



California Public  
Utilities Commission

# Climate Adaptation Equity Metrics Workshop

Climate Adaptation Proceeding (R.18-04-019)

Meghan Cook – CPUC Climate Adaptation Analyst

November 20, 2024



# Welcome & Introduction

# Restrooms & Safety Procedures



- Restrooms available across the hall. Go through the "Hearing Room" doors, turn right and then left.
- In event of evacuation, please exit the Courtyard, turn right (south on Van Ness Ave) past the War Memorial Herbst Theater to the Garden Plaza, next to the War Memorial Opera House.

# Webex Logistics

Mute/ Unmute

Participant List

Chat

Audio Options

Leave Meeting



Raise Hand



- Today's presentations (.pdf) and agenda are available on the WebEx link under “Event Material” type password “ADAPT” into the box and click “View Info”
- Please note this meeting is being recorded.

- Please submit questions for speakers in the Chat box or raise your hand to be unmuted by staff.
  - \*3 to raise hand and \*6 to unmute/mute over the phone
- Questions will be read aloud by staff (Reminder: Mute back!)

# Purpose of Workshop Series

**Goal: 1)** Gather input to refine existing requirements for utility Community Engagement for Climate Adaptation Vulnerability Assessments (CAVAs) for energy infrastructure; **2) discuss methods to measure equity impacts of CAVAs within climate adaptation planning**

**Outcome:** Stakeholder input will help inform a future CPUC Decision to improve Equity guidance and impacts, anticipated in 2025

**Focus:** Long-term planning related to extreme climate impacts on energy infrastructure / utility operations

# Today's Agenda

Time	Content	Presenters/Participants
<b>Introductory Information</b>		
10:00 AM	<b>Welcome</b>	Meghan Cook - CPUC
10:10 AM	<b>Commissioner Opening Remarks</b>	Commissioner Houck
10:20 AM	<b>Overview &amp; Background</b>	Meghan Cook – CPUC
<b>Equity Metrics in Climate Adaptation Planning: California Utility Efforts to Date</b>		
10:40 AM	<b>PG&amp;E's First CAVA – Building Resilient Infrastructure and Communities (BRIC)</b>	PG&E
10:50 AM	<b>SCE's First CAVA – Community Resilience Metric (CRM) and Community Impact Metric (CIM)</b>	SCE
11:00 AM	<b>5 Minute Break</b>	
11:05 AM	<b>Resilience Node Cluster Analysis Tool (ReNCAT) and SCE Pilot Study</b>	<ul style="list-style-type: none"> <li>• Sandia National Lab (Sandia)</li> <li>• SCE</li> </ul>
11:35 AM	<b>Facilitated Panel and Audience Discussion</b>	Panel Participants: Technical and Community Organizations, Tribal, and Local Governments
12:15 PM	<b>Lunch Break</b>	

# Today's Agenda Continued

Time	Content	Presenters/Participants
<b>Landscape of Existing Equity Metrics and Methods</b>		
1:45 PM	<b>National Landscape of Emerging Equity Metrics for Resilience</b>	Pacific Northwest National Lab (PNNL)
2:00 PM	<b>National Landscape of Equity Metrics</b>	Lawrence Berkeley National Lab (LBNL)
2:15 PM	<b>Existing State Metrics and Data</b>	California Office of Land Use and Climate Innovation (LCI)
2:30 PM	<b>Equitable Resilience Evaluation and Planning</b>	Energy Division Staff
2:45 PM	<b>Facilitated Panel and Audience Discussion</b>	Panel Participants: Technical and Community Organizations, Tribal, and Local Governments
3:15 PM	<b>15 Minute Break &amp; Networking</b>	
<b>Approaches to Measuring Equity in Energy Resilience and Climate Adaptation Planning</b>		
3:30 PM	<b>Measuring Equity Impacts of Outages</b>	PSE Health Energy
3:45 PM	<b>Climate READi: Texas Case Study</b>	Electric Power Research Institute (EPRI)
4:00 PM	<b>Facilitated Discussion with Audience</b>	Panel Participants: Technical and Community Organizations, Tribal, and Local Governments
<b>Next Steps &amp; Closing Remarks</b>		
4:45 PM	<b>Closing Remarks</b>	Commissioner Houck Meghan Cook – CPUC
5:00 PM	<b>Adjourn</b>	

# Community Agreements

- Workshop is structured to stimulate an honest dialogue and engage different perspectives
  - Keep comments friendly and respectful
  - Be present (as few additional screens as possible)
  - Assume best intentions but be mindful of impact
  - One person speaking at a time
  - Amplify underrepresented voices
  - Half thoughts are welcome
- Chat feature is only for Q&A or technical issues



# Opening Remarks

Commissioner Darcie L. Houck

# Background: Climate Adaptation Proceeding

# Climate Adaptation Proceeding - R.18-04-019

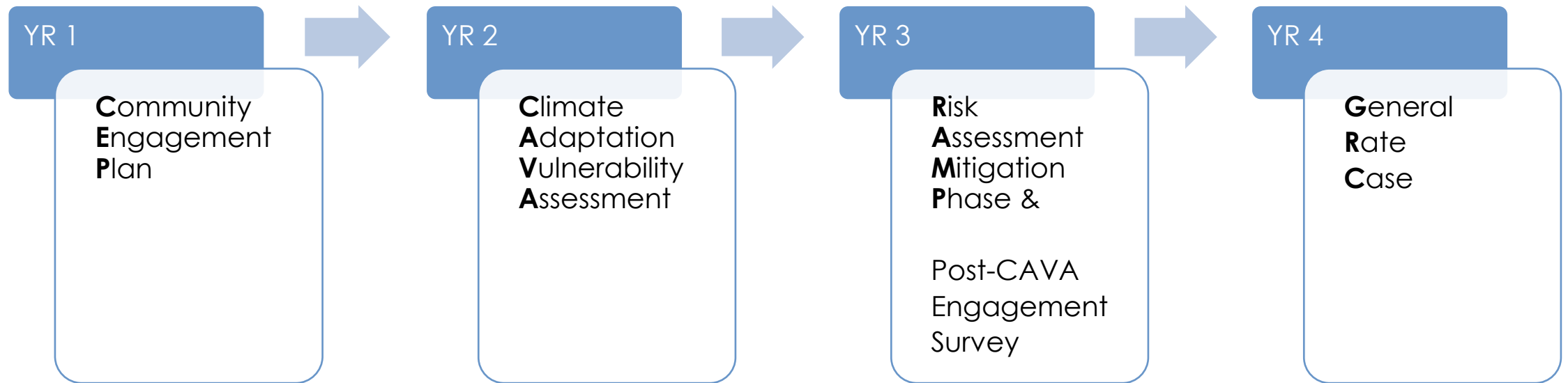
**Purpose:** Requires IOUs to assess forecasted extreme climate impacts on energy infrastructure and IOU operations decades into the future and identify options to mitigate threats by developing and submitting to CPUC:

- Climate Adaptation Vulnerability Assessment (**CAVA**) every 4 years
- Community Engagement Plan (**CEP**) one year before their CAVA

**Equity Targets:** Disadvantaged and Vulnerable Communities (**DVC**) defined as: 1) Tribes, 2) 25% highest CalEnviroScreen scores, 3) median income less than 60% of state median

**Informational:** CAVAs are used to inform Risk Mitigation (RAMP), general rate cases (GRCs), and may be used in other long-term planning proceedings (e.g., Integrated Resource Plans, Gas Planning)

# CAVA Process



# Recent CAVA Decision - D.24-08-005

- Commission adopted updated CAVA guidelines on August 1, 2024
- Updates climate science & analysis requirements for CAVAs to align with best available science
  - Adopts new baseline climate scenario: SSP 3-7.0
  - Adopts Global Warming Level Approach for climate modeling
    - Requires IOUs to examine 1.5°C and 2°C warming scenarios
  - Orders IOUs to update requirements as Climate Assessments update best practices
- Requires IOUs to publicly present and seek stakeholder input on draft CAVAs 90 days prior to submitting to the CPUC
- Requires that IOUs demonstrate **Incrementality, Prioritization, Cost-Effectiveness,** and **Justification** of any post-CAVA investment requests in GRC or other applications

# Today's Goals

- **Proceeding Scope to Consider Improvements:**

<b>1.</b>	<b>Should the Commission refine requirements regarding consultations with DVCs and the preparation of CEPs adopted in D.20-08-046 with regard to large IOUs, including but not limited to:</b>
<b>1.1</b>	Additional guidance regarding the purpose and intended outcomes of the CEP and DVC consultation processes?
<b>1.2</b>	Ways to reduce consultation fatigue and/or coordinate with other proceeding outreach processes?
<b>1.3</b>	Modifications to the definition of DVC adopted in D.20-08-026?
<b>1.4</b>	Additional guidance regarding consultation and collaboration with local governments during risk and vulnerability assessment processes? During adaptation proposal identification processes?
<b>1.5</b>	Refinement of Tribal consultation processes specific to climate adaptation matters?
<b>1.6</b>	Additional guidance regarding methods and scope for the determination of community adaptive capacity in CAVA analyses?
<b>2.</b>	<b>What are the impacts on environmental and social justice communities of actions taken in this proceeding, including the extent to which requirements impact achievement of any of the nine goals of the Commission's Environmental and Social Justice Action Plan?</b>

# Assessing Impacts of CAVAs on ESJ Communities

- **Today's Purpose:** Identify Methodologies and Metrics that can quantify impacts and benefits of CAVA planning on ESJ Communities
- Technical Deep-Dive on the Landscape of Quantitative Methodologies
  - Pros, cons, use cases
  - Opportunities for complementary approaches
  - Gaps and opportunities for further research & development
  - How this fits into the existing CAVA process

# Equity Metrics & the CAVA Process

- The existing process for incorporating equity into the CAVA process is qualitative
  - Community Engagement Plans
  - Public comment opportunities on CAVAs
- Equity metrics can be incorporated into the analysis to provide a **quantitative** equity lens for climate adaptation in IOU planning
  - Complementary to the existing qualitative approach
  - Results may vary depending on what metrics are used or how they are weighted



# Qualities of Equity Metrics in Climate Adaptation

- Method for quantitatively measuring a community's climate vulnerability or adaptive capacity to climate impacts
  - **Climate Vulnerability:** How likely/ how intensely a community may be affected by climate impacts such as fire, flooding, heat, etc.
  - **Adaptive Capacity:** A community's ability to adapt to climate impacts either by preventing impacts or recovering from them
- May require a combination of different metrics and methods
- Different metrics may be useful for different purposes
- CAVAs consider vulnerability of both communities and the energy infrastructure they rely on

# Equity Metrics May Include

- Household or census tract median income
- Proximity to resources
- Access to transportation
- Pollution burden
- Race or ethnicity
- Age
- Gender
- Physical ability/ health
- Language barriers
- Risk of a given climate event (flood, fire, heat, etc.)

# Your Role – Provide Feedback

- Your unique perspective related to use of equity metrics for climate adaptation planning for energy utilities
- Sharing existing models and best practices
- Opportunities for collaboration and streamlining
- Identifying indicators of climate vulnerability and adaptive capacity
- Opportunities for further research and development of equity metrics for climate adaptation and resilience

**Questions?**



# Next Steps

# Next Steps

- **December 11:** November 20 workshop comments due
  - Submit via email: [Meghan.cook@cpuc.ca.gov](mailto:Meghan.cook@cpuc.ca.gov)
  - Note: These are informal comments to staff, *not* part of proceeding docket
- **Early 2025:** Staff Proposal - anticipated to be issued for Comment
- **Mid 2025:** Proposed Decision - anticipated

# How to Participate

- Staff will use the mailing list you received this Notice for upcoming follow-up;
  - If we don't have your email, sign-up at the check-in table
- The full docket card for each proceeding can be accessed through the [CPUC docket card search tool](#).
  - Enter the proceeding number (R1804019) without any periods or dashes to search.
  - Final decisions can also be located on the CPUC website using this [decision search tool](#).
- The CPUC's [Public Advisor's Office](#) provides procedural information and advice to individuals and groups who want to formally participate in proceedings.

# Closing Remarks



## For more information:

- **Visit:** [www.cpuc.ca.gov/industries-and-topics/electrical-energy/climate-change](http://www.cpuc.ca.gov/industries-and-topics/electrical-energy/climate-change)
- **Email:** Meghan Cook at [meghan.cook@cpuc.ca.gov](mailto:meghan.cook@cpuc.ca.gov)





# California Public Utilities Commission

# Appendix

# Glossary of Terms

- **Investor-Owned Utility (IOU)** – Utilities regulated by the CPUC. In this context, we are referring to the large electric IOUs:
  - Southern California Edison (SCE), Pacific Gas & Electric (PG&E), San Diego Gas & Electric (SDG&E), and Southern California Gas (SCG)
- **General Rate Case (GRC)** – Proceedings used to address the costs of operating and maintaining the utility system and the allocation of those costs among customer classes. An IOU submits a proposal which the CPUC reviews, and then makes a decision on for the IOU's budget for the next four years.

# Glossary of Terms

- **Climate Adaptation Vulnerability Assessment (CAVA)** – An analysis of the climate vulnerabilities of all an IOU's assets and operations and potential options to mitigate those vulnerabilities.
  - Large document (~1000 pages) completed by each IOU and submitted to the CPUC every four years.
  - This informational document is intended to inform long-term climate adaptation investment decisions within an IOU's GRC.

# Glossary of Terms

- **Disadvantaged and Vulnerable Community (DVC)** – Defined within the Climate Adaptation Proceeding as communities that consist of:
  - 25% highest scoring census tracts in CalEnviroScreen
  - Census tracts with highest 5% pollution burden in CalEnviroScreen
  - Census tracts with median household income at less than 60% of state median income
  - All California Tribal lands

# Glossary of Terms

- **Community Engagement Plan (CEP)** –This shorter more qualitative document (~50-80 pages) outlines an IOU's plans to engage communities, particularly DVC communities, prior, during, and after their CAVA analysis.
  - Submitted by each IOU one year prior to submitting their CAVA.

# Proceeding History – Phase 1

- **November 2019, Decision (D.) 19-10-054**
  - Defines climate adaptation for electric IOUs
  - Ordered large IOUs to use specific climate scenarios and projections from California Statewide Climate Assessment when analyzing climate risk for investments and operations
  
- **September 2020, D. 20-08-046**
  - Defines DVC for purposes of the proceeding
    - Requires IOUs to prepare and submit CAVA every 4 years
    - Requires IOUs to prepare and file a CEP for DVCs one year before submitting their CAVA
      - And to conduct and file surveys of the effectiveness of their CEP one year after filing their CAVA



# Proceeding History – Phase 2

- **August 2024, D. 24-08-005**
  - Updates climate science & analysis requirements for CAVAs to align with best available science
    - Adopts new baseline climate scenario and degree-based approach to climate modeling
    - Orders IOUs to update requirements as Climate Assessments update best practices
  - Establishes these requirements as best practice for climate modeling across proceedings
  - Requires IOUs to publicly present CAVAs prior to submitting to the CPUC
  - Adopts guidance for adaptation investment requests Included in GRC or free-standing applications

# CAVA & CEP Submission Timeline

	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
<b>SCE</b>	CEP	CAVA & RAMP	Survey & GRC		CEP	CAVA & RAMP	Survey & GRC	CEP	CAVA	RAMP & Survey	GRC
<b>PG&amp;E</b>			CEP	CAVA & RAMP	Survey & GRC	CEP*	CAVA*	RAMP & Survey	GRC		
<b>SDG&amp;E</b>				CEP	CAVA & RAMP	Survey & GRC	CEP	CAVA	RAMP & Survey	GRC	
<b>SCG</b>				CEP	CAVA & RAMP	Survey & GRC	CEP	CAVA	RAMP & Survey	GRC	

*\*Note that CAVAs and CEPs move up one year starting in 2026 with PG&E as per D.24-08-005*