activities on cost-effective wildfire

mitigation measures that reduce wildfire ignition risk while managing costs to electric ratepayers. Proposals for legislative or regulatory changes should be reported to me by January 1, 2025.

6. The California Public Utilities Commission is requested to pursue, and direct the regulated utilities to pursue, all federal funding opportunities that can help reduce and avoid electric service costs that would otherwise flow into electric ratepayer bills.

IT IS FURTHER ORDERED that, as soon as hereafter possible, this Order be filed in the Office of the Secretary of State and that widespread publicity and notice be given of this Order.

This Order is not intended to, and does not, create any rights or benefits, substantive or procedural, enforceable at law or in equity, against the State of California, its agencies, departments, entities, officers, employees, or any other person.

IN WITNESS WHEREOF I have hereunto set my hand and caused the Great Seal of the State of California to be affixed this 30th day of October 2024.

GAVIN NEWSOM
Governor of California

ATTEST:

SHIRLEY WEBER, PH.D.
Secretary of State

Inland Regional Energy Network
I-REN Executive Committee

Staff Report

Subject: I-REN Energy Fellowship Status Update

Contact: Tyler Masters, WRCOG Program Manager, tmasters@wrcog.us, (951) 405-6732

Date: May 20, 2025

Recommended Action(s):

1. Receive and file.

Summary:

A status update on this matter will be provided.

Discussion:

This item is reserved for a staff presentation on the status of the I-REN Energy Fellowship Program.

Prior Action(s):

None.

Financial Summary:

Activities related to the Workforce Education & Training Sector are included under the I-REN Fiscal Year 2024/2025 Budget in Fund 180, under the Workforce Education & Training subprogram.

Attachment(s):

None.