EPIC Strategic Goals

Equity in RD&D

Workshop

Report

EPIC POLICY + INNOVATION
COORDINATION GROUP

November 2023

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I.   EXECUTIVE SUMMARY

In its most recent EPIC decision,[1] the CPUC directed that program-wide goals are needed to evaluate the progress of innovation investments and the extent to which investment plan portfolios maximize ratepayer benefits and impacts in achieving California's clean energy and climate goals. As part of that decision, the CPUC directed the establishment of a public workshop process to inform how Strategic Goals and Objectives should be articulated and established by the Commission in its next guidance Decision for the EPIC 5 cycle (2026-2030). The workshop process will collect feedback on measurable program level strategic goals and Administrator level strategic objectives that align with achieving the State's climate goals.

On August 17, 2023, the California Public Utility Commission (CPUC) hosted an Equity in RD&D Workshop in San Francisco, CA with virtual and in-person participation. It was the second workshop in the Strategic Goals Workshop series designed to meet the objectives of this CPUC decision.

The overall goal of the Strategic Goals Workshop process is to collect stakeholder input on critical pathways, gaps, roles and objectives in achieving the State's climate goals that would be best fulfilled by EPIC's research, development, and demonstration (RD&D) funding, considering its unique role and opportunities. The Equity in RD&D Workshop aimed to lay the groundwork for how equity should be considered and integrated into RD&D strategic planning.

Almost 130 stakeholders participated in the workshop, with speakers identifying critical pathways, and relevant gaps, related to key areas of focus, including: education and training, technical assistance and outreach, early engagement and sustained involvement with tribes and disadvantaged communities in decision making processes, meeting tribes and communities where they are at, developing clear and measurable metrics, following the roadmap for the equity framework implementation, developing a clear understanding of benefits, involving tribes and communities in evaluating those benefits.

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[1] CPUC Decision (D.)23-04-042

II.   BACKGROUND

What is EPIC?

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

The Electric Program Investment Charge (EPIC) is a California ratepayer funded program that drives efficient, coordinated investment in new and emerging clean energy solutions. Its mandatory guiding principle is to provide ratepayer benefits, with a mission of investment in innovation to ensure equitable access to safe, affordable, reliable, and environmentally sustainable energy for electricity ratepayers. EPIC invests in a wide range of critical innovation, including building decarbonization, cybersecurity, demand reduction, distributed energy resource integration, energy storage, entrepreneurial ecosystems, grid decarbonization, grid decentralization, grid modernization, grid optimization, grid resiliency and safety, high penetration renewable energy grid integration, industrial and agricultural innovation, smart grid technology, transportation electrification, and wildfire mitigation. From 2012 through 2030, EPIC will have invested nearly $3.4 billion in clean energy technology innovation.

What is the Policy + Innovation Coordination Group?

The California Public Utilities Commission (CPUC) oversees and monitors the implementation of EPIC research, development, and deployment program. For current EPIC funds from investment periods 1 (2012-2014), 2 (2015-2017), 3 (2018-2020), and 4 (2021-2025) there are four program administrators: the California Energy Commission (CEC), Pacific Gas and Electric (PG&E), Southern California Edison (SCE), and San Diego Gas & Electric (SDG&E). The CEC administers 80% of the funds and the utilities administer 20%.

In Decision 18-10-052, the CPUC established the Policy + Innovation Coordination Group (PICG)—comprised of a Project Coordinator, the four Administrators, and the CPUC—to better align EPIC investments and program execution with CPUC and California energy policy needs. In Decision 23-04-042, the CPUC directed the PICG to convene the Strategic Goals and Objectives process for the EPIC 5 funding cycle (2026-2030).

Workshop Process Goals

The Strategic Goals Workshop Process will focus on identifying four core elements:

Pathways:
Set of critical actions necessary to support meeting the State's 2045 zero carbon goals via the most effective strategies and technology innovation.

Gaps:
Key challenges for achieving zero carbon goals and how RD&D should be prioritized to address opportunities and barriers more quickly along critical pathways.

Roles:
The best-positioned stakeholders (ratepayers, state, federal, private sector) to lead innovation investment in addressing identified gaps, including through coordination and collaboration.

Outcomes:
Clear, measurable, and reasonable targets to be used by administrators in developing EPIC portfolios and used in program evaluations to measure impacts of EPIC in supporting achievement of California's 2045 zero carbon goals.

III. WORKSHOP SUMMARY

Agenda

The Workshop was hosted from 9 am – 1 pm and consisted of three panels, each followed by stakeholder discussions inviting questions and comments from the audience in the room and participants connected virtually, with the opening and closing remarks from the CPUC Commissioner Genevieve Shiroma and an initial introduction by the CPUC Staff.

Opening and Closing Remarks: Commissioner Genevieve Shiroma welcomed the participants and highlighted that EPIC investment plans and programs must ensure rate payer benefits in form of equitable access to safe, affordable, reliable, and environmentally sustainable energy for electricity ratepayers. The Commissioner also noted that in a recent decision, the CPUC directed EPIC Administrators to align their EPIC investment plans with CPUC's Environmental and Social Justice Action Plan and the federal Justice40 initiative. The decision requires Administrators to achieve 40% of the benefits in low income and disadvantaged communities and to engage with environmental and justice communities

before developing their plans. She indicated that EPIC could go a long way to correct the historical injustices towards communities of color, native American communities, and environmental and social justice communities. In the closing remarks, Commissioner Shiroma specified that RD&D investments intending to benefit low-income and disadvantaged communities are looking not only for the location of the projects but also the accrual of benefits to the disadvantage communities. She mentioned that the Commission tasked the utilities in other programs (e.g., wildfire mitigation) to strengthen partnerships with community-based organizations and tribal members to serve as liaisons in sharing information with the communities on what is available to them. The Commission also requires that utilities provide grants to tribes/tribal members to ensure that tribes know about the programs they qualify for. She also stressed the importance of learning how community-based organizations can play a key role with EPIC. In concussion, Commissioner Shiroma stressed importance of looking not just at data but also at stories where EPIC was successful, in uplifting communities, reducing GHG emissions, proving advances, or health improvements. Commissioner Shiroma noted that there might be opportunities to look for at brownfields, for example, to identify opportunities to cleanup those sites with clean energy.

Introduction: EJ Action Plan and Tribal Engagement Level Setting. Before the panels, the CPUC Staff, Amanda Krantz and Kenneth Holbrook, introduced the CPUC's Environmental and Social Justice (ESJ) Action Plan and Tribal Consultation Plan that serve as a framework to integrate environmental and social justice and tribal consultations and considerations. Amanda outlined the goals of the ESJ Action Plan and noted recent CPUC decision that requires EPIC Administrators to allocated at least 25% of technology demonstration and deployment (TD&D) funds toward projects located and benefiting disadvantaged communities and at least 10% of TD&D funds towards projects benefiting low-income communities. Amanda noted that the feedback from this workshop process will help determine how to continue achieving the EPIC ESJ Action Plan through the next EPIC funding cycle. Kenneth outlined the goals for tribal engagement and consultation and provided examples of some recent projects and success stories.

Panels: The three panels focused on the following areas:
I.   **How Equity is Incorporated into EPIC Portfolios.**
      Presenters:
         - Cynthia Carter, San Diego Gas & Electric (SDG&E)
         - Dan Gilani, Pacific Gas and Electric (PG&E)
         - Anthony Ng, California Energy Commission (CEC)

- Aaron Renfro, Southern California Edison (SCE)

The panelists provided perspectives of the CEC, PG&E, SCE and SDG&E, and outlined EPIC Administrators' approach to incorporating equity into their EPIC plans and portfolios, their outreach efforts and provided examples of projects located in or benefiting disadvantaged communities. The panelists also provided examples of how outreach and coordination helped adjust/improve the projects and what their approaches are for engaging more experts from tribal communities in their workforce (field projects, pilots, supplier diversity processes, partnership with colleges and support to energy entrepreneurs). The stakeholder discussion that followed highlighted the need to focus more on the customer psychology and provide more education, training and outreach to the communities to help them understand EPIC funding opportunities and priorities. The discussions also focused on the need to evaluate how to better engage tribal communities in the demonstrations, the need to locate more workshops and events in the tribal communities and have two-way meaningful conversations with tribes on RD&D ideas and potential testing in tribal communities.

II. **Equity Frameworks and Principals.**
Presenters:
- Sneha Ayyagari, Greenlining Institute
- Andres Ramirez, People for Mobility Justice
- Anuj Desai, Southern California Edison (SCE)
- James Strange, US Department of Energy (US DOE)

The panelists provided perspectives of the Greenlining Institute, People for Mobility Justice, SCE and US DOE. The panelists discussed the Equity Framework developed by the Disadvantages Communities Advisory Group (DACAG) and highlighted a need for a clear roadmap for how to implement it. They highlighted the need for more outreach and guidance to eliminate barriers to funding and better engagement with the communities through the project selection and evaluation process. The panelists used CalSEED as an example of successful application of the equity framework to EPIC investments that lead to increased engagement of women and people from underrepresented ethnic or racial groups, but noted that more could be done, particularly to improve tracking of demographic information during the outreach process. SCE also discussed their Climate Adaptation Vulnerability Assessment and the community engagement and outreach efforts during its development. Some of

the lessons learned from the process included the importance of paid engagements of community leaders to be part of designing solutions, and then lead engagement and outreach; flexibility to meet people and organizations where they are at and taking time to bring them up to speed; as well as customization/adjustment to specifics of each group. US DOE also discussed the Justice40 Initiative, Community Benefit Plans and key measurements and scoring approaches. The 8 benefits that US DOE is looking for to see in the disadvantaged communities are: decrease in energy burden and environmental exposures and increases in jobs and training, creation of enterprises, energy democracy, low-income capital, energy resilience, and clean energy access and adoption. Some of the suggestions for the EPIC improvement included: standardization of benefits and maps; leveraging data (quantifiable, measurable and trackable); and identifying where the benefits are occurring.

III.   **Equity Benefits in RD&D.**
Presenters:
- Daniel Coffee, University of California, Los Angeles (UCLA)
- Walker Wieland, California's Office of Environmental Health Hazard Assessment (OEHHA)
- Eddie Price, San Diego Urban Sustainability Coalition (SDUSC)
- Holmes Hummel, Stanford University
- Thomas Steirer, Alliance for Tribal Clean Energy

The panelists provided perspectives of UCLA, OEHHA, SDUSC, Stanford University and Alliance for Tribal Clean Energy. The panelists discussed various screening tools, including CalEnviroScreen, and provided recommendations on layering them with localized data. The panelists also discussed various metrics, matrixes and policy frameworks that can be used by EPIC Administrators to evaluate the projects. The panelists also discussed unique challenges of the tribes and the need to recognize their energy sovereignty.

Presentations

The link to each presentation is included in the Appendices to this report.

Attendees

Almost 130 individuals participated in the full day workshop, virtually and in person, including CPUC Commissioner Genevieve Shiroma, representatives from the US Department of Energy, the four Administrators of the EPIC Program (California Energy Commission, and the 3 utilities), as well as RD&D leaders, research institutions, community leaders, technology solution providers, government entities, utilities, non-governmental organizations, and industry.

IV. KEY TAKEAWAYS

During the workshop, the panelists and participants identified the following key gaps and unique roles/opportunities for EPIC investments:

Measurable Metrics

#1: Clear roadmap on how to implement and track Equity Framework.

Many participants complimented the DACAG Equity Framework but noted that a clear tracking and roadmap are necessary for its implementation, with clear and measurable goals, processes, and tracking metrics. Participants suggested requiring funding grantees to set specific and measurable goals that are realistic and achievable and track inclusivity and equity impacts. The proposed tracking metrics included: health and safety impacts on the community (e.g., Does the projects result in some measurable changes?); access and education (including access to funding opportunities); financial benefits (Is the impact positive or negative? Are there cost savings, incentives, financial benefits? What is the impact on rates?); economic development (including jobs pipeline, training, workforce development); consumer protection (such as protection from predatory practices). They also highlighted the need to make as much of the information about projects' narratives, outcomes, progress and tracking data publicly available, particularly on how the program goals account for equity considerations, how the projects are progressing in achieving those equity goals, how the implementation has impacted disadvantaged communities, what are the anticipated community benefits. Participants noted that having this publicly available data will improve transparency and accountability of EPIC funding in terms of its impacts on disadvantaged and ESJ communities. The US DOE also echoed the need for measurable and trackable data, and identifying where the benefits are occurring. Many participants agreed

that some traditional metrics (e.g., enrollment numbers) might not be indicative of actual impacts on people's lives and more targeted measurements are necessary (e.g., thermal comfort). Panelists suggested a wide range of metrics and matrixes that can be used as an example for developing project evaluation criteria and tracking metrics. Some participants also suggested agency coordination on the metric development, such as using the California Office of Data and Innovation (https://innovation.ca.gov) standards for equity progress data collection, or following the California Racial Equity Commission (https://www.nextgenpolicy.org/priorities/racial-equity-commission) work on developing standards of practice for state government. Another example following San Diego Energy Equity Center (https://sdeecvp.com) that addresses equity and inequities from the community perspective. Participants noted that, for example, it uses the "community of concern" term, rather than "disadvantaged community."

#2: More clarity on definition of energy equity and benefits to disadvantaged communities and tracking demographic impacts.

Many participants highlighted that it is not enough to simply locate the projects in disadvantaged communities, as it can sometimes even harm them by causing displacement, and housing affordability issues. They noted that it is important to understand what the actual impact in those communities is. The panelists indicated a need for a clear definition of energy equity in funding criteria and how it differs from the benefits to ratepayers overall. They noted that there must be a collective understanding of what equity means and how to measure it. Participant noted that equity needs are regionally diverse, what fits one community will not work for the other. They noted that some EPIC programs (e.g., CalSEED) developed their own definition with feedback from community partners. Participants suggested extending that guidance more broadly across the full portfolio of EPIC projects. Participants also suggested involving disadvantaged communities in defining what benefits should be delivered to their communities and evaluating whether these benefits have been delivered. Participants suggested that providing more publicly available data on the community benefits – that are measurable and real or anticipated - of each project in the EPIC's project database will help track and evaluate their progress and keep grantees accountable. Some participants suggested that a better ability to track demographic information, such as race, veteran status, or gender identity, during the outreach process will help evaluating program success in delivering social benefits and help the entities implementing projects keep track of the impacts of their outreach efforts across a broader range of underrepresented groups. Participants argued that EPIC reporting on equity and demographic metrics should be connected with Justice40 reporting and should require using community benefit plans or similar tools in the assessment of applications.

#3: Standardization of benefits and maps and streamlining metrics tracking.

Some panelist suggested streamlining the tracking, if there are synergies between federal and state approaches, so there is less for the applicants to track. The US DOE also suggested standardization of benefits and maps across the projects and agencies and layering the federal and state tools, starting with the federal Climate and Economic Justice Screening Tool (available at geoplatform.gov) and then adding more specifics from the state and local tools, where appropriate. Participants note that the federal and state/local tools overlap in 70-80% of cases.

#4: On the ground engagement.

Some participants stressed that while screening tools are very helpful, they may not be adequate to provide the details of specific neighborhoods and the on-the-ground engagement is necessary to collect that data to inform programs and policy goals.

Training, Education, and Technical Assistance

#1: Overarching need for more accessible information, training and education on programs and funding opportunities.

Many stakeholders highlighted the need for more outreach, training, and education for tribal and disadvantaged communities on funding opportunities, to level the playing field. To help tribal and disadvantaged communities explore and use opportunities, they may require help understanding and navigating these opportunities. Participants highlighted the need to train applicants on priorities and goals, and what is considered as "innovation." They also stressed the need for better coordination with science and technology education programs to build a pipeline of innovators. They also stressed that key information on the programs and funding opportunities should be translated into multiple languages.

#2: Technical assistance for communities and community groups.

The participants noted that it is important to provide technical assistance, including for the community-based groups, and create pathways for underrepresented groups to receive clean energy innovation funding. They may not be in a position to apply even if they know about the programs or may not know which programs can be a good fit, or what they can qualify for. Participants suggested that some existing available technical assistance programs could be integrated across different opportunities.

#3: Streamline the application and verification process.

Some participants highlighted the need to simplify and streamline the application and verification processes around similar topics (e.g., income verification) to make it easy for communities to apply to and qualify for multiple opportunities at once (for example through a standardized portal for end consumers).

Community and Tribal Outreach

#1: More integrated engagement of local communities through the process.

The panelist highlighted the need to enable better integration and coordination with the local communities though the entire process, including them in goals setting, processes definition, implementation, and evaluation. The panelists suggested co-creation of projects and pilots with paid community groups; including impacted communities in projects evaluation process and ensuring early on partnerships to align the goals of the projects with the actual community needs. The panelists also suggested evaluating EPIC programs in consultations with the Disadvantages Communities Advisory Group (DACAG). It was also highlighted that the engagement must be continuous, not come and go with each project, and develop sustainable continuous partnerships.

#2: Formula allocations to communities.

One of the suggestions was to make direct formula allocations to the communities and have the communities define their own needs and design and implement their solutions, have community plans developed by the communities.

#3: Higher allocations to disadvantaged communities.

Several participants indicated that the 25% +10% TDD and 40% Justice40 allocations might not be enough to address the historic injustices and to have meaningful impact. A higher allocation would be more equitable (e.g., 60% or 100%). For example, the allocations can focus exclusively on disadvantaged communities for the first few years to level the playing field. It is important to do an analysis of the historical perspective on how the investments were directed and allocated in the past and what % was historically invested in the disadvantaged communities. Many participants agreed that Justice40 requirements should be considered a floor and not a ceiling.

#4: Meet tribes and disadvantaged communities where they are at.

Engaging tribes and disadvantaged communities locally at their convenient location and times, e.g., hosting workshops at their localities, at the times that work for them (e.g., evenings) was raised by many participants as a key to better and more efficient outreach and engagement. Some other suggestions included right sizing the outreach, paid engagements of community leaders to lead the engagement and outreach and customization/adjustment to specifics of each group. Keeping in mind digital divide when hosting virtual outreach opportunities.

#5: Understand and recognize tribes' unique challenges.

The panelist indicated that tribes should be recognized for their energy sovereignty and should be treated separately from other disadvantaged communities. ECE resolution committing to tribal energy sovereignty might be an inspiration for the EPIC. The impact of the outages on the tribes may be more profound, considering the rural and remote location of the tribes, cutting people from access to medical assistants, education and basic necessities (e.g., fresh food). The most remote tribes are often the first to lose power and the last to be reconnected, so even the most basic metrics, like duration and frequency of outages, may be more important to them.

#6: Evaluate ways to engage tribal members in workforce development.

The participants expressed a need to evaluate how to better engage tribal communities in workforce development, particularly through the pilots, field demonstrations etc.

#7: Look for opportunities to involve tribes in testing.

Commissioner Shiroma invited EPIC Administrators to think of ways to involve tribes in pilots and investigate opportunities for testing within tribes, if they are interest, and look for testing and demonstrations, from lab scale to pilot scale, and have two-way meaningful consultations with the tribes on potential ideas and opportunities for projects and pilots.

Equitable and Safe Access to Technology

#1: Enable better access to established technology and enable collaboration between the communities and industry.

The panelists indicated that EPIC funding should be directed to fund opportunities for collaboration between companies that increase access in disadvantaged communities to

existing technology in addition to new technologies (e.g., software that will reduce costs or increase community ownership; hardware that will make solar more accessible to renters). The panelists suggested providing resources for community-based organizations and companies to work together as it will improve collaboration and provide new solutions for the communities. Some participants also suggested that EPIC should provide resources for collaboration among companies so that they could provide more holistic and comprehensive community solutions that are more affordable (for example have a collaboration of companies in the EV space to design solutions for the community on all stages of the EV lifecycle, including charging, energy storage and battery recycling). Participants noted that this will also help reduce fatigue in the community of being approached by too many companies.

#2: Consumer protection.

The participants indicated a need to think of consumer protection measures to ensure the disadvantaged communities are not taken advantage of and become victims of predatory and fraudulent behaviors in the clean tech adoption processes or funding applications. Is there a potential for standardized contract language? Are there translations available?

#3: Remove administrative and financial barriers and split incentives.

The participants indicated many administrative and financial burdens to funding. Participants noted that many programs provide benefits in the long run, or after the fact, but do not cover the upfront costs and or demand complicated paperwork and verification processes that exclude the most vulnerable populations that needs these programs the most. Participants noted that it is also important to keep in mind the potential split incentives between landowner and renters where the renters may be unable to access some of the programs, such as energy efficiency, even though these programs could benefit them the most. Participants suggested that programs specifically targeted to renters, such as Comprehensive Affordable Multifamily Retrofits program, could help address this barrier. Participants also suggested investing more resources in creating pathways for underrepresented groups to receive funding, for example by partnering with science and technology education programs or other programs.

V. APPENDICES

Video Recordings:

Workshop video **PT. 1**
Workshop video **PT. 2**

Agenda: **(PDF)**

Presentations:

Introduction: Andrew Barbeau, EPIC PICG Project Coordinator (no slides)
Opening remarks: Commissioner Genevieve Shiroma, California Public Utilities
Commission (no slides)

EJ Action Plan and Tribal Engagement Level Setting

Amanda Krantz, California Public Utilities Commission - Presentation Link

Ken Holbrook, California Public Utilities Commission - Presentation Link

How Equity is Incorporated into EPIC Portfolios

Cynthia Carter, San Diego Gas & Electric - Presentation Link

Dan Gilani, Pacific Gas and Electric - Presentation Link

Aaron Renfro, Southern California Edison - Presentation Link

Anthony Ng - California Energy Commission Presentation Link

Equity Frameworks and Principals

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Equity Benefits in RD&D

Daniel Coffee, UCLA - Presentation Link

Walker Wieland, CalEnviroScreen (OEHHA) - Presentation Link

Eddie Price, San Diego Urban Sustainability Coalition (no slides)

Holmes Hummel, Stanford University - Presentation Link

Thomas Steirer, Alliance for Tribal Clean Energy (no slides)