Southern California ESJ Communities & Tribes EPIC 5 Workshop

Joint IOU EPIC 5 Investment Plans

June 18, 2026

The EPIC program is funded by California utility customers under the auspices of the California Public Utilities Commission

Language Need

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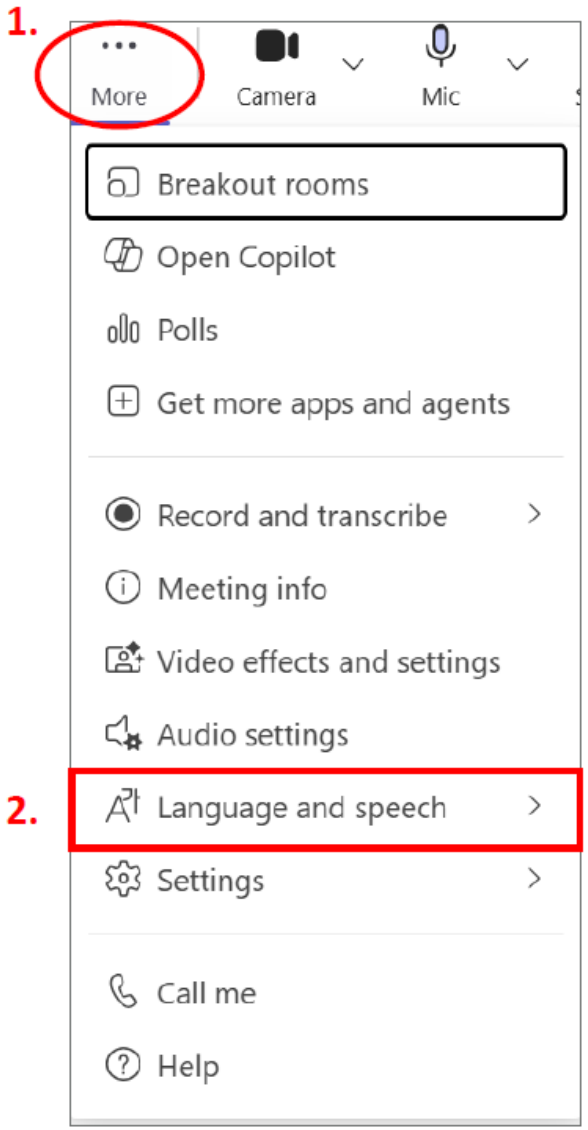
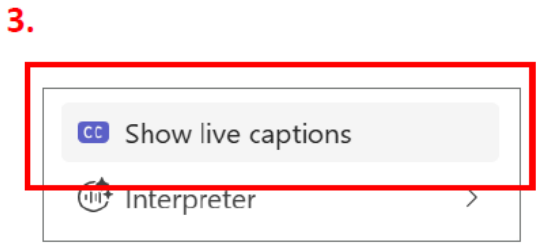




ESJ Communities EPIC 5 Workshop Agenda

Agenda Topics	Start Time	Minutes	Section Detail
Opening	10:00	5	Introduction and Safety Moment
EPIC Overview	10:05	10	EPIC Program Overview
SDG&E Project Spotlight	10:15	10	SDG&E's EPIC Projects that Benefit Communities
	10:25	5	Q&A: SDG&E's projects
SCE Project Spotlight	10:30	10	SCE's EPIC Projects that Benefit Communities
	10:40	5	Q&A: SCE's projects
PG&E Project Spotlight	10:45	10	PG&E's EPIC Projects that Benefit Communities
	10:55	5	Q&A: PG&E's projects
Break	*11:00*	*5*	*Break for 5 minutes and return*
Q&A on How EPIC can impact ESJ Communities	11:05	10	Q&A: How EPIC Projects Can Benefit the Community
SDG&E, SCE and PG&E EPIC 5 Investment Plans	11:15	20	Discuss Upcoming EPIC 5 Investment Plans
Q&A on EPIC 5 Investment Plans	11:35	15	Q&A: Ways EPIC 5 can Impact the Community
Closing	11:50	5	Concluding Comments, Next Steps

1. Welcome & Safety

Richard Kwee, EPIC Program Manager
SCE

SAFETY MOMENT: ROADWAY CROSSING AWARENESS

Ensure the roadway is clear by checking both directions prior to crossing.

Situational awareness starts with checking both ways

Hazards:

- Oncoming vehicles from unexpected directions (lane changes, one-way streets)
- Turning vehicles may not see pedestrians entering crosswalks
- Fast-moving bicycles and scooters reduce reaction time
- Obstructed views from parked cars or construction
- Driver distraction or reduced visibility

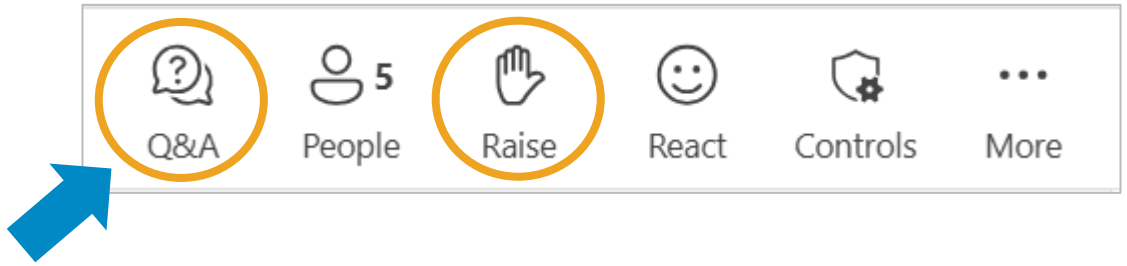
Goals For ESJ Communities EPIC 5 Workshop

1. Share tangible examples of how EPIC projects can benefit the community.
2. Share information and receive feedback from CBOs, ESJ community stakeholders & Tribes on draft Investor-Owned Utility (IOU) approaches for the EPIC 5 Investment Plan and potential impacts and benefits to communities;
3. Hear stakeholder input on the key priorities of different communities with respect to EPIC goals and research topics under consideration;
4. Receive other stakeholder input on how ESJ communities and Tribes can be better integrated in EPIC 5 programming throughout the investment period.

Workshop audience feedback and submitted comments will be **documented and incorporated in the EPIC 5 Investment Plans to be filed August 26, 2026**.

To Participate

- Type your question in the Chat, or
- Raise your hand



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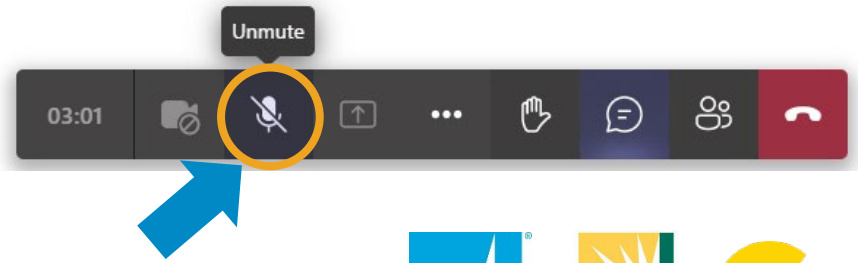


2. Introduction to EPIC

Britt Shaw, EPIC Program Manager
PG&E

What is EPIC?

The Electric Program Investment Charge (EPIC) is a California statewide program that enables energy utilities and the California Energy Commission (CEC) to invest in & pursue new/novel emerging energy solutions to benefit electric ratepayers and support California's energy goals

Five guiding principles have been formally established to guide all EPIC work:

Increased Safety • Improved Affordability • Greater Reliability
Environmental Sustainability • Equity

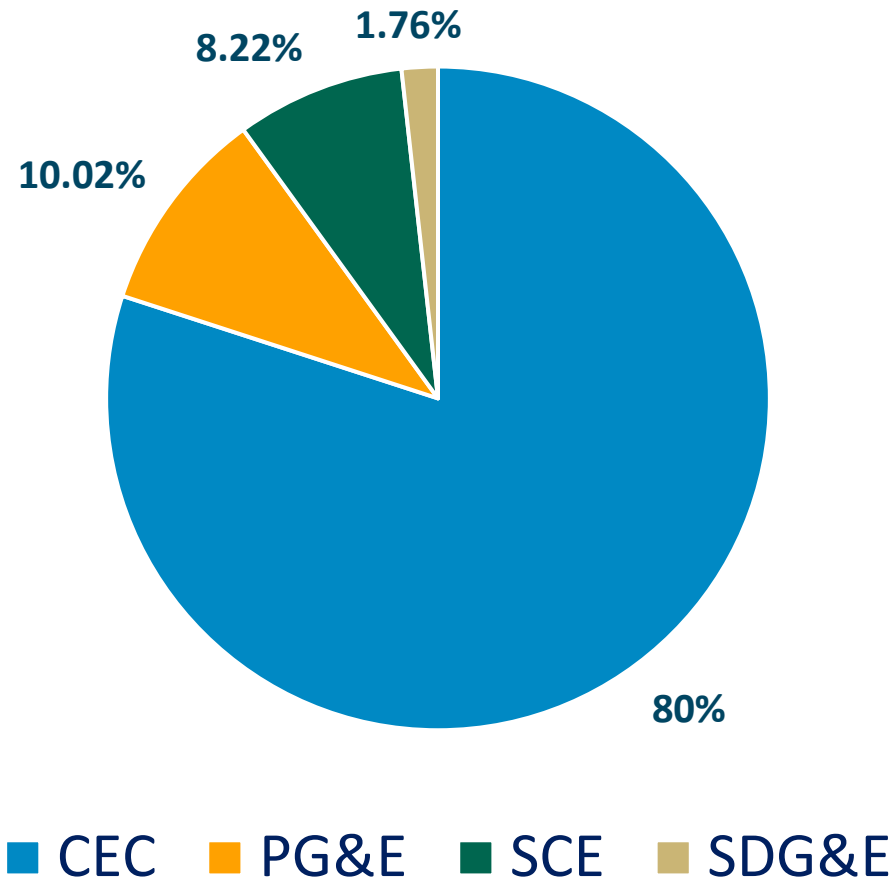
This program is funded by California utility customers under the auspices of the California Public Utilities Commission.

CPUC-Designated EPIC Work Categories

Applied Research and Development	Technology Demonstration & Deployment	Market Facilitation
Investment in applied energy science and technology that provides public benefit but for which there is no current deployment of private capital.	Investments in technology demonstrations to showcase emerging innovations and increase technology commercialization.	Investments in market research, regulatory permitting and streamlining, and workforce development activities to address non-price barriers to clean technology adoption.
CEC	CEC	CEC
	SCE SDG&E PG&E	

EPIC Funding Allocation

The CEC administers **80%** of EPIC funding. The three IOU administrators oversee the remaining **20%** of funding, which is divided as shown in the pie chart.



Types of EPIC Projects

Projects that EPIC Can Fund

- EPIC funds technology demonstration and deployment projects
  - Demonstrations typically locate in only one or a few locations to prove a technology works

Projects EPIC Cannot Fund

- EPIC cannot fund customer incentive programs
- EPIC cannot fund a project after the demonstration phase ends
  - Therefore, the short-term project life cannot create permanent workforce opportunities
- Broad deployments of commercially available/already proven technologies
  - Successful projects can use other sources of funds to scale across the grid to provide benefits like reliability affordability, safety, environmental sustainability and equity.

How EPIC Can Benefit ESJ Communities

As examples, a selection of current and past EPIC projects are delivering the following benefits in specific ESJ communities where they are deployed:

	Benefit Area	Past / Current EPIC Project Examples
Benefits to Specific Communities / Customers	**Safety**	• Local deployment of hardware to rapidly de-energize power lines in wire-down events, to **improve community safety**
	Reliability / Resiliency	• Local installation of devices to proactively address power quality issues, to **keep agricultural equipment operating** in the San Joaquin Valley • Local installation of multi-customer microgrids to **keep a community's critical facilities powered** during an outage • Advanced equipment that **improves power quality** using existing grid capacity.
	Environmental	• Mobile batteries to **improve air quality** • New technologies to **expedite transportation electrification.**

	Affordability	• **Lowering customer ownership costs** of Distributed Energy Resource, such as through:
		  • Innovations that allow for reduced losses and increased system efficiency
		  • New communication system that reduces the cost of complying with CPUC data-sharing requirements

How EPIC Can Benefit All Customers

EPIC projects also deliver improvements to safety, affordability, reliability, and environmental sustainability that benefit all customers. See examples from past and current IOU EPIC projects below:

	Benefit Area	Past / Current EPIC Project Examples
Benefits to All Customers	**Safety**	• Evaluate emerging technologies that can significantly advance IOUs' ability to **prevent, detect, and mitigate wildfires**. • Improvements to weather & fire danger models to help **prevent wildfire ignitions**
	Reliability / Resiliency	• Demonstrate advanced cybersecurity technologies to **protect the grid** • Innovative protection schemes for substation transformers to **prevent broad power outages**
	Environmental	• Demonstrations that inform industry standards for Smart Inverters to **enable clean generation integration**
	Affordability	• Using drones, augmented reality and digital models for more efficient inspections to **reduce operating costs which lower customer bills** • Technologies that support greater customer choice and flexibility to **manage energy costs.**

3. Examples of SDG&E EPIC Projects that Benefit the Community

Cynthia Carter, EPIC Program Manager
SDG&E

EPIC 4 Project 3 - Power Quality and Smoke Detection

Smart Power Monitoring

Tiny Problems

Small issues can affect the power.

Smart Meters

Detect issues early.

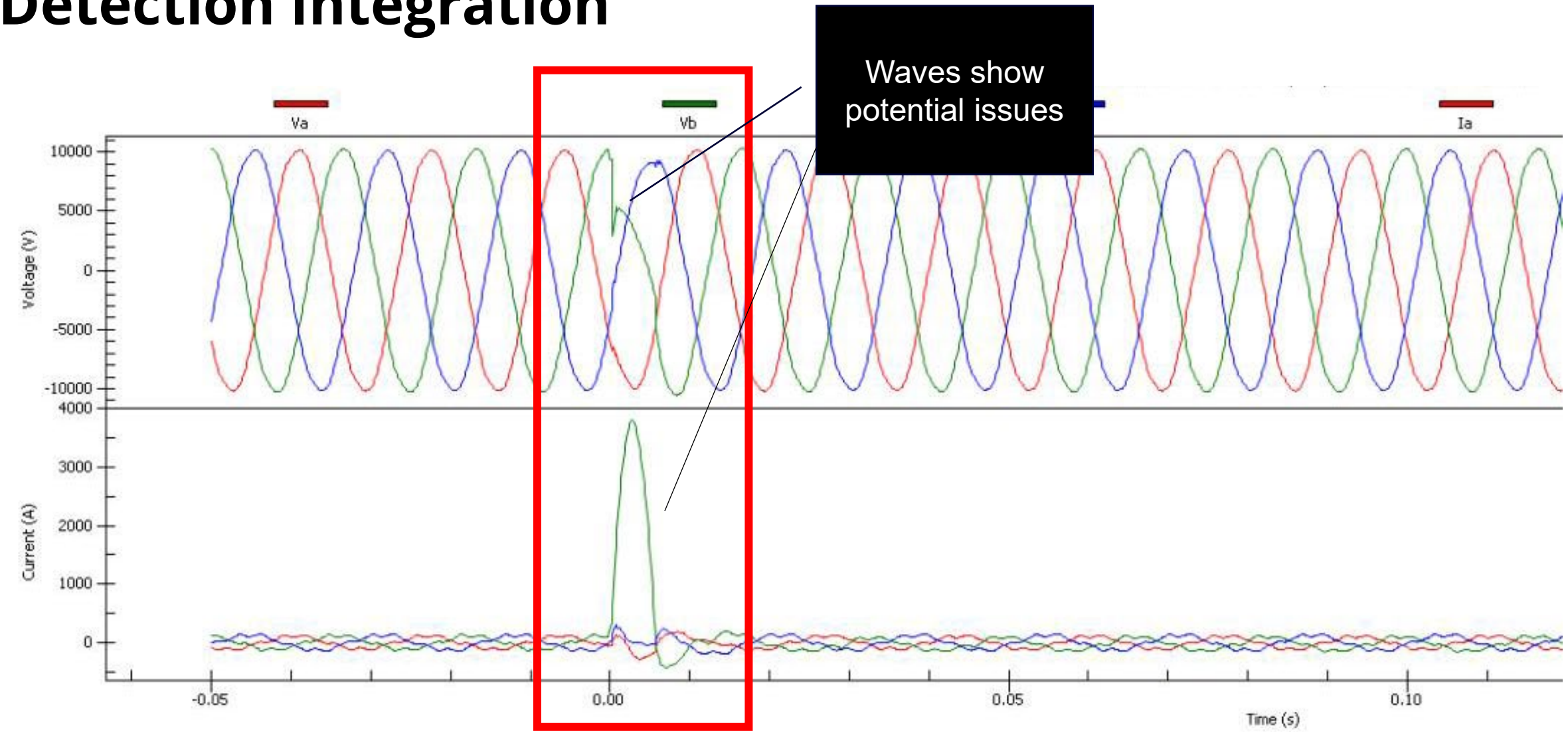
Find & Fix

Locate and repair before big trouble.

Safer & Reliable

Prevent outages & reduce risks.

EPIC 4 Project 3 - Power Quality and Smoke Detection Integration



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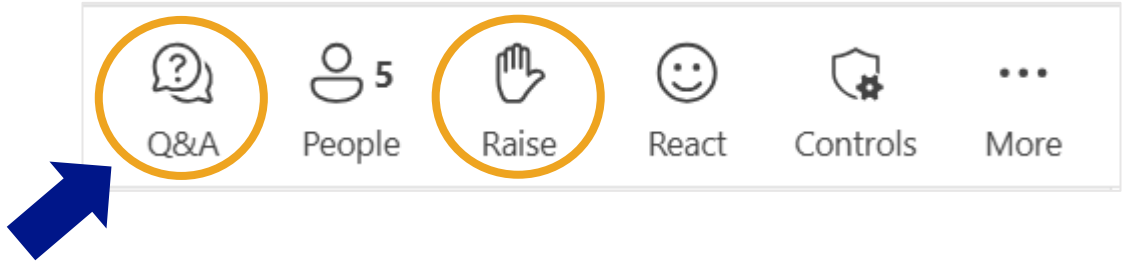

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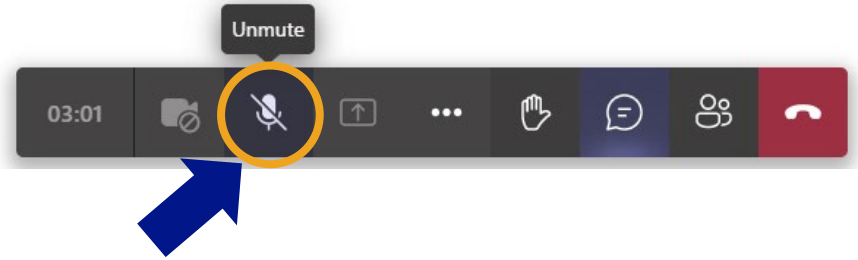


4. Examples of SCE EPIC Projects that Benefit the Community

Richard Kwee, EPIC Program Manager
SCE

Flexible Alternating Current System (FACS) EPIC 4

Project Introduction

This project aims to demonstrate how power quality conditioners (PQCs) can cost-effectively enhance grid utilization, power quality and resilience without the need for costly grid reinforcement.

Why this Project Matters

Distributed Energy Resources (DERs) like solar, batteries and wind provide clean energy to the grid. Areas with higher penetration of DER or large industrial loads can have power quality issues, leading to voltage fluctuations that can cause damage to electrical appliances and flickering effects (lights).

How the Project directly impacts Customers

- FACS will locate a PQC at a specific circuit (sub-station), nearer to the source of power quality issues, which will provide a localized solution.
    - Potentially improves energy efficiency for all users and reduce negative outcomes.
- PQCs can provide a cheaper alternative to upgrading grid infrastructure, which reduces cost increases to ratepayers.

Flexible Alternating Current System (FACS) EPIC 4

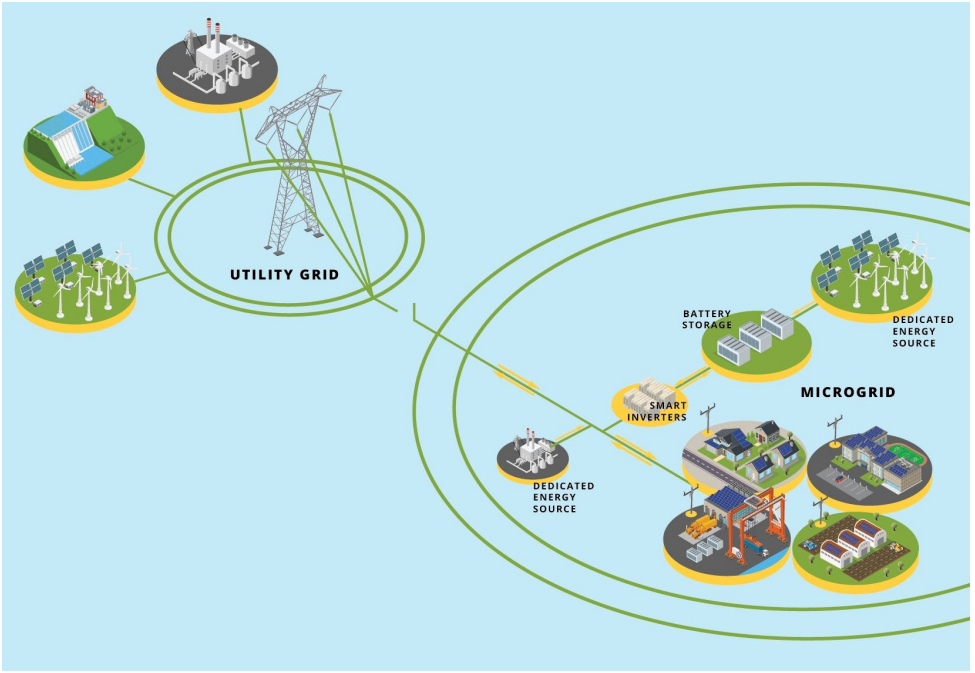
How did the Project Arrive in this Community?

- SCE performed a systemwide analysis of its territory to identify circuits that showed signs of power quality issues.
- Filtered circuits to include locations in DACs
- Detailed analysis to identify optimum location among selected circuits.

Future Impact?

- Develop internal standards to deploy this technology across SCE's territory
- Share findings with the industry through published papers and industry conferences

Smart City Demonstration EPIC 3



Project Introduction

SCE is partnering with the City of Porterville to **demonstrate a microgrid and Energy Storage (ES) system supporting a Wastewater Treatment Plant** to prevent overloading the circuit and protect against grid outages (planned or unplanned).

Why this Project Matters

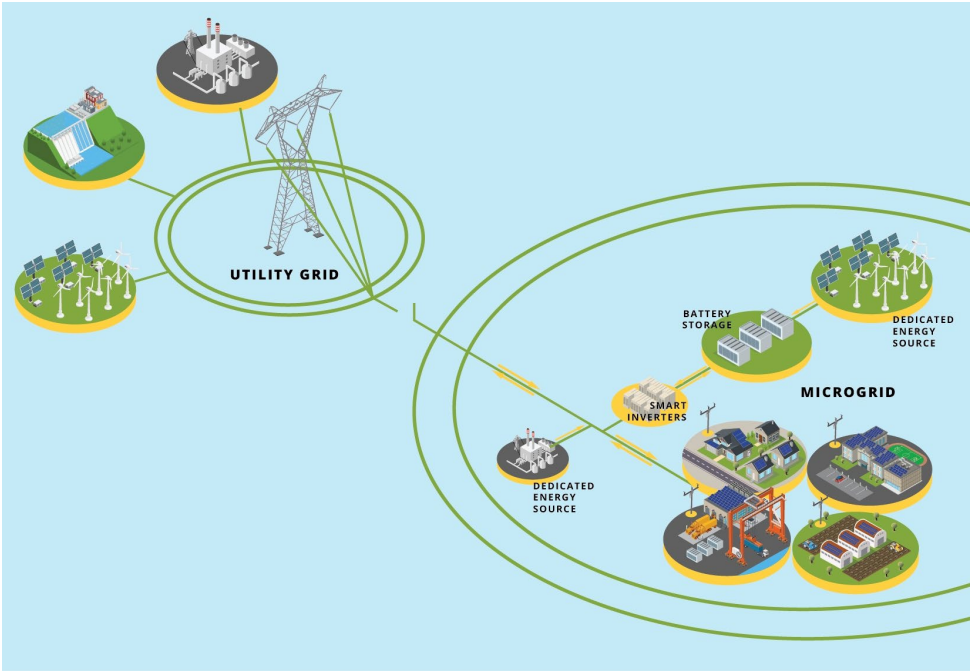
SCE is combining the Smart City microgrid project with a separate, SCE-funded Battery Energy Storage System (BESS).

The project evaluates a grid-forming, combined microgrid and BESS system to stabilize demand volatility and increase reliability.

How the Project Directly Impacts Customers

- The microgrid and ES system can provide power to the grid during high demand periods to reduce the outages, **improving the City of Porterville's reliability** in the face of unexpected spikes in demand.
- Smart City will ensure the City of Porterville's wastewater treatment plant receives consistent power even during grid outages, **providing resilience** to the water treatment plant and the entire City of Porterville.
- By reducing overloading of the grid, Smart City **reduces the need for spending** to reconductor wires to meet demand.

Smart City Demonstration EPIC 3



How did the Project Arrive in this Community?

- After successful lab demonstrations, SCE is now testing the project in the real-life conditions.
- Discussions at SCE across departments to match technology needs with a potential partner.
    - Challenges included finding partners with available land to host the system.

Future Impact?

- Upon successful completion of Smart City EPIC project, SCE will leave the microgrid system in the City of Porterville (EPIC funds will no longer be used on the project or equipment).
- SCE will build on lessons learned and deploy more microgrids, increasing reliability and resiliency for more ratepayers across SCE's territory.

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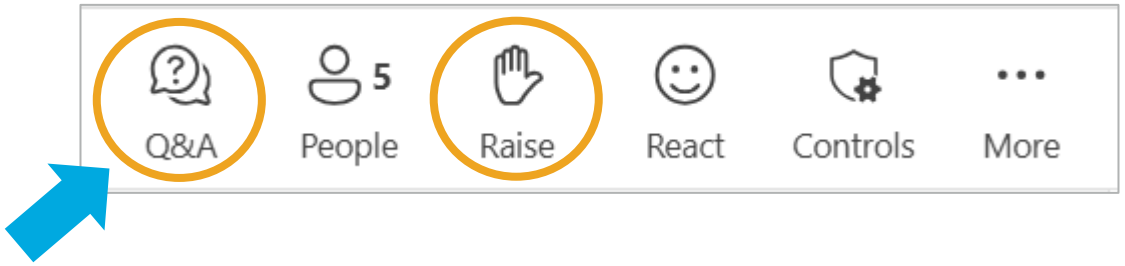

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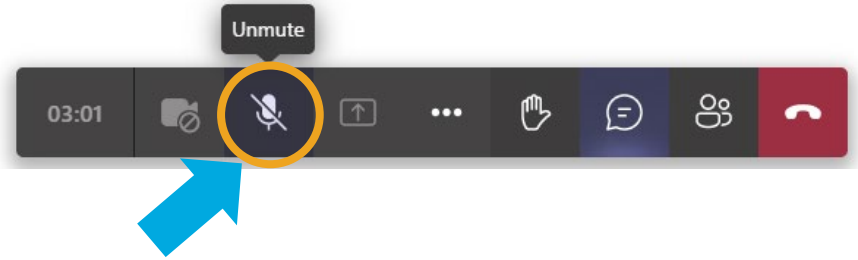


5. Examples of PG&E EPIC Projects that Benefit the Community

Britt Shaw, EPIC Program Manager
PG&E

PG&E EPIC Project Benefits

Past and currently active PG&E EPIC Projects have included the following types of benefits to specific communities and customers

Benefit Area:	Safety	Reliability / Resiliency	Environmental	Economic
PG&E Examples	Local deployment of hardware to rapidly de-energize power lines in wire-down events, to **improve community safety**	Local installation of multi-customer microgrids **to keep a community's critical facilities powered** during an outage	Local public transit fleet electrification to **improve air quality**	**Lowering customer ownership costs** of Distributed Energy Resources, such as through innovations that allow for reduced interconnection costs

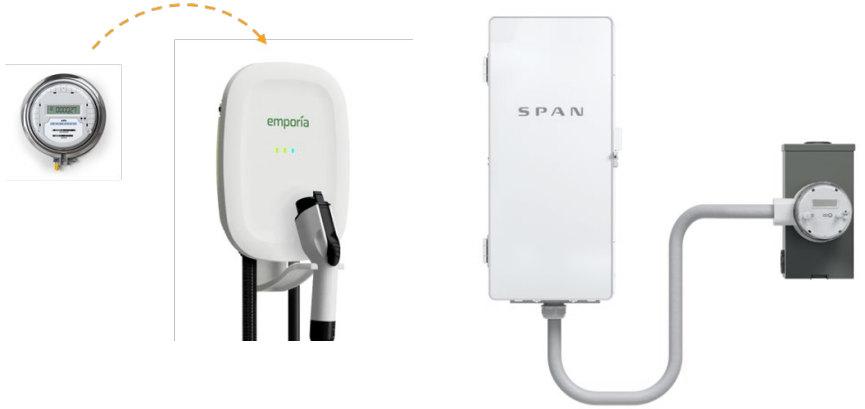
PG&E EPIC Project Examples

We will share information about the following two EPIC projects:

EPIC 3.11

Redwood Coast Airport Microgrid (RCAM)

EPIC 4.02



ChargeBoost and PanelBoost Electrification Projects

EPIC 3.11 Redwood Coast Airport Microgrid

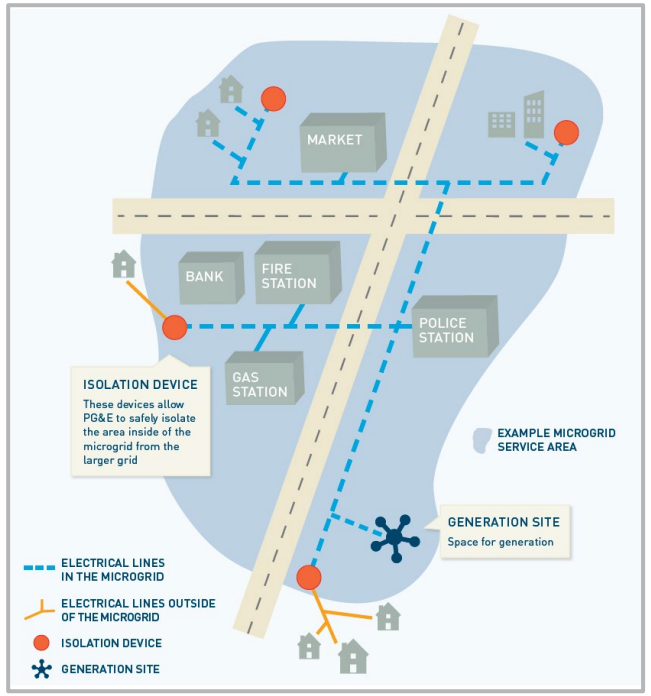
What is a Microgrid?

A microgrid is a small, independent power system that can operate on its own or work together with the larger electric grid. When the main grid goes down, a microgrid can keep power flowing to the homes and facilities it serves.

The **Redwood Coast Airport Microgrid (RCAM)** is the first 100% renewable, multi-customer community microgrid in California

- Online 2021
- Solar PV & Batteries
- Provides power to the Airport, the U.S. Coast Guard Air Station, and over a dozen other customers.
- Helps community during planned and unplanned grid power outages
    - Earthquakes
    - Storms & weather events

RCAM has established a blueprint for developing community microgrids, enabling scalable deployment in disadvantaged communities (DACs)



Other Available Microgrid Programs

Community Microgrid Enablement Program (CMEP): Up to $3M per project in funding

Microgrid Incentive Program (MIP): Up to $15M per project in funding

- Representatives of Tribes, governments and community-based organizations in eligible communities are encouraged to apply.

MIP-funded microgrids must serve communities that are considered BOTH:

Susceptible to Frequent Outages

Microgrid is located in any of the following:

1. Tier 2 or 3 High Fire-Threat District
2. Area that experienced prior PSPS outage
3. Elevated earthquake risk zone
4. Locations with lower historical level of reliability

OR: Local or Tribal government leadership may be able to justify other forms of vulnerability

Disadvantaged and Vulnerable

Eligible community meets any of the following criteria:

1. Census tracts with median household incomes less than 60% of state median
2. California Native American Tribal Community
3. Community with highest risk as identified in the current version of CalEnviroScreen
4. A rural area

OR: Microgrid powers a critical community facility that primarily serves one of these communities

Electrification Panel & Service Upgrade Avoidance

EPIC 4.02

What Does a Service Upgrade Cost For A Customer?

Panel Capacity Increase may trigger ~3 weeks; longer if project needs design review

Customer impacts:
- $3,000-$5,000
- Hire an electrician
- Submit application to utility for service modification

Service Line Capacity Increase may trigger additional weeks to years

Customer impacts:
- $2,000 - $4,500 overhead
- $3,000-$10,000 underground
- First $2-3K usually covered by utility allowance

Transformer and/or Pole Upgrade

Customer impacts:
- $2,850 - $30,000
- If ≥ 3 customers on a transformer, utility pays
- If ≤ 2 customers on the transformer, they pay

This costs the connecting customer money

This costs all customers money

Key takeaway: For customers, upgrading their electric service is expensive, time-consuming and often an unexpected surprise, making it challenging for more people to go electric.

Source: SPUR – Solving the Panel Puzzle Policy Brief, May 2024

PG&E Electrification Connections

EPIC 4.02A

ChargeBoost

EV CHARGING
Lowest cost EV connection without needing an upgrade

EPIC 4.02B

PanelBoost

FULL ELECTRIFICATION
Connect anything without needing an upgrade

- PG&E is launching both of these products this year to residential customers
- Targeting deployments to 500 customers by end of year
- Specific emphasis on customers in DACs

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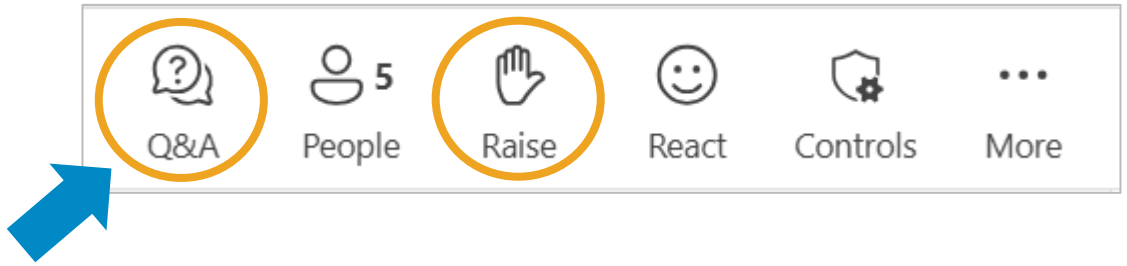

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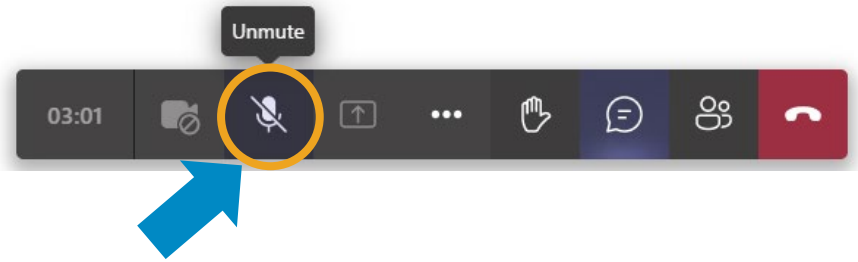

Break

Please return in 5 minutes

What Would You Like to Know About EPIC Projects and How they can Benefit the Community?

(10 Minutes)

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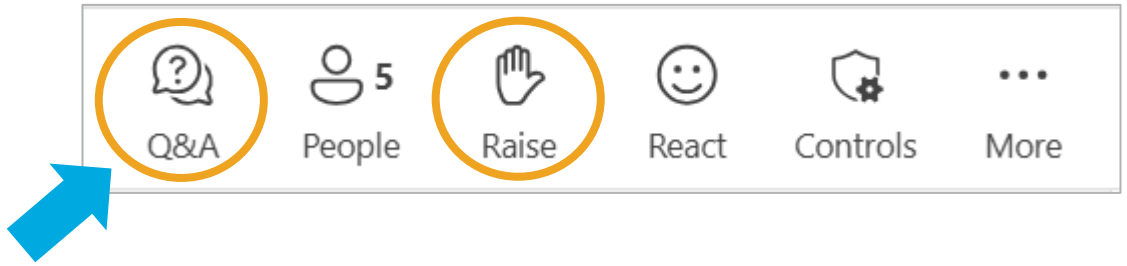

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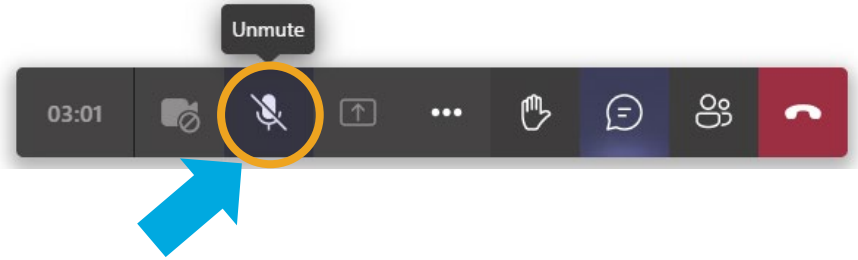
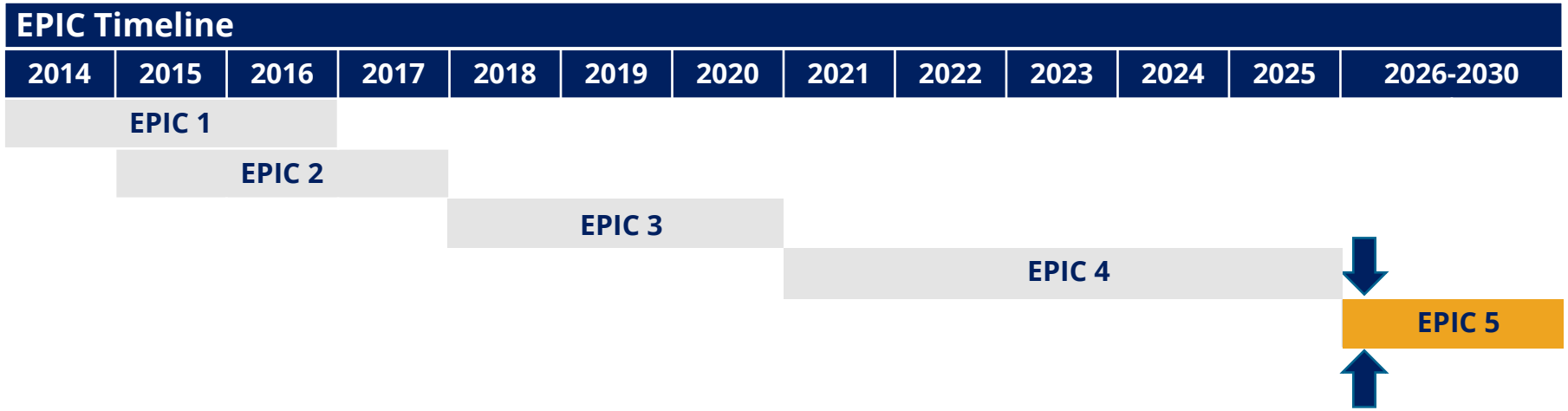


6. Looking Ahead to EPIC 5

Cynthia Carter, EPIC Program Manager
SDG&E

EPIC Timeline and EPIC 5 Investment Plans



- EPIC 3 and 4 cycle projects are continuing to completion
- Proceeding R.19-10-005 is ongoing (EPIC 4 & EPIC 5)
- Administrators will file EPIC 5 Community Engagement Plans by June 26, 2026
- Administrators are developing EPIC 5 Investment Plan applications
  - Must be filed by August 26, 2026

Investment Plan Structure

All EPIC-funded projects support meeting State Goals and EPIC Strategic Goals and Strategic Objectives. Administrator Investment Plans will propose Strategic Initiatives and Research Topic Areas. EPIC 5 portfolio projects within the Research Topic areas will be selected after Investment Plan approval. Measurable results of EPIC investment are characterized on near, mid, and long-term timeframes.

Source: CPUC Energy Division Staff, March 2026

EPIC 5 Strategic Goals

CPUC's D.24-03-007 set the five EPIC 5 Strategic Goals that will guide our plans.

Transportation Electrification

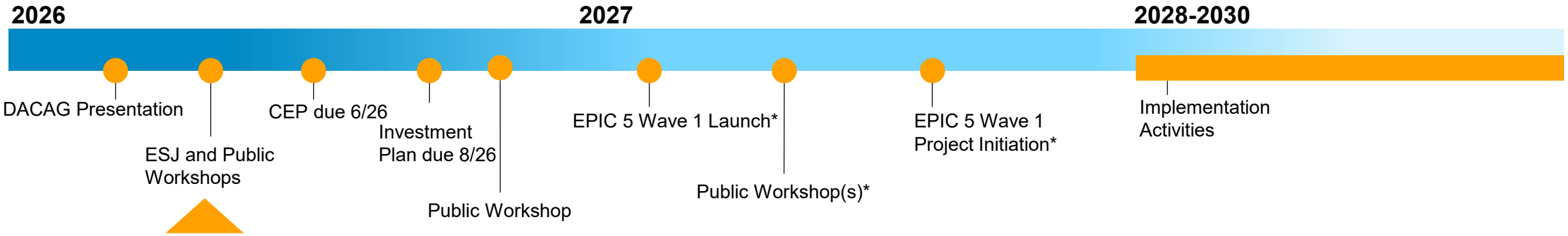
DER Integration

Building Decarbonization

Achieving 100% Net Zero Carbon Emissions & Coordinated Role of Gas

Climate Adaptation

EPIC 5 Lifecycle & Engagement Opportunities



Investment Plan Development

- ESJ Communities& Tribes Workshops
- Public Joint Admin Workshop
- Community Engagement Plan (CEP) submission
- Additional engagement to be detailed through each IOU's CEP

Project Selection

- Public Workshops
- Additional engagement during project ideation & selection to be detailed in each IOU's CEP
- EPIC Program Admin Coordination

Implementation

- CBO/ESJ Project Partners & feedback
- Metrics & Results Dissemination
- Sharing learnings, Industry engagement

**timing dependent on CPUC approval of Investment Plan*

7. SDG&E EPIC 5 Overview

Cynthia Carter, EPIC Program Manager
SDG&E

SDG&E's EPIC-5 Goals & Proposed Initiatives

DER Integration

Advancing the Grid for Community Resilience

Climate Adaptation

Next-Generation Resilience and Response

Building Decarbonization

Guiding Customers to a Clean Energy Future

Achieving 100% Net-Zero Carbon & the Coordinated Role of Gas

Low Carbon Options for California's Economy

To Participate

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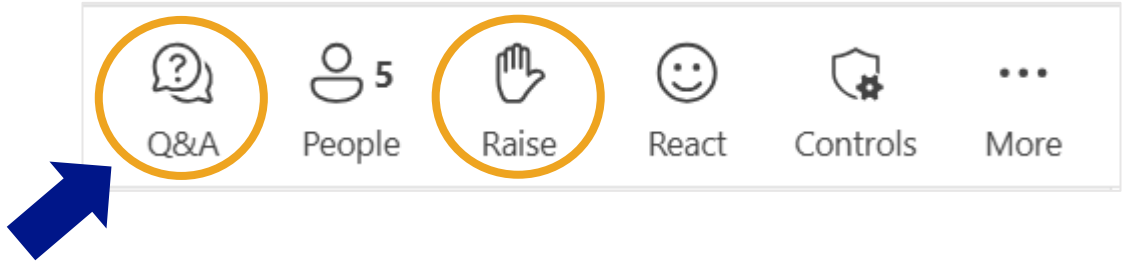

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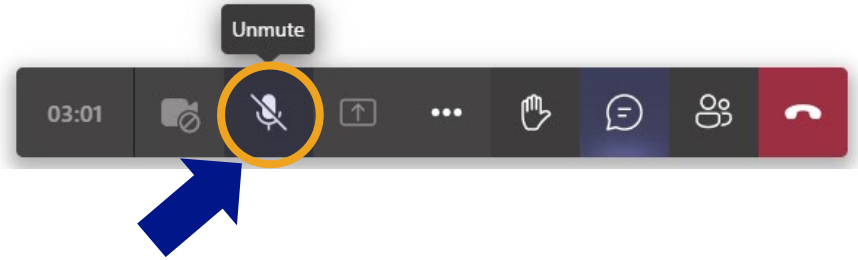


8. SCE EPIC 5 Overview

Richard Kwee, EPIC Program Manager
SCE

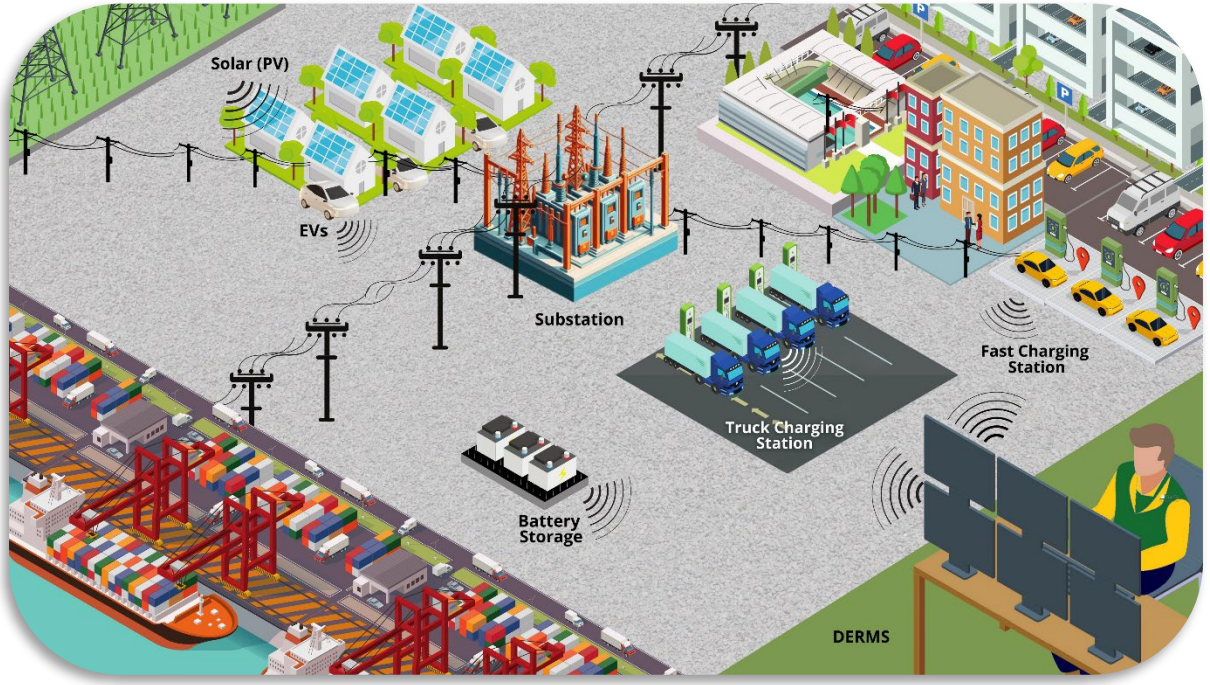
SCE's EPIC 5 Strategic Initiatives

Technologies that Run the Grid*

Technologies that Support the Grid*

Enhanced Grid Efficiency, Utilization and Flexibility (EGEUF): Advanced physical grid technologies to increase usable capacity and flexibility

Intelligent Grid Planning & Orchestration (IGPO): Digital platforms to optimize grid operations and long-term planning



Field Intelligent Technologies (FIT): Proactively monitor grid assets with advanced sensing and predictive analytics

Safe and Advanced Field Execution (SAFE): Digital, real-time tools to improve safety, reduce field risk, and increase operational readiness

*Several technologies are cross cutting that support and run the grid

SCE's EPIC 5 Strategic Initiatives

Enhanced Grid Efficiency, Utilization and Flexibility (EGEUF)

- Advanced physical grid technologies that increase usable capacity, defer costly new construction, and enable dynamic grid operation under growing demand and climate stress.
- **Impact:** Support growing demand and defers costly new construction, helping improve reliability and affordability.

Field Intelligent Technologies (FIT):

- Sensor networks, autonomous inspection platforms, and predictive analytics that enable continuous, risk-based asset management.
- **Impact**: Identify issues early to prevent outages, reduce repair and maintenance costs, and extend equipment life.

Intelligent Grid Planning & Orchestration (IGPO)

- Digital platforms, AI-driven analytics, and real-time orchestration systems that transform how SCE plans, models, and operates the grid.
- **Impact:** Enable smarter, faster decisions to manage demand, improve reliability, and affordability.

Safe and Advanced Field Execution (SAFE):

- Digital connected worker platforms, drones, robotics and augmentation technologies that improve situational awareness, reduce field risk, and accelerate work execution.
- **Impact**: Enable faster, more efficient outage response and inspection and improves worker safety.

Benefits to Communities

- **Reliability**: Reduce outage and increase restoration times through better monitoring, coordination, and response
- **Affordability**: Leverage existing infrastructure and avoidance of emergency repairs to manage long-term customer costs
- **Safety**: Reduce risk to communities through predictive maintenance, improved situational awareness, safer execution and mitigation
- **Environmental Sustainability**: Supports integration of clean energy resources and reduced reliance on emergency or redundant infrastructure
- **Equity**: Ensure consistent service quality and benefits across all communities, including those most vulnerable to outages and extreme events

Additional ESJ-specific benefits based on final project/site selection

SCE's EPIC 5 Initiatives Overlap with EPIC 5 CPUC Goals

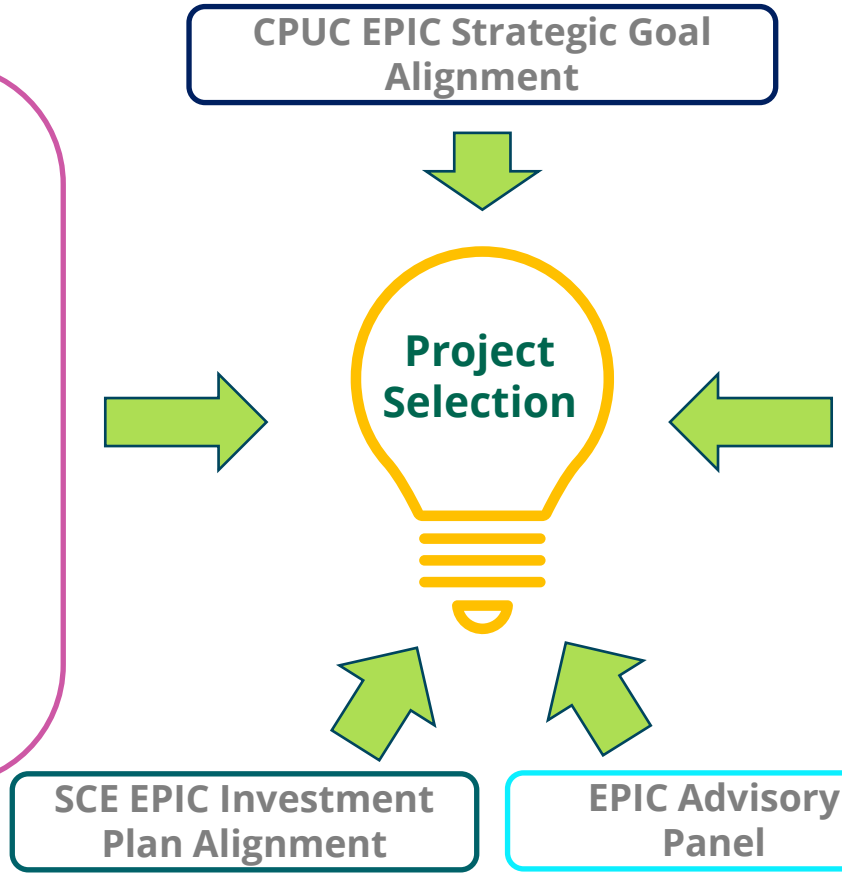
	CPUC EPIC 5 Strategic Goals				
SCE EPIC 5 Strategic Initiatives	**Climate Adaptation**	**Transportation Electrification**	**DER Integration**	**Building Decarbonization**	**Achieving 100% Net Zero and the Coordinated Role of Gas**
Enhanced Grid Efficiency, Utilization & Flexibility (EGEUF)	✓	✓	✓	✓	✓
Intelligent Grid Planning & Orchestration (IGPO)	✓	✓	✓	✓	✓
Field Intelligent Technologies (FIT)	✓		✓		✓
Safe and Advanced Field Execution (SAFE)	✓		✓		

How Does SCE Incorporate Community Perspectives into EPIC Projects?

- Communities can understand social and technical considerations SCE uses to source demonstration locations and can partner with SCE to identify those considerations
- Please share comments at epic@sce.com or project proposals at ideas.sce.com

Customer/Social Considerations

- **Community Impact to:**
  - Value of service
  - Environmental and Social Justice (ESJ) communities
  - Critical infrastructure
  - Expected customer minutes of interruption (CMI)
- **High fire risk area (HFRA) and high wind events, subject to PSPS**
- **Capital cost and funding partnership**
- **Stakeholder engagement and commitment**



Technical Considerations

Does this technology alleviate known, or forecasted, grid issues for the area?

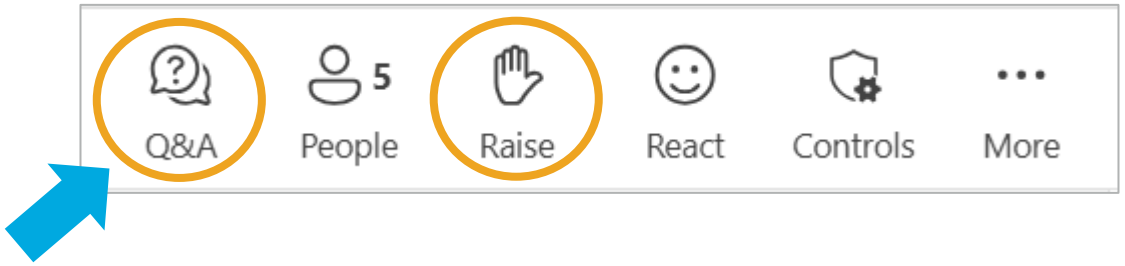
- Reliability
- Resource adequacy
- Resiliency

Deployment site considerations:

- Electrical capacity & structures
- Space, physical access and security
- Telecom infrastructure
- Existing customer assets (Solar, Storage, charging infrastructure)

To Participate

- Type your question in the Chat, or
- Raise your hand



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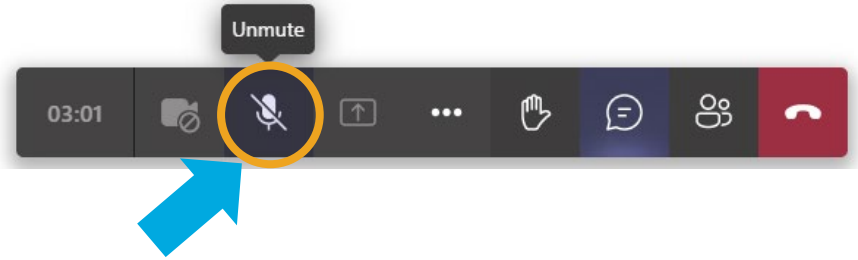


9. PG&E EPIC 5 Overview

Britt Shaw, EPIC Program Manager
PG&E

EPIC 5 Draft Initiatives

EPIC 5 Goal	PG&E Draft Proposed Initiatives
Transportation Electrification	Ensuring cost-effective and timely access to EV connection for the benefit of all Californians
DER Integration	• Affordable load growth through advanced planning and operating capabilities • Exploring pathways to streamline interconnection for DERs and new load to reduce costs for All
Building Decarbonization	Accelerating affordable electrification across customer groups to enable community-scale decarbonization
Achieving 100% Net-Zero Carbon Emissions	
Climate Adaptation	• Understanding and planning for climate and weather impacts on operations, assets & environment • Building community resilience from prevention through recovery

What benefits can EPIC 5 portfolio projects deliver for ESJ communities and Tribes?

- Affordability
- Community Resilience
- Improved Air Quality
- Safety and Reliability
- Access: understanding & addressing barriers to participation

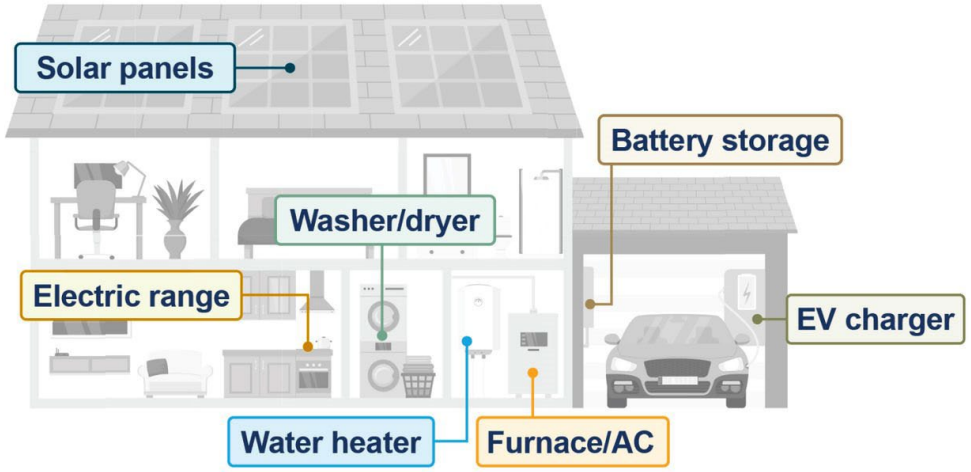
Spotlight: Sample EPIC 5 Draft Research Topic

Draft Initiative: Accelerating affordable electrification across customer groups to enable community-scale decarbonization

SPOTLIGHT RESEARCH TOPIC

Lowering the cost and complexity of whole-home electrification from assessment to installation

- **Problems:** Cost, complexity and friction of residential electric retrofits remain high barriers to adoption, especially for households in disadvantaged and low-income communities. Issues include: panel upgrade costs, permitting delays, confusing program landscape
- **Target Solutions:** Cost-reducing technologies, automated assessment and permitting, pilot program designs that lower barriers especially for customers in ESJ communities
- **Anticipated Benefits:** improved affordability & bill savings, more equitable access to home electrification, better air quality.



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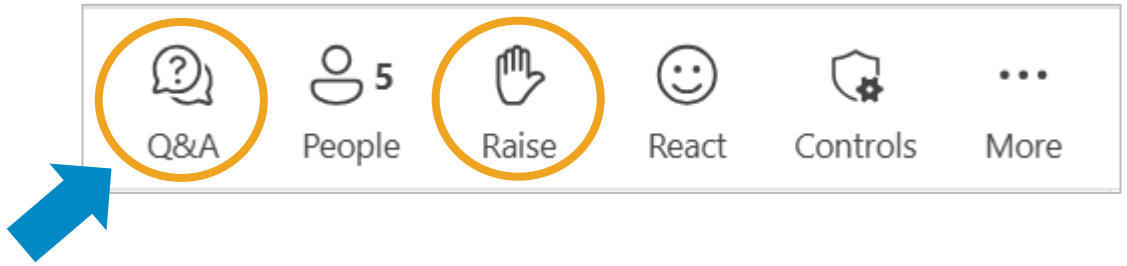

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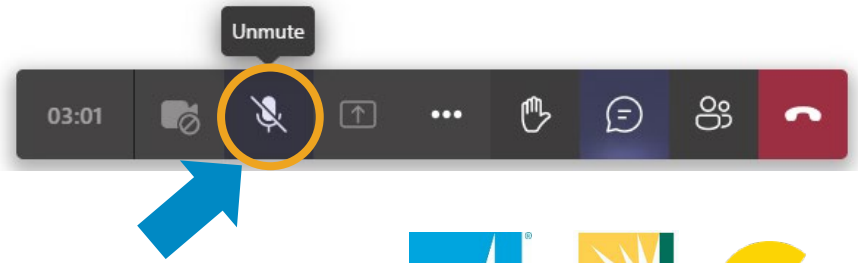


10. Open Workshop Q&A and Comment

Kicking off the dialogue:

- Is there an initiative or technology we talked about that is particularly interesting to your community?
- What does, and does not, matter to your community?
- Suggestions on how to include community perspectives when we implement the Investment Plan?

Next Steps

Join the EPIC Proceeding

Join the EPIC Proceeding (Docket number R.19-10-005), by filing a motion for "party status" with the CPUC

Receive updates and invitations: Workshops, regulatory decisions, and ongoing program updates.

Join the 6/23 Workshop

Sign up through registration links available through the QR code below:

Connect with us Directly

PG&E: Britt Shaw, epic_info@pge.com

SCE: Richard Kwee, epic@sce.com

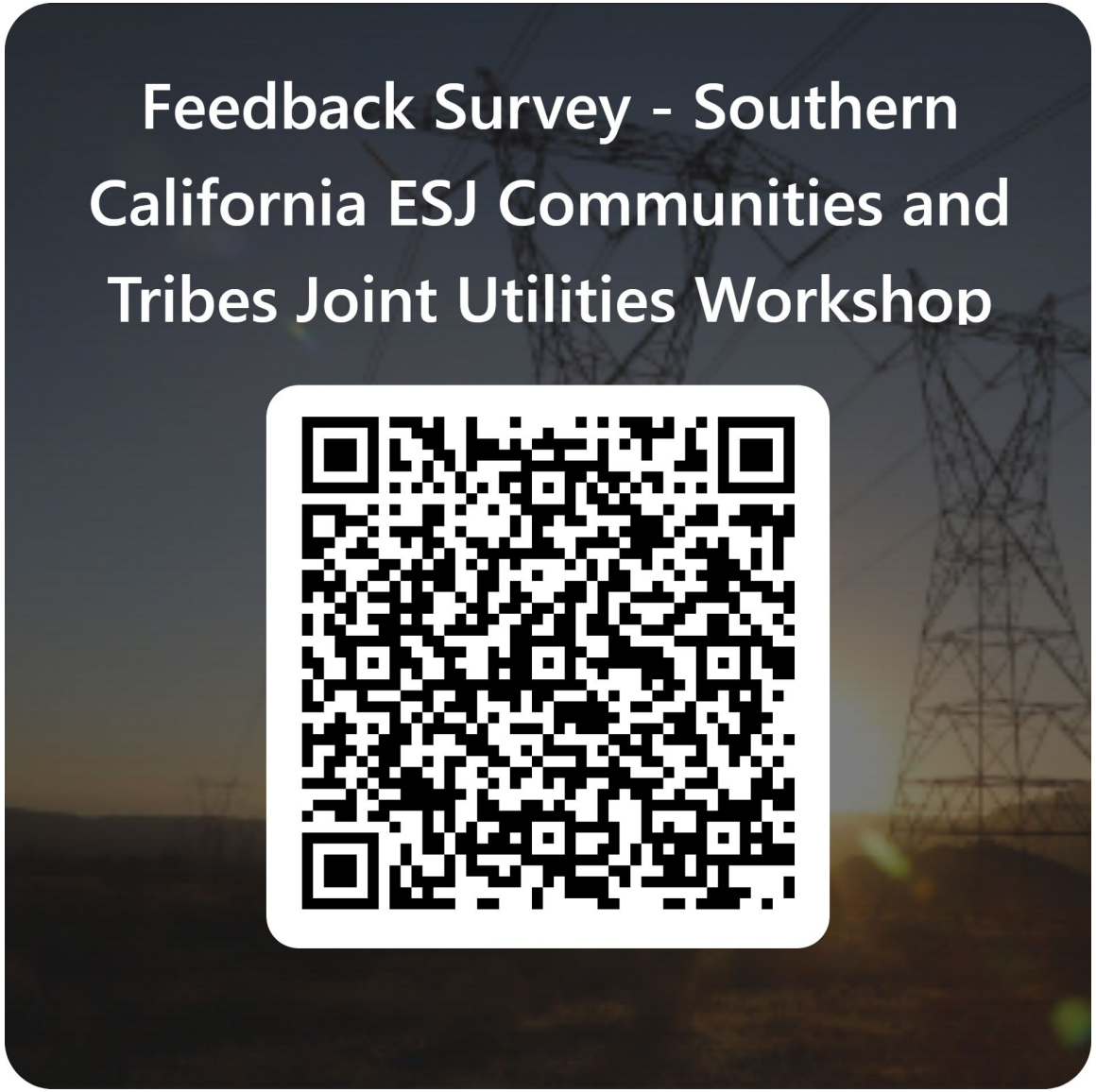
SDG&E: Cynthia Carter, ccarter5@sdge.com

Your Thoughts

Leave us a Comment

We greatly appreciate your valuable and thoughtful questions and comments.

To provide feedback or comments on the EPIC 5 Investment Plans, please scan the QR Code:



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