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Attachment 1

Order Instituting Rulemaking to Consider Strategies and Guidance for Climate Change Adaptation (R.18-04- 019): Working Group Session Report on Item “Climate Vulnerable and Disadvantaged Communities”

REPORT 4 OF 5
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Introduction

The purpose of this report is to describe and summarize the key issues addressed during the Topic 4 Working Group discussions regarding identifying and prioritizing actions to address the needs of vulnerable and disadvantaged communities related to energy planning, investment and operations for climate change as part of the Order Instituting Rulemaking to Consider Strategies and Guidance for Climate Change Adaptation (OIR or Rulemaking) at the California Public Utilities Commission (CPUC). This report is the fourth in a series of five total reports that will be issued pertaining to the five topics in the OIR.

The Working Group met once at the California Energy Commission (CEC) in Sacramento and once at CPUC headquarters in San Francisco on this topic. The first meeting took place on March 25, 2019 and the second meeting took place on May 21, 2019. Both meetings were open to the public, and parties and non-parties to the proceeding participated.

I. Background and Framing Questions

a. Context for the Working Group Session Report

Order Instituting Rulemaking

The OIR to Consider Strategies and Guidance for Climate Change Adaptation (R.18-04-019) was adopted by the Commission on April 26, 2018. The OIR was motivated by statewide policy directives, recent climate events, as well as advancements in—and availability of—climate science and tools.

The Commission posed a set of questions in the OIR. Parties filed their Comments on the OIR and responses to the questions on June 6, 2018.

Phase 1 Scoping Memo and Ruling

On October 10, 2018, Assigned Commissioner Liane Randolph issued a Scoping Memo and Ruling for Phase 1. This Scoping Memo specified a Working Group structure through which to work on issue areas and relevant questions in the proceeding. The Scoping Memo noted that the session reports will summarize the Working Group conversations. The Scoping Memo said that “...it is not a goal at this time to reach consensus among participants but rather to develop a full understanding of the interplay of factors and externalities within each question, and to develop a range of recommendations that may be considered for adoption. The intent is to issue a guidance document to aid in utility planning for climate change adaptation.”¹

As part of this proceeding, the Working Group is asked to consider the following Issue areas: “(1) definition of climate adaptation for utilities; (2) appropriate data sources, models and tools for utility decision-making; (3) guidelines for utility climate adaptation and planning; (4) identifying and prioritizing actions to address the needs of vulnerable and disadvantaged communities; and (5) a framework for climate-related decision-making and accountability.”

Within each Issue Area, the Scoping Memo specifies a set of questions for the Working Group to consider in discussion at the session meetings. At the conclusion of each Issue Area, a utility would lead the drafting of the Working Group session report. Working Group meeting attendees will have an

¹ Assigned Commissioner’s Scoping Memo and Ruling, Filed 10/10/18. Order Instituting Rulemaking to Consider Strategies and Guidance for Climate Change Adaptation. R.18-04-019. p. 11.

opportunity make corrections to the draft session report, however, and Parties to the proceeding are invited to comment on the final session report after it is issued. The Commission aims to conclude the Phase 1 Working Group process and session reports by Summer 2019 and issue a Commission Decision by September 2019 (see [Appendix E](#) for the full proceeding Schedule as of the issuance of this report).

Topic 4 Scoping Memo Guiding Question

The working group for Topic 4 was tasked with developing “recommendations on how to identify and prioritize investments and other activities that address the needs of vulnerable and disadvantaged communities as related to climate change impacts.”²

The Scoping Memo included the following questions pertinent to this topic:

- What is an appropriate definition of vulnerable and disadvantaged communities in the context of climate adaptation? What are the special needs of these communities that should be addressed?
- How should utilities and the Commission include these communities in their efforts to identify and prioritize climate adaptation investments?
- How should investments and other activities benefitting these communities in the context of climate change impacts be identified and prioritized?

Format of This Document Relative to Previous Reports

This report instead is organized sequentially pursuant to the Topic 4 Session 1 and Session 2 discussions because the questions addressed in Session 1 were foundational for Session 2. Additionally, while the topics addressed are related, the two sessions resulted in robust and unique discussion with different points of focus.

The report still endeavors to reflect the positions of participants as accurately as possible and attempts to carefully characterize the level of agreement reached (or not) within each session-related section.

II. Summary of Topic 4 Session 1: Defining Climate Disadvantaged and Vulnerable Communities

a. Topic 4 Session 1 Background, Staff Proposal, and Guiding Questions for Discussion

Topic 4 Session 1 was held from 1:00pm to 3:00pm on March 25, 2019 at CEC headquarters in Sacramento, California. The goal of this meeting was to discuss definitions for both “vulnerable” and “disadvantaged” communities in the context of climate adaptation.

Prior to stakeholder discussion, Facilitator Nuin-Tara Key reviewed connections between Topic 4 and other state and local efforts to define vulnerable communities in an adaptation context. She also outlined the meeting objectives and what Topic 4 questions would and would not be in scope for Session 1.

² *Ibid.* p.7

Sarah Owens of the CPUC reviewed the Topic 4 Session 1 Staff Proposal which provides background about existing definitions of vulnerable and disadvantaged communities, proposed definitions for stakeholder reactions, and ways of conceptualizing the relationship between the two definitions (See [Appendix B](#) for full proposal).

Figure 1. Staff Proposal: Draft Definition of Vulnerable Communities in a Climate Context

Vulnerable communities experience heightened risk and increased sensitivity to climate change and have less capacity and fewer resources to cope with, adapt to, or recover from climate impacts. These disproportionate effects are caused by physical (built and environmental), social, political, and/ or economic factor(s), which are exacerbated by climate impacts. (ICARP TAC “Vulnerable Communities in an Adaptation Context”).

Figure 2. Discussion Questions re: Draft Definition of Vulnerable Communities in a Climate Context

- Is this the right definition for application to the electric and natural gas sectors?
- Does it include all the most important components?
- Are there parts of the proposed definition that need to be defined, such as the definition of “community”?
- Are there critical socio-economic or demographic factors that should be included in the definition and should they be weighted?

Figure 3. Staff Proposal: Draft Definition of Disadvantaged Communities in a Climate Context

- 25% highest scoring census tracts according to the California Communities Environmental Health Screening Tool (CalEnviroScreen).
- Tribal lands
- Census tracts with median household incomes less than 80% area or state median income

Figure 4. Discussion Question re: Draft Definition of Disadvantaged Communities in a Climate Context

- Does the proposed definition miss any key factors or considerations?
- Does it help distinguish DACs in a way that will help the CPUC meet the goals of this proceeding?

Figure 5. Discussion Question re: the Relationship Between Climate Vulnerable and Climate Disadvantaged Communities

- Do you agree or disagree that climate vulnerability is a spectrum, in the way that disadvantage is a spectrum?
- Is it possible to be disadvantaged and not climate vulnerable, or does being disadvantaged automatically make a community vulnerable (at least somewhat) to climate change?

b. Summary of Topic 4 Session 1 Discussion

- a. **A number of factors, including existing designations, could be considered to help define a “climate vulnerable community” (no apparent agreement).** Stakeholders had many questions, and opinions, regarding how to determine if a community is climate vulnerable, climate disadvantaged, or both.

Some stakeholders, including Commissioner Randolph, found a geographic frame of reference useful for considering the issue, as ultimately the designations could be used to direct utility investments in a specific way. The Public Advocates Office noted that “climate vulnerable communities” is not necessarily tied to geography the same way that “DACs” are, as defined in CalEnviroScreen. The investor-owned utilities, and particularly Southern California Edison (SCE), agreed that a geographic lens is useful, but that pursuant to the guidelines of the proceeding the geography should be defined by the particulars of utility infrastructure exposed to climate impacts, as the utilities can consider the characteristics of customers but ultimately are responsible for the infrastructure that serves said customers.

There was also much discussion around the specific characteristics that should determine climate vulnerability and/or climate disadvantage. APEN and the CEC noted that many existing mapping tools combine geography with characteristic information that could be relevant.³ Stakeholders discussed which existing community designation tools might be appropriate to use. It was noted that tools created for other purposes, like CalEnviroScreen, may not be best suited for a climate vulnerability-specific designation purpose, but could be a starting point.

- b. **Climate vulnerability and disadvantage requires consideration of community characteristics as well as exposure to climate impacts (some apparent agreement).** A number of stakeholders expressed that defining these terms requires considering both a community’s exposure to climate impacts as well as characteristics that indicate their adaptive capacity. Additionally, it was noted that the relevant geography for one type of climate impact might be different for another. PG&E referenced the California Environmental Quality Act (CEQA) concept of “appropriate study areas” as a potential conceptual guide.
- c. **Climate vulnerability and climate disadvantage are overlapping concepts (some apparent agreement).** The Public Advocates Office (Cal Advocates), PG&E, SCE, APEN, and others noted that climate vulnerability and climate disadvantage are overlapping concepts, though there was less agreement with regard to how they overlap. A number of groups, including APEN and the Public Advocates Office, asserted that the category of vulnerable communities is larger than just disadvantaged communities, as traditionally defined using

³ See [“Defining Vulnerable Communities in the Context of Climate Adaptation.”](#) Governor’s Office of Planning and Research. Integrated Climate Adaptation and Resilience Program (ICARP) Technical Advisory Council (TAC). July 2018. p 5-6.

CalEnviroScreen. CEJA, Public Advocates Office and NRDC noted that the issue of geographic and demographic exposure to climate impacts is an empirical one, not yet determined by the working group. Considering climate vulnerability and climate disadvantaged communities, PG&E and SCE argued that interlinking rather than concentric circles is a better reflection of the relationship, given that some disadvantaged communities may not face exposure to adverse climate impacts, and thus be programmatically “disadvantaged” but not climate vulnerable.

The proposed staff definition of climate disadvantage may be too broad and could be confused with other existing programmatic definitions (some apparent agreement). As stakeholders considered the proposed definition of climate disadvantaged communities, a number expressed concern that the proposal is too broad – APEN noted that the AB 1550 definition encompasses 47% of the state. Rising Sun Energy Center (RSEC) also pointed out the tension between having consistent definitions of what constitutes a “disadvantaged” community for targeting by state programs and the potential that the proposed definition could be too broad for effective targeting. It was suggested that lowering the median-income threshold from 80% to 60% is one way to reduce the scope of the definition and has been used in other cases. It was also noted that CalFire also has a separate programmatic definition of “disadvantaged” communities, potentially leading to further confusion. The Public Advocates Office urged that this proceeding not develop yet another definition of disadvantaged community, and rather rely on CalEnviroScreen’s definition to better coordinate across state agencies and minimize confusion. Representatives from the three IOUs and the CEC agreed.

- d. **Climate change impacts exacerbate existing adverse local environmental impacts (some apparent agreement).** APEN and the Leadership Council for Justice and Accountability (LCJA) argued that while tools targeting communities affected by adverse local environmental impacts may not be perfect for targeting “climate vulnerable” communities, they are likely still useful inasmuch as vulnerability to climate impacts and local environmental impacts are related and that climate impacts can exacerbate local adverse environmental impacts.
- e. **Community input is a key consideration in defining climate vulnerability and disadvantage (much expressed agreement/potential consensus).** Many stakeholders throughout the meeting expressed the importance of involving members of targeted communities themselves in the process of understanding what climate impacts are of most concern and the level of community resilience to said impacts.

III. Summary of Topic 4 Session 2: Identifying and Prioritizing Climate Adaptation Investments to Benefit Disadvantaged and Vulnerable Communities

a. Topic 4 Session 2 Background, Staff Proposal, and Guiding Questions for Discussion

Topic 4 Session 2 was held from 10:00pm to 4:00pm on May 21, 2019 at CPUC headquarters in San Francisco, California. The goal of this meeting was to:

- To discuss a process for identifying and prioritizing climate change adaptation investments and activities that benefit vulnerable and disadvantaged communities.
- To discuss how the CPUC and investor-owned utilities should include vulnerable and disadvantaged communities in the identification and prioritization of climate change adaptation investments and activities.

During the morning session, Facilitator Nuin-Tara Key reviewed the agenda, outlined the meeting objectives and reviewed the outcomes of the Topic 4 Session 1 discussion. Reese Rogers of the CPUC presented on proposed community engagement principles related to how utilities should include climate vulnerable communities in efforts to prioritize and identify adaptation investments.

Figure 6. Discussion Questions for Staff's Proposed Community Engagement Principles

- *Are there additional principles for community engagement that you think should be included?*
- *The IOU planning processes and regulatory proceedings are numerous and complex. If communities and IOUs are to work together, is education about IOU planning and regulatory process needed? If so, what might that look like?*
- *Where would community input be most helpful for the IOUs?*
- *Where do community groups and community representatives feel they could be supportive of IOU efforts to create more resilient communities?*
- *How should the Commission evaluate the IOUs efforts to engage with vulnerable and disadvantaged communities? Would specific metrics be a useful evaluation tool, and if so, what metrics are needed (number and location of meetings, number of participants, qualitative feedback from community members)?*

In the afternoon, Abigail Solis of Self-Help Enterprises presented on best practices in community engagement followed by discussion. After lunch, Jason Vargo of the California Department of Public Health on tools for assessing climate vulnerability, and Amee Raval of APEN provided a community-based organization (CBO) perspective on community engagement and climate investments. Reese Rogers of the CPUC prefaced the day's final group discussion with a review of the second element of the Topic 4 Staff Proposal – a process for identifying how potential climate vulnerabilities in the energy system could impact local communities, especially vulnerable populations and disadvantaged communities.

Figure 7. Discussion Questions for Staff's Proposed Community Engagement Principles

- *Are there any additional elements/categories that utilities should be required to include in their assessments of impacts to vulnerable and disadvantaged communities? (Steps 4-6 on p. 4-5)*
- *Should utilities conduct separate outreach for climate adaptation, or can the utilities combine outreach on adaptation with existing outreach activities?*
- *Who should the utilities work with in developing their vulnerability assessment? (Academics, local governments, community members?)*

- *Are there additional tools/data sources needed for identifying vulnerable communities?*

b. Topic 4 Session 2 Discussion

a. **The community engagement principles are robust (apparent agreement/potential consensus).**

Many stakeholders, including both CBOs and some of the IOUs, agreed that the list of community engagement principles in the staff proposal includes a number of established best practices. The California Environmental Justice Alliance (CEJA) stated that these principles “go further” than community considerations in other CPUC proceedings and hoped they would be extended to apply beyond the Climate Adaptation Proceeding. Other stakeholders did not explicitly affirm or disagree.

Ms. Margaret Gordon of the West Oakland Environmental Indicators Project also argued forcefully that community stakeholders must be brought in early and often, that it is valuable to learn through doing in a structured, safe environment, and that community, utility, and Commission stakeholders should receive training to help these groups interact with mutual understanding in order to achieve better outcomes.

b. **CBOs supporting community engagement require resources to enable their role (apparent agreement with some outstanding questions).** CBO stakeholders raised the issue that facilitating meaningful community engagement requires resources, and that the Commission’s existing intervenor compensation system is hard to access and navigate. Self-help Enterprises noted that grants and other options for advancement payment for CBOs are helpful, and that such a system has been established for facilitating action on water issues in relatively less well-resourced communities in the state. CEJA also noted that CBO participants in CPUC processes continue working on proceedings even when there is a gap between phases, and as such are not eligible to be compensated for their work. Commissioner Randolph and staff were receptive to this feedback, although clarifying that intervenor compensation is not the appropriate tool for general compensation; Commissioner Randolph explicitly asked for examples of models from other organizations with more experience supporting CBO-facilitated efforts.

c. **The focus of the proposed vulnerability assessment must be on impacts to customers as a result of climate impacts to utility infrastructure (some apparent agreement with significant outstanding questions).** Much of the discussion focused on clarifying the scope of the staff proposal, which specifies that the proposed vulnerability assessments will consider the effects on customers of climate impacts to utility infrastructure.⁴ While staff affirmed this framing, they also emphasized the importance of considering community perspectives on climate vulnerability, as well as understanding how climate impacts to communities may interact with climate impacts on the energy system.

Many questions remained about the exact scope of and specific outcomes of the proposed assessment, which some CBOs and the Small Business Utility Association (SBUA) expressing

⁴ Vulnerable and Disadvantaged Communities Staff Proposal. May 15, 2019. p. 3

concern that the proposed framing may not result in tangible community benefits or actionable information. The IOUs expressed support for gathering more information to be better prepared to serve customers in the face of climate impacts but highlighted that utility expertise and locus of control is specific to utility infrastructure.

d. **Clear roles, responsibilities, expectations, and commitments should be set for the proposed community engagement process (agreement in principle with many outstanding questions).**

Stakeholders largely agreed more work is needed scope the specifics of the proposed vulnerability assessment, while offering many different perspectives on what those specifics should be. Issues related to this topic include:

- **The expected time to complete the assessment**, which will vary depending on key details like the definition of what communities should be considered and the level of community outreach expected. It was noted that the San Joaquin Valley proceeding⁵ was focused on one region of the state and one specific issue, and occurred over the course of three years, with additional phases in progress. SCE stated, and PG&E agreed, that the current schedule is likely infeasible given the pace of other efforts similar in objective but more limited in scope.

Staff and APEN asserted that information is available for utilities to start analysis immediately. PG&E disagreed, noting that the existing Department of Energy (DOE) vulnerability assessment, which staff aim to expand with the proposed community-focused vulnerability assessment, is focused on the exposure of utility infrastructure to climate impacts. PG&E asserted that an analysis of community impacts will require a more detailed sensitivity analysis to determine what intensity of climate impacts will affect energy infrastructure in a way that impacts customers.

- **The expected result of the proposed vulnerability assessment.** The Public Advocates Office raised the issue that the staff proposal did not have an intended purpose for the vulnerability assessments, which could end up costing money, time and goodwill of communities if a clear purpose was not stated. Several parties agreed and proposed potential end results. For example, CEJA expressed a desire to utilities to commit to taking actions to benefit climate vulnerable communities as a result of the findings prior to initiating the assessment. CEJA also asked if the vulnerability assessment would include consideration of specific projects and pilots based in climate vulnerable communities.

Commissioner Randolph stated the expectation that while specific pilots are likely beyond the scope of the vulnerability assessment, the findings could be used in the future to inform adaptation investments. PG&E and SCE agreed, with the caveat that the information gathered from the assessment would be one of a number of inputs used by energy infrastructure managers to safely and reliably serve customers.

⁵ [Identifying Disadvantaged Communities in the San Joaquin Valley and Evaluating Options to Increase Access to Affordable Energy](#). California Public Utilities Commission.

Additionally, Commission staff stated that considering the feasibility of specific solutions is a step too far, and that the intent is to get a holistic view of how climate change will impact energy infrastructure, and the communities served by said infrastructure, before, during, and after climate impacts occur.

SBUA also noted that granularity of the findings should ideally be on a level that helps community members, including small businesses, take action to make themselves more resilient in the face of climate impacts to utility infrastructure.

- **The cadence for updating the proposed assessment.** Staff initially proposed the climate vulnerability assessment be updated every three years. SCE did not yet have an opinion on this item. PG&E noted that it may be more appropriate to update the assessment when new data is made available via the California Climate Assessment process, which occurs on a 4-6 year cycle. The Public Advocates Office recommended that regardless of the timeline, subsequent vulnerability assessments relate back to prior assessments, by including (1) an explanation of how the assessment is intended to be used (or not), (2) whether the prior assessment achieved its goal, (3) an analysis of why it was or was not successful, and (4) alterations to the new assessment process to improve outcomes, if needed.
- **The nature of community outreach related to the proposed assessment, including the appropriate organizations for leading said outreach.** San Diego Gas & Electric, which has experience doing outreach to customers related to de-energizations and wildfire risk, noted that often communities are interested in more than just one climate-related issue. Rob Kay, climate consultant in support of SDG&E, agreed, noting that asking for community time to talk about a single climate-related issue when people are often concerned about how climate change will impact many parts of their lives could diminish community interest in participating.

This conversation highlighted the issue of whether the utilities should be driving community outreach, or if the CPUC or local government and CBO partners should be leading outreach so that communities can address climate adaptation holistically with utilities, and many other necessary stakeholders in the water, transportation, and other spaces, at the table. CPUC staff agreed that non-energy sector CPUC-jurisdictional bodies would likely need to be folded into the outreach process on account of efficiency and consideration for the public's time. The Public Advocates Office recommended reaching out to California Office of Emergency Services (CalOES), which is engaged in climate adaptation planning for its hazard mitigation plan and the California Department of Public Health, which is also engaged in local climate adaptation planning and tends to have positive trust relationships with local communities.

- **How to gather community input setting clear expectations and being respectful of community time.** Many CBO representatives noted that the community members from areas that have historically experienced underinvestment and a lack of resources, some

of which may qualify as climate vulnerable, have a learned distrust of efforts like the one proposed either because expectations around outcomes were not clearly set or did not materialize as promised. LCJA noted that planning efforts not resulting in direct investment can still garner significant community input, but that it is important to set expectations about outcomes at the outset. The Public Advocates Office reasserted that importance of having clearly defined goals, and an explanation of how the assessments would or could inform planning, to prevent stakeholder fatigue and inadvertently increase resentment on the part of communities.

- **At what point in the proposed six step community climate vulnerability assessment process community members should be engaged for input.** The first three steps of the proposal involve technical analysis specific to climate impacts and utility infrastructure. Some CBO representatives stated that they would like engagement with climate vulnerable communities to begin as early in the process as identification of current and future climate risks as related to utility assets (Step 2).

IV. Appendices

Appendix A. Background Memo for the Topic 4 Working Group: Defining Vulnerable and Disadvantaged Communities

Background

This memo is drafted in support of the California Public Utility Commission’s Order Instituting Rulemaking (OIR) R.18-04-019, specifically in reference to Topic 4: Vulnerable and Disadvantaged Communities. The purpose of the OIR is to provide guidance to investor-owned electric and gas utilities on how to incorporate climate adaptation into their planning and operations. The OIR will broadly consider how best to integrate climate change adaptation into the larger investor-owned electric and gas utilities’ planning and operations to ensure safety and reliability of utility service.

The first phase of the rulemaking addresses five key topics:

1. Definition of climate adaptation for utilities
2. Appropriate data sources, models, and tools for climate adaptation decision-making
3. Guidelines for utility climate adaptation assessment and planning
4. Identification and prioritization of actions to address the climate change related needs of vulnerable and disadvantaged communities;
5. Framework for climate-related decision-making and accountability.

The CPUC is convening sequential working groups that provide recommendations for each of the topics above. The working group for Topic 4 is tasked with developing “recommendations on how to identify and prioritize investments and other activities that address the needs of vulnerable and disadvantaged communities as related to climate change impacts.”⁶ To accomplish this charge, the working group will need to develop definitions for both “vulnerable” and “disadvantaged” communities in the context of climate adaptation.

The initial working group meeting for Topic 4 is scheduled for March 25, 2019 from 1-3pm at the California Energy Commission in Sacramento, CA. There will be a WebEx option and call-in number for the meeting:

Event number: 929 144 916

Event password: This event does not require a password.

Event address for attendees:

<https://energy.webex.com/energy/onstage/g.php?MTID=e73900e2c9cb92b493f15172b436e9ef0>

To receive a call back, provide your phone number when you join the event, or call the number below and enter the access code.

Call-in toll-free number (US/Canada): 1-866-469-3239

Call-in toll number (US/Canada): 1-650-429-3300; Access code: 929 144 916

⁶ Assigned Commissioner’s Scoping Memo and Ruling, Filed 10/10/18. Order Instituting Rulemaking to Consider Strategies and Guidance for Climate Change Adaptation. R.18-04-019. p.7

The second meeting for Topic 4 will be in May, and will cover the following topics:

- How should utilities and the Commission include these communities in their efforts to identify and prioritize climate adaptation investments?
- How should investments and other activities benefitting these communities in the context of climate change impacts be identified and prioritized?

In this memo we will provide background on existing definitions for both terms, then provide proposals for both terms in the context of this proceeding and discussion questions that will be used to facilitate the discussion at the working group meeting on March 25th.

While there are no statutory definitions of “vulnerable communities” in an adaptation context, there are existing programmatic definitions that may be relevant. Additionally, there are several existing definitions of disadvantaged communities (DACs) used to inform programmatic and funding decisions throughout California, including a number of definitions established in state law (see Appendix B). Many of these definitions were developed to inform state programmatic and funding decisions focused on reducing greenhouse gas emissions. While these definitions provide a useful starting point to inform the Topic 4 working group’s deliberations, it should be noted that the existing definitions in state statute may or may not provide specificity to identify disadvantaged communities in a climate adaptation context.

Summary - Existing Definitions of Vulnerable Communities

While there are several statutory definitions of “disadvantaged communities,” there is currently no legislative direction in California on “vulnerable communities” in a climate adaptation context. There are, however, a growing number of public sector efforts to assess and adapt to climate impacts. For example, Executive Order B-30-15 requires all state agencies to incorporate climate into all planning and investment decisions; the Executive Order also includes a series of guiding principles, one of which is: “actions should protect the State’s most vulnerable populations”. However, the terms “protect” and “vulnerable populations” are not defined.

There is also a large body of literature that explores and defines climate vulnerability. The leading international body on climate change, the Intergovernmental Panel on Climate Change (IPCC), defines vulnerability as:

“The propensity or predisposition to be adversely affected. Vulnerability encompasses a variety of concepts and elements including sensitivity or susceptibility to harm and lack of capacity to cope and adapt.”⁷

Building off this definition, the Technical Advisory Council (TAC) for the Integrated Climate Adaptation and Resiliency Program (ICARP) within the California Governor’s Office of Planning and Research (OPR), developed and adopted a definition of “Vulnerable Communities in an Adaptation Context.” While this definition is not specific to a utility context, it outlines the underlying components that contribute to climate vulnerability. The definition is:

⁷ Working Group II Contribution to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change, p. 5. https://www.ipcc.ch/site/assets/uploads/2018/02/WGIIAR5-PartA_FINAL.pdf

“Vulnerable communities experience heightened **risk** and increased **sensitivity** to climate change and have less **capacity** and fewer resources to cope with, adapt to, or recover from climate impacts. These disproportionate effects are caused by physical (built and environmental), social, political, and/ or economic factor(s), which are exacerbated by climate impacts. These factors include, but are not limited to, race, class, sexual orientation and identification, national origin, and income inequality.”
[Emphasis added]

The IPCC defines three key components that contribute to vulnerability in a climate adaptation context:

1. Risk: “The potential for consequences where something of value is at stake and where the outcome is uncertain, recognizing the diversity of values. Risk is often represented as probability of occurrence of hazardous events or trends multiplied by the impacts if these events or trends occur.”⁸
2. Sensitivity: “The degree to which a system or species is affected, either adversely or beneficially, by climate variability or change. The effect may be direct (e.g., a change in crop yield in response to a change in the mean, range, or variability of temperature) or indirect (e.g., damages caused by an increase in the frequency of coastal flooding due to sea level rise).⁹
3. [Adaptive] Capacity: “The ability of systems, institutions, humans, and other organisms to adjust to potential damage, to take advantage of opportunities, or to respond to consequences.”¹⁰

While there can be differences in terminology across disciplines, these three components, as concepts, are generally consistent in vulnerability research.

The California Department of Forestry and Fire Protection recently submitted the Community Wildfire Prevention and Mitigation Report to the Governor’s Office in response to Executive Order N-05-19. The report recommends immediate, medium, and long-term actions to help prevent destructive wildfires, with a focus on California’s most vulnerable communities. In order to identify vulnerable communities, CAL FIRE conducted a socioeconomic analysis and a wildfire risk analysis. CAL FIRE’s creation of a definition for “vulnerable communities” includes a focus on risk, sensitivity, and capacity. The Socioeconomic Factors that CAL FIRE identified to represent populations at risk to wildfire impacts are:

- Families in poverty (% of families in the census tract living below the poverty line)
- People with disabilities (based on self-reporting)
- People that have difficulty speaking English (% of people in census tract estimated to have difficulty speaking English)
- People over 65
- People under 5
- Households without a car

⁸ IPCC, 2014: Climate Change 2014: Impacts, Adaptation, and Vulnerability, Annex II, Glossary, p. 1772, https://www.ipcc.ch/site/assets/uploads/2018/02/WGIIAR5-AnnexII_FINAL.pdf

⁹ Ibid, pp. 1772-1773.

¹⁰ Ibid; p. 1758. The IPCC definition provided above is for the term “adaptive capacity”. The ICARP Technical Advisory Council elected to shorten this to “capacity” for readability and language accessibility reasons, but the intent was to address the concept outlined in the IPCC definition.

Proposal - Proposed Definition of Vulnerable Communities and Discussion Questions

Below is a draft definition for the Topic 4 working group to discuss at the initial working group meeting. The definition is intended to serve as the starting point for stakeholder feedback and discussion. This definition is a modified version of the ICARP TAC definition, which also reflects the concepts included in the IPCC definition. This definition is a useful starting point because it provides a framework to define communities that are vulnerable to climate change impacts. It is consistent with the other definitions of vulnerability used by the State, including the Governor's Office of Planning and Research and CAL FIRE.

Proposed Definition:

Vulnerable communities experience heightened risk and increased sensitivity to climate change and have less capacity and fewer resources to cope with, adapt to, or recover from climate impacts. These disproportionate effects are caused by physical (built and environmental), social, political, and/ or economic factor(s), which are exacerbated by climate impacts. (ICARP TAC "Vulnerable Communities in an Adaptation Context").

Discussion questions:

- Is this the right definition for application to the electric and natural gas sectors?
- Does it include all the most important components?
- Are there parts of the proposed definition that need to be defined, such as the definition of "community"?
- Are there critical socio-economic or demographic factors that should be included in the definition and should they be weighted?

Summary - Existing Definitions of Disadvantaged Communities

Many, but not all, of the commonly used definitions of "disadvantaged communities" in California are tied to the legislative definitions that guide State Cap-and-Trade investments. Through Senate Bill (SB) 535¹¹ and Assembly Bill (AB) 1550¹² the California Environmental Protection Agency (CalEPA) is responsible for identifying disadvantaged communities for purposes of the Cap-and-Trade funding program. CalEPA designated as disadvantaged communities the top 25% of highest scoring census tracts using results of the California Communities Environmental Health Screening Tool (CalEnviroScreen).¹³ CalEnviroScreen determines disadvantaged communities based on geographic, socioeconomic, public health, and environmental hazard criteria (Health and Safety Code Section 39711), with specific focus on identifying the most pollution-burdened and vulnerable communities.

In 2016, AB 1550 also created new investment requirements for disadvantaged communities and created new requirements for low-income communities and households. Health and Safety Code Chapter 369, section 39713 states:

¹¹ Health and Safety Code, Chapter 830, Statutes of 2017

¹² Health and Safety Code Chapter 369, Statutes of 2016

¹³ CalEPA, Designation of Disadvantaged Communities Pursuant to Senate Bill 535 (De León), April 2017. Access on February 28, 2019. <https://calepa.ca.gov/wp-content/uploads/sites/6/2017/04/SB-535-Designation-Final.pdf>

“Low-income communities” are census tracts with median household incomes at or below 80 percent of the statewide median income or with median household incomes at or below the threshold designated as low-income by the Department of Housing and Community Development’s list of state income limits adopted pursuant to Section 50093.¹⁴

Given the intention of the legislation – reducing greenhouse emissions – the nexus of this definition is to identify and prioritize investments for communities disproportionately affected by environmental pollution tied to greenhouse gas emission sources.

The CPUC uses the term “disadvantaged communities” in several programs and proceedings. It is often, but not always, defined consistently with CalEPA’s definition. One example where the CPUC uses a variation of this definition is the Green Tariff program¹⁵ which uses the top 20% of ranked census tracts. Another example is IOU transportation electrification programs, where the utilities can consider the 25% highest burdened census tracts on either a state-wide basis, or service-territory wide basis. Still another is San Joaquin Valley “disadvantaged communities”, which under PUC 783.5, seeks to provide affordable energy, defines disadvantaged communities as areas with:

- at least 25% of residential households with electrical service enrolled in CARE
- a population greater than 100 persons within its geographic boundaries
- located no further than seven miles from the nearest natural gas pipeline operated by a gas corporation
- located in one of the eight San Joaquin Valley Counties

Pursuant to SB 350 (2015) and codified in Public Resources Code Section 400, the CPUC and the California Energy Commission established a “...disadvantaged community advisory group consisting of representatives from disadvantaged communities identified pursuant to Section 39711 of the Health and Safety Code. The Disadvantaged Communities Advisory Group (DAC AG) adopted an “equity framework” to guide its deliberations. The equity framework broadens the definition of disadvantaged communities as established by Health and Safety Code Section 39711 to also include:

- Tribal lands
- Census tracts with area median household incomes less than 80% area or state median income
- Households with income less than 80% of Area Median Income (AMI)

The Environmental and Social Justice (ESJ) Action Plan, which was adopted by the CPUC on February 22, 2019, references the expansive Disadvantaged Communities Advisory Group definition of “disadvantaged communities” for its definition of “Environmental and Social Justice Communities,” which would broadly apply to its authority to serve “disadvantaged” and “vulnerable” ratepayers, in all industries regulated by the CPUC, including water, telecommunications, and transportation.

While these definitions are generally rooted in the definition established in SB 535, over time they have expanded to address additional factors of disadvantage within a climate mitigation context, which are important for identifying vulnerable communities in an adaptation context. However, these definitions do not provide sufficient clarity and guidance to identify climate vulnerable communities, most notably

¹⁴ <https://www.arb.ca.gov/cc/capandtrade/auctionproceeds/communityinvestments.htm>

¹⁵ Public Utilities Code, Section 2833(d)(1)(A)

because (1) the definitions and corresponding screening tools do not incorporate climate impact and exposure data and (2) they do not capture the full suite of indicators needed to identify communities vulnerable to climate impacts. They also do not provide a full picture of the capacity considerations that contribute to climate vulnerability, highlighting the need to adopt both a definition for disadvantaged and vulnerable communities.

See Appendix B for additional definitions.

Proposal – Proposed Definitions of Disadvantaged Communities and Discussion Questions

Below is the proposed definition for disadvantaged communities for the Climate Change Adaptation OIR. Many of the CPUC's existing proceedings define disadvantaged communities as the 25% highest scoring census tracts according to CalEnviroScreen. In an effort to be consistent with existing Commission practice, staff proposes using CalEnviroScreen top 25% as a starting point for the definition of disadvantaged communities. CalEnviroScreen, however, is just one tool available to identify communities that are disadvantaged. Staff proposes expanding the definition of disadvantaged communities in order to include low-income communities in California that are not captured by CalEnviroScreen.

- 25% highest scoring census tracts according to the California Communities Environmental Health Screening Tool (CalEnviroScreen).
- Tribal lands
- Census tracts with median household incomes less than 80% area or state median income

Discussion questions:

- Does the proposed definition miss any key factors or considerations?
- Does it help distinguish DACs in a way that will help the CPUC meet the goals of this proceeding?

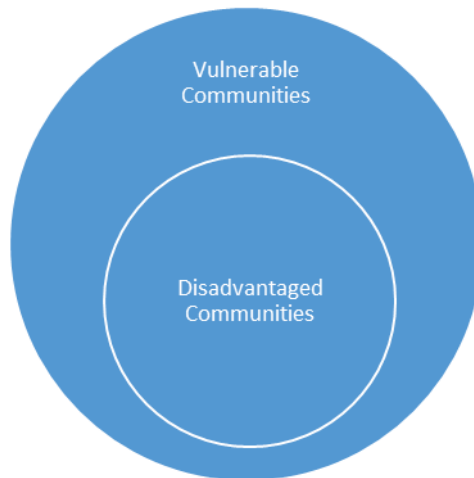
Discussion – Different Conceptual Models of the Relationship Between DACs and VCs

The purpose of Topic 4 in the OIR is to develop recommendations on how to identify and prioritize investments and other activities that address the needs of vulnerable and disadvantaged communities as related to climate change impacts. In order to develop such recommendations, it is first necessary to define what we mean by “vulnerable” and “disadvantaged” and to explore the relationship between those definitions.

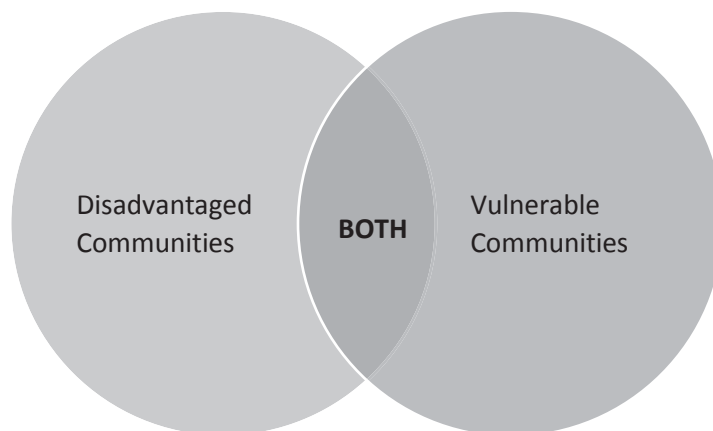
All communities in California will need to adapt to climate change (to some degree), however, some communities are more climate vulnerable and have a greater risk of exposure and sensitivity to certain climate impacts (e.g. coastal and delta communities and sea level rise, forested communities and wildfire). In addition, some communities and populations may be disproportionately affected by climate change as a result of existing disparities that cause multiple, compounding stressors that reduce adaptive capacity. Therefore, the concept of vulnerability might be understood as a spectrum, with “disadvantaged” factors contributing to heightened vulnerability. The factors that result in a community being defined as disadvantaged - per the proposed definition set forth earlier in this memo - may also make a community more vulnerable to climate change. While the definitions of vulnerable communities and disadvantaged communities are distinct, it is important for this working group to discuss how

disadvantaged factors may result in increased vulnerability and might be considered during the prioritization of utility investments and other activities.

There are many ways to represent the complex relationship between these two terms. The diagram below displays the concept that all disadvantaged communities are vulnerable to climate change, but that there are some communities that are vulnerable to climate change but are not disadvantaged.



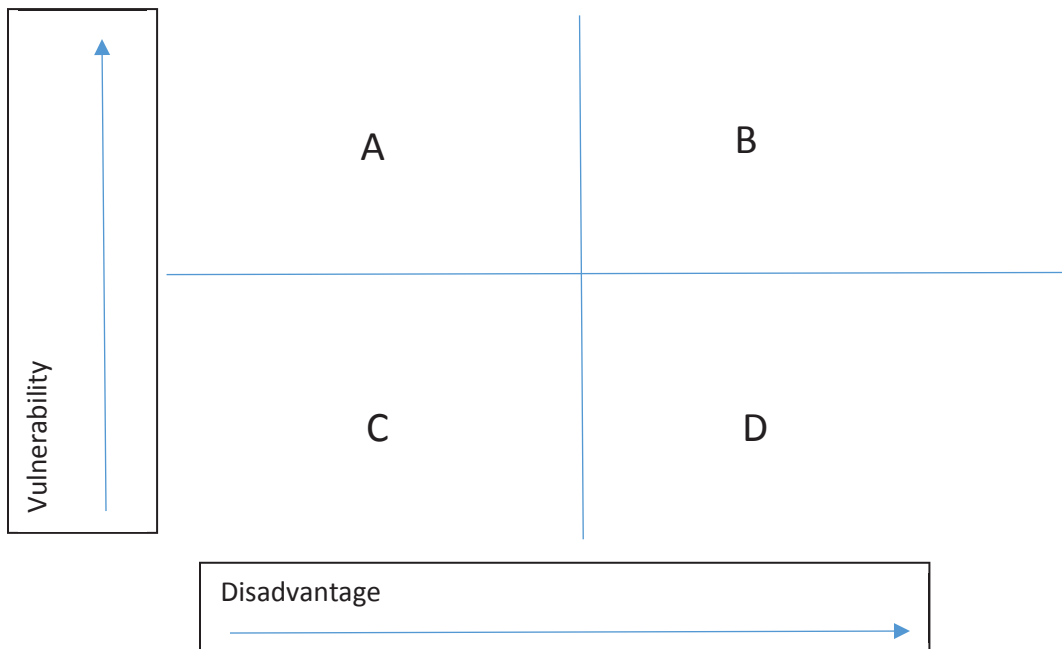
The following diagram offers another possibility - that there are instances of overlap, where communities are both disadvantaged and vulnerable, but that not all disadvantaged communities are also vulnerable to climate change.



The graph below also represents the relationship between climate vulnerability and disadvantage, with the added layer of demonstrating vulnerability and disadvantage as a spectrum. This representation seeks to show the concept that there are varying levels of both vulnerability and disadvantage. CalEnviroScreen is, by definition, a spectrum, since census tracts are ranked in order from least disadvantaged to most disadvantaged. In the figure below, Community A would be a community in the 25th percentile as measured by CalEnviroScreen (bottom 25%), while Community B would be in the 75th percentile, or top 25% of disadvantaged communities in the State. Likewise, climate vulnerability is

variable, and based on varying levels of risk, sensitivity, and adaptive capacity, a community can be more or less vulnerable.

Imagine that Points A and B are communities on the coast, and they are similarly at risk to rising sea levels. Community B is in the top 25% of disadvantaged communities, while Community A is not. Community A is still vulnerable because they experience the same risks and sensitivity to rising sea levels. However, Community A is less vulnerable because they are a higher-income community, and most likely have a higher adaptive capacity due to increased access to mobility and financial ability to afford temporary housing.



Discussion Questions:

- Do you agree or disagree that climate vulnerability is a spectrum, in the way that disadvantage is a spectrum?
- Is it possible to be disadvantaged and not climate vulnerable, or does being disadvantaged automatically make a community vulnerable (at least somewhat) to climate change?

Conclusion

This memo has summarized the existing definitions of vulnerable and disadvantaged communities and has proposed definitions for the working group to consider and discuss. While staff has proposed definitions for vulnerable and disadvantaged communities, we want to hear from participants at the meeting about their perspective on the definitions and the relationship between the two categories.

Appendix: Existing definitions of Vulnerable Communities in an Adaptation Context

The existing state definitions primarily focus on identifying Environmental Justice and low-income communities, which are important considerations when identifying vulnerable communities in an adaptation context. However, these definitions do not provide sufficient clarity and guidance to identify vulnerable communities in an adaptation context, most notably because (1) the definitions and corresponding screening tools do not incorporate climate impact and exposure data and (2) they do not capture the full suite of factors needed to identify communities vulnerable to climate impacts.

Recognizing this gap, the Technical Advisory Council for the Integrated Climate Adaptation and Resiliency Program (ICARP) in the Governor's Office of Planning and Research (OPR), developed the following definition of Vulnerable Communities in an adaptation context:

- **ICARP TAC Definition:**

- "Climate vulnerability describes the degree to which natural, built, and human systems are at risk of exposure to climate change impacts. Vulnerable communities experience heightened **risk** and increased **sensitivity** to climate change and have less **capacity** and fewer resources to cope with, adapt to, or recover from climate impacts. These disproportionate effects are caused by physical (built and environmental), social, political, and/or economic factor(s), which are exacerbated by climate impacts. These factors include, but are not limited to, race, class, sexual orientation and identification, national origin, and income inequality."

After the TAC's adoption of this definition, OPR developed a resource guide for practitioners¹⁶ to use when first considering how to define vulnerable communities in an adaptation context. This guide includes a summary of publicly accessible statewide tools and data sets that, when overlaid with climate projection data, can identify vulnerable communities.

- The Resource Guide also identifies additional indicators that could be useful for identifying vulnerable communities but are not yet available in state-wide models or tools. These include the following indicators that deal specifically with public and private utilities:
 - Telecommunications - availability and access (phone, cable, broadband, etc.)
 - Households with water/electricity shut offs in last 12 months
 - Household that have never been connected to the electricity grid
 - Households reliant on well-water
 - Reliance on wood-based heat
 - Households & businesses with independent power generation/storage capacity
- The **California Department of Forestry and Fire Protection (CAL FIRE)** submitted the Community Wildfire Prevention and Mitigation Report to the Governor's Office in response to Executive Order N-05-19. The report recommends immediate, medium, and long-term actions to help prevent destructive wildfires, with a focus on California's most vulnerable communities. In order

¹⁶ Defining Vulnerable Communities in the Context of Climate Adaptation, A resource guide developed through the Integrated Climate Adaptation and Resilience Program (ICARP), with guidance from the ICARP Technical Advisory Council (2018) http://opr.ca.gov/docs/20180723-Vulnerable_Communities.pdf

to identify vulnerable communities, CAL FIRE conducted a socioeconomic analysis and a wildfire risk analysis. The Socioeconomic Factors that CAL FIRE identified to represent populations at risk to wildfire impacts are:

- Families in poverty (% of families in the census tract living below the poverty line)
- People with disabilities (based on self-reporting)
- People that have difficulty speaking English (% of people in census tract estimated to have difficulty speaking English)
- People over 65
- People under 5
- Households without a car

CAL FIRE used data from the American Community Survey and the California Building Resilience Against Climate Effects Project.

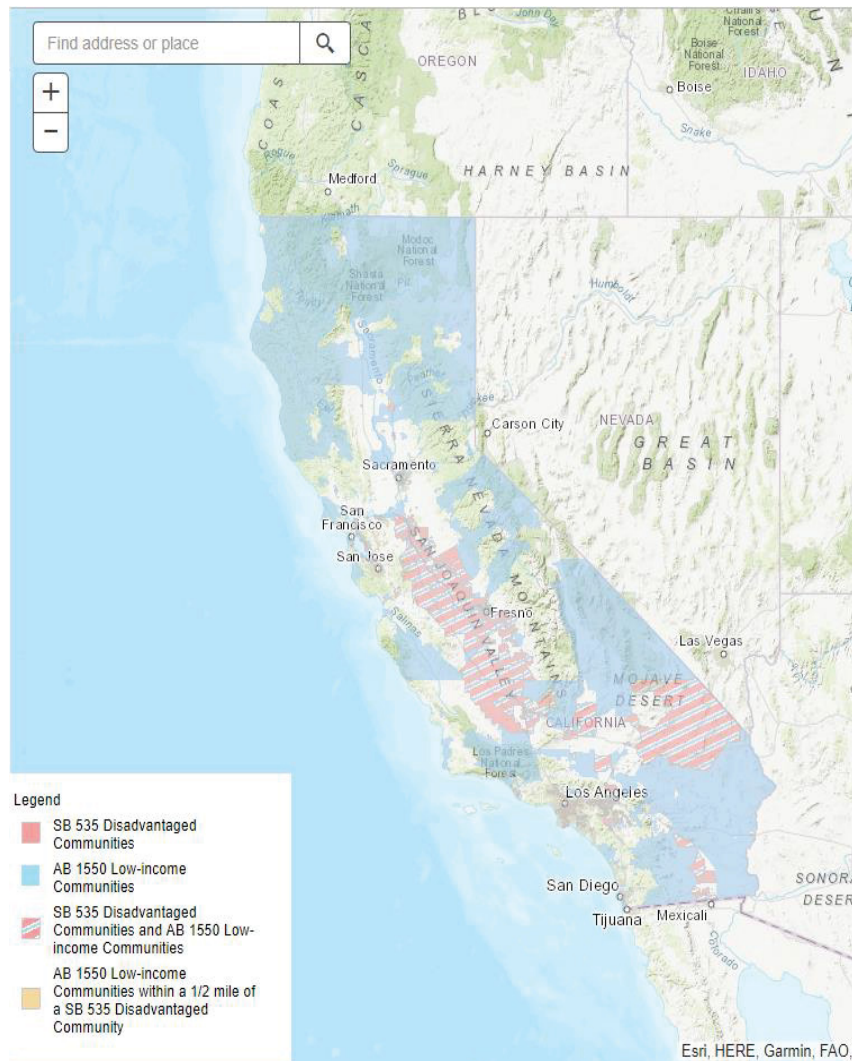
- Other factors or considerations to understanding climate vulnerability include, but are not limited to:
 - Communities without access to transit/transportation
 - Geographical isolation
 - Homelessness
 - Community adaptive capacity, including number and capacity of community organizations
 - Health/medical conditions

Existing Definitions of Disadvantaged Communities

The following list provides the most relevant definitions of Disadvantaged Communities (DACs) found within California State Law, as well as other commonly used definitions. (This is not intended to be a comprehensive inventory of all definitions, but a snapshot of commonly referenced definitions.):

- **SB 535 (2012, de Leon)** introduced CalEnviroScreen (CES) and directs 25% of proceeds from that State's Cap-and-Trade Program (California Climate Investments) to projects that provide benefit to DACs.
 - Health and Safety Code Section 39711 identifies DACs in an environmental context based on geographic, socioeconomic, public health, and environmental hazard criteria.
 - CalEnviroScreen 3.0 is a screening tool that identifies communities most affected by and vulnerable to the effects of many sources of pollution and population-based disparities. It aggregates state-wide environmental, health, and socioeconomic information to produce scores for every census tract in the state. A census tract with a high score is considered more disadvantaged than a community with a low score as a result of pollution burden and population characteristics.
- **AB 1550 (2016, Gomez)** introduced additional cap-and-trade spending requirements that benefit low-income communities, in addition to the spending requirements for DACs established through Health and Safety Code 39711.
 - Health and Safety Code section 39713 states: "Low-income communities" are census tracts with median household incomes at or below 80 percent of the statewide median income or with median household incomes at or below the

threshold designated as low income by the Department of Housing and Community Development's list of state income limits adopted pursuant to Section 50093.”¹⁷



AB 535 and AB 1550 Map of Disadvantaged and Low-Income Communities

<https://www.arb.ca.gov/cc/capandtrade/auctionproceeds/lowincomemapfull.htm>

- **SB 1000 (2016, Leyva)** requires local governments with DACs to develop an environmental justice element to their general plan. SB 1000 provides reference to the DAC definition established by Health and Safety Code 39711 (SB 535), but also allows local jurisdictions to develop and use alternate locally established definitions and screening tools.
 - Health and Safety Code Section 65302 Bill language: “Disadvantaged communities” means an area identified by the California Environmental Protection Agency pursuant to Section 39711 of the Health and Safety Code or an area that is a low-income area that is disproportionately affected by environmental pollution and

¹⁷ <https://www.arb.ca.gov/cc/capandtrade/auctionproceeds/communityinvestments.htm>

other hazards that can lead to negative health effects, exposure, or environmental degradation.

It is important to note that SB 1000 does not include a statutory requirement for local governments to incorporate climate adaptation considerations in the environmental justice element of a general plan. SB 379¹⁸ requires local jurisdictions to consider climate change in the safety element, but there is no statutory requirement requiring the Environmental Justice Element to also incorporate climate change.

- **SB 1072 (2018, Leyva)** establishes the regional climate collaborative program under the Strategic Growth Council (SGC). The program is intended to assist under-resourced communities access statewide public and other grant moneys for climate change mitigation and adaptation projects.
 - “Under-resourced Community” is defined in the legislation to include: Health and Safety Code Section 39711 (SB 535) CalEnviroScreen Top 25% Disadvantaged Communities; Health and Safety Code Section 39713, Subdivision (d) (AB 1550) Low Income & Buffer Communities; and Health and Safety Code Section 75005, Subdivision (g), Median Household Income less than 80% of statewide average
 - SB 1072 includes the additional median household income factor.
- **Proposition 84** created the Safe Drinking Water, Water Quality and Supply, Flood Control, River and Coastal Protection Bond Act of 2006. Prop 84 authorizes general obligation bonds to fund safe drinking water, water quality and supply, flood control, waterway and natural resource protection, water pollution contamination control, state and local park improvements, public access to natural resources and water conservation efforts. The Prop 84 DAC definition intends to prioritize water quality projects that address and serve small communities with limited financial resources, DACs, and severely disadvantaged communities.
 - Public Resources Code section 75005: (g) “Disadvantaged community” means a community with a median household income less than 80% of the statewide average. The Act further defines “Severely disadvantaged community” as communities with a median household income less than 60% of the statewide average.
- **Proposition 1** created the Water Quality, Supply, and Infrastructure Improvement Act of 2014, which authorizes general obligation bonds to fund ecosystems and watershed protection and restoration, water supply infrastructure projects, including surface and groundwater storage, and drinking water protection. Prop 1 (AB 1741), established a definition for Economically Distressed Areas (EDAs), for the purpose of waiving or reducing a local cost share for projects that directly benefit disadvantaged or economically distressed communities.
 - Public Resources Code section 79702: (k) “Economically distressed area” means: a municipality with a population of 20,000 persons or less, a rural county, or a reasonably isolated and divisible segment of a larger municipality where the

¹⁸ Senate Bill 379 (Jackson, Chapter 608, Statutes of 2015)

segment of the population is 20,000 persons or less, with an annual median household income that is less than 85 percent of the statewide median household income, and with one or more of the following conditions as determined by the department:

- (1) Financial hardship.
 - (2) Unemployment rate at least 2 percent higher than the statewide average.
 - (3) Low population density.
- The **CPUC** uses the term “disadvantaged communities” in several programs and proceedings.
 - It is often, but not always, defined consistently with CalEPA’s definition, (25% highest burdened census tracts using 20 social, and environmental health, indicators included in CalEnviroScreen).
 - The CPUC and CEC Disadvantaged Community Advisory Group’s definition of Disadvantaged Communities is: “As defined in the Energy Equity Indicators tool, the Disadvantaged Communities Advisory Group (DAC AG) will adopt as the definition and advocate for equitable programming to reach all of the following communities (including community residents, workers, and businesses):
 - CalEnviroScreen, as defined by Cal EPA,
 - Tribal Lands,
 - Census tracts with area median household income/state median income, less than 80%, and
 - Households with median household income less than 80% of Area Median Income (AMI).”¹⁹

(Note: The CPUC has not adopted the DAC AG’s definition of disadvantaged communities)

¹⁹ Environmental and Social Justice Action Plan, February 21, 2019.
http://www.cpuc.ca.gov/uploadedFiles/CPUCWebsite/Content/UtilitiesIndustries/Energy/EnergyPrograms/Infrastructure/DC/Env%20and%20Social%20Justice%20ActionPlan_%202019-2-19.pdf

Appendix B. Topic 4: Vulnerable and Disadvantaged Communities Staff Proposal

Introduction

The Scoping Memo for Topic 4 of the Climate Change Adaptation OIR (R.18-04-019) contains three guiding questions:

1. What is an appropriate definition of vulnerable and disadvantaged communities in the context of climate adaptation? What are the special needs of these communities that should be addressed?
2. How should utilities and the Commission include these communities in their efforts to identify and prioritize climate adaptation investments?
3. How should investments and other activities benefitting these communities in the context of climate change impacts be identified and prioritized?

Staff issued a proposal on the definition of vulnerable and disadvantaged communities in the context of climate adaptation on March 13, 2019. A working group meeting was held on March 25, 2019 to discuss the proposal.

This staff proposal addresses questions 2 and 3 raised in the Scoping Memo. To address the second question of how to include communities in effort to identify and prioritize climate adaptation investments, staff proposes principles for engaging with these communities. To address the third question of how investments should be identified and prioritized, staff proposes a process for identifying how potential vulnerabilities to the system caused by climate change could impact local communities. The analysis in that assessment would then be used to identify and prioritize investments benefitting vulnerable and disadvantaged communities.

Throughout this staff proposal the terms “vulnerable” and “disadvantaged” communities will be used with the understanding that they will be formally defined in the decision for this proceeding.

Principles for Community Engagement on Investment Decisions

This section of the staff proposal focuses on guiding principles for community engagement and stakeholders are encouraged to bring specific ideas for including vulnerable and disadvantaged communities to the working group meeting on May 21, 2019.

The Commission has been prioritizing community engagement as a key aspect to the Investor Owned Utilities’ (IOUs’) overall planning processes. Rather than propose a prescriptive process for engagement, staff proposes principles to guide the IOU outreach, while allowing for both flexibility and innovation in the process, recognizing that each community and situation is unique. Staff proposes the following principles for utilities to follow when conducting community outreach and working with vulnerable and disadvantaged communities on the issue of climate change adaptation:

- Build enough time into the vulnerability assessment process (as described in the following section) to allow for community engagement and partnership.
- Develop and maintain partnerships with vulnerable and disadvantaged communities and their representative organizations across the IOU's service territory. Examples of potential partners include, but should not be limited to:
 - o Culturally specific community-based organizations and networks
 - o Faith-based organizations
 - o Local governments
 - o Parent-teacher associations
 - o Public health providers
 - o Schools
- The Commission and IOUs should work with communities to build community capacity to participate in Commission processes and create long-term relationships with community groups. Specifically, we look to strengthen skills, knowledge, relationships, and power of communities to participate in decision-making processes related to climate adaptation.
- The Commission and IOUs should work with communities to maximize community member participation through meeting logistics and planning
 - o Meetings times should be convenient for working people and located in spaces that are centrally located and accessible via public transit. Meetings should also allow for remote participation.
 - o Meeting information and outreach materials should be translated into languages spoken by community members in that area. Additionally, translation services should be made available and advertised, when appropriate.
- The Commission and IOUs should build on the best practices for community engagement that they and other organizations have identified and implemented. Similarly, the IOUs should collaborate, when appropriate, with existing efforts at the CPUC and in State government. Existing efforts include the Disadvantaged Communities Advisory Group¹ and the Telecommunications Education and Assistance in Multiple-Languages (TEAM) and Community Help and Awareness of Natural Gas and Electric Services (CHANGES) programs.²
- IOUs can consider how best to connect community members with appropriate agencies to address requests for adaptation investments/activities that are not within the IOU's jurisdiction.

Discussion Questions

- Are there additional principles for community engagement that you think should be included?
- The IOU planning processes and regulatory proceedings are numerous and complex. If communities and IOUs are to work together, is education about IOU planning and regulatory process needed? If so, what might that look like?

- Where would community input be most helpful for the IOUs?
- Where do community groups and community representatives feel they could be supportive of IOU efforts to create more resilient communities?
- How should the Commission evaluate the IOUs efforts to engage with vulnerable and disadvantaged communities? Would specific metrics be a useful evaluation tool, and if so, what metrics are needed (number and location of meetings, number of participants, qualitative feedback from community members)?

Identifying Adaptation Investment and Activities benefitting Vulnerable and Disadvantaged Communities

Part 1: Assessment of Impacts to Vulnerable and Disadvantaged Communities

In order for Investor Owned Utilities (IOUs) to fully understand the risks from climate change in their service territories, they need to understand not only what impact the changes in climate will have to their assets and operations, but also how those impacts to the assets will directly and indirectly impact their customers.

As part of their membership in the U.S. Department of Energy’s Climate Resilience Partnership, California’s large IOUs³ all conducted Climate Change Vulnerability Assessments. In these reports, which were completed in November 2016, each IOU assessed the climate impacts their region anticipated and then evaluated how various critical assets might be affected. PG&E for example, found that with 24 inches of sea level rise, 4 substations in the San Francisco Bay Area would be negatively impacted. However, the assessment did not address which customers and communities would be impacted if a major utility asset such as a substation was compromised. The report did not characterize the risk in terms of its scale or scope from a low-impact minimum disruption to a high-impact unacceptable risk. More relevant to this Topic 4 discussion, the report did not characterize the climate risk in terms of who is affected and did not assess the vulnerability and adaptive capacity of the people and places affected.

In its report, *Planning and Investing For A Resilient California*⁴, the Governor’s Office of Planning and Research also recommends that planners consider assessing the nature of a climate-related disruption on the community: is it a temporary impairment, a future-options-limiting impairment, or a permanent and irreversible harm?

Staff recommends that the utilities do an assessment to understand the risks as they relate specifically to vulnerable and disadvantaged communities in their territories. Detailed data about how a utility’s vulnerabilities to climate change will impact the vulnerable and disadvantaged communities are necessary. This kind of information is crucial in order to identify and prioritize investments benefiting those communities. Staff proposes that this analysis be incorporated into the “decision-making framework” that will be discussed in Topic 5 of this proceeding.

Utility vulnerability assessments should be consistent with the current state of practice established through the IPCC assessment processes. The current 2014 IPCC *Impacts, Adaptation, and Vulnerability Report* (Working Group II), frames risk as the result of interactions between a hazard, exposure and vulnerability.⁵ IPCC 2014 goes on to further frame vulnerability as encompassing sensitivity and adaptive capacity. Because vulnerability is a “result of diverse historical, social, economic, political,

cultural, institutional, natural resource, and environmental conditions and processes” it is important that utility efforts to identify vulnerable communities in an adaptation context include both physical utility-owned assets and also the characteristics and contexts of their customer base.⁶

In conducting their 2016 vulnerability assessments, all three IOUs determined how and when climate impacts (e.g. sea level rise, temperature, precipitation) may affect utility assets. Each of the IOUs approached the effort differently, but overall, each took similar steps:

Step 1: Determine the total number of known assets in the IOU’s service territory

Step 2: Identify current and future climate risks as related to those assets.

Step 3: Assess the sensitivity of those assets to climate impacts,

To meet the objectives of the OIR, staff proposes IOUs undertake additional analysis in their vulnerability assessments:

Step 4: Within the IOU’s service territory, determine the location of disadvantaged and vulnerable communities that will be potentially affected by climate impacts to the utility’s infrastructure

Step 5: Determine the location-specific vulnerabilities and adaptive capacity of disadvantaged and vulnerable communities that will be impacted by climate change impacts that will curtail utility service.

Step 6: Analyze the direct and indirect impacts on vulnerable and disadvantaged communities as a result of climate impacts on utility assets; understand options before, during, and after a climate impact event that can lessen the negative effects on the community.

There are a number of tools the IOUs can use to identify vulnerable communities. For example, the Governor’s Office of Planning and Research’s guidance⁷ for evaluating adaptive capacity includes a suite of different data and process tools that can help inform a utility vulnerability assessment:

- Tools for Identifying Vulnerable Communities
 - o CalEnviroScreen
 - o Climate Change and Health Vulnerability Indicators for California
- Health Places Index
 - o Regional Opportunity Index
- Additional Process Guidance Tools
 - o Executive Order B-30-15 Equity Checklist
 - o Government Alliance on Race Racial Equity Toolkit
 - o Bay Localize Community Resilience Toolkit

Coordination with Local Governments and Community Based Organizations

Utilities should meaningfully engage with vulnerable and disadvantaged communities to identify and understand their needs with respect to climate change adaptation. Given the scale of effort needed to

support meaningful engagement, utilities will need to make the best use of resources and should leverage opportunities to coordinate on adaptation with existing outreach efforts.

Staff propose that the IOUs coordinate with local governments and community-based organizations when assessing the impacts on vulnerable and disadvantaged communities. In addition to outreach specific to the IOU's vulnerability assessment, there is an opportunity for the IOUs to work with local governments to incorporate any existing and ongoing local assessments into the utility's analysis. For example, Senate Bill 379 directs local governments to incorporate climate considerations into their general plans for the protection of the community from unreasonable risks associated with the effects of various geologic hazards, flooding, and wildland and urban fires.⁸ Local governments can meet this requirement through several different options including 1) the safety element of their general plan, 2) by reference into their local hazard mitigation plan or other climate mitigation and adaptation plans.

Although the utilities' assessments will likely commence before local governments are required to complete the assessments required in SB 379 in 2022, the utilities should strive to incorporate local information into their vulnerability assessments when that information is available. For example, local governments and community-based organizations might have access to data about community vulnerabilities at a more granular level than what the utility has access to. This local data can be helpful to the utilities to determine the vulnerabilities of specific populations within their service territory.

Another opportunity for utilities to collaborate with local governments is around SB 1000, which requires many local governments to develop an environmental justice element of their General Plan. While the scope of these local government efforts may not entirely align with the needs of IOUs, they provide opportunities for utilities and local governments to leverage resources and time to better coordinate on both engagement and assessment activities.

Staff proposes that the IOUs utilize their designated Environmental Justice and Tribal Outreach personnel to consult with individuals and entities as necessary. If existing outreach efforts are insufficient for engaging with vulnerable and disadvantaged communities, then the IOUs should conduct outreach to vulnerable and disadvantaged communities throughout their service territory, including environmental justice communities and tribes.

Submission Requirements

The utilities must submit their assessment of impacts to vulnerable and disadvantaged communities within 12 months of the Commission Decision in this proceeding and must update their assessment every 3 years.

The updated vulnerability assessment must report on the IOU's coordination with local governments, CBOs, and vulnerable and disadvantaged communities. The utilities shall report on the type of outreach, number of meetings and participants, and shall include summaries of comments and feedback received from local governments, CBOs, and vulnerable and disadvantaged communities.

Part 2: From Assessment to Planning

The assessment of impacts to vulnerable and disadvantaged communities allows the IOUs to plan for adaptation investments and activities with more complete information about where and to what extent communities will be negatively impacted by climate change. As the utilities develop plans for investing

in adaptation activities specifically to address vulnerability, it may be beneficial to look to examples of how others outside of California are approaching community engagement. The following Appendix includes examples of local jurisdictions are working on innovative community engagement tools and best practices.

Discussion Questions

- Are there any additional elements/categories that utilities should be required to include in their assessments of impacts to vulnerable and disadvantaged communities? (Steps 4-6 on p. 4-5)
- Should utilities conduct separate outreach for climate adaptation, or can the utilities combine outreach on adaptation with existing outreach activities?
- Who should the utilities work with in developing their vulnerability assessment? (Academics, local governments, community members?)
- Are there additional tools/data sources needed for identifying vulnerable communities?

Appendix: Additional Examples of Community Engagement

King County/City of Seattle: King County has developed a Community Engagement Guide, which includes an explanation of the “Continuum” of community engagement (from “inform” to “community directed”): <https://www.kingcounty.gov/~media/elected/executive/equity-social-justice/documents/CommunityEngagementGuideContinuum2011.ashx?la=en>

Race and Social Justice initiative (RSJI): developed a Racial Equity Toolkit to Assess Policies, Initiatives, Programs, and Budget Issues.
https://www.seattle.gov/Documents/Departments/RSJI/RacialEquityToolkit_FINAL_August2012.pdf

The Toolkit includes specific guidance on identifying stakeholders and listening to communities of color. Ask the community: 1. What do we need to know about this issue? How will the policy, program, initiative or budget issue burden or benefit the community? 2. What factors produce or perpetuate racial inequity related to this issue? 3. What are ways to minimize any negative impacts (harm to communities of color, increased racial disparities, etc.) that may result? What opportunities exist for increasing racial equity?

Urban Sustainability Directors Network - collaborative project with Seattle and King County and the Puget Sound Clean Air Agency Case Study:
https://www.usdn.org/uploads/cms/documents/heat_sceanrio_racial_equity_evaluation_mini-report_-_final.pdf. This pilot project seeks to go beyond inclusive outreach and community engagement to “sharing power and decision-making responsibility” with community members.

- Community-driven planning process
- Community-centered outcome
- Identification of racially equitable planning tactics

Georgetown Climate Center developed a guide to community-centered engagement in D.C. and a report on Opportunities for Equitable Adaptation in Cities (developed in collaboration with the Urban

Sustainability Director's Network) https://www.georgetownclimate.org/files/report/GCC-Opportunities_for_Equitable_Adaptation-Feb_2017.pdf

- Long-term commitment to relationship building - institutionalized, not project-specific
- Hold meetings at convenient times for working people; include interpreters and notices in inclusive languages
- Partner with others: community-based organizations, community institutions, foundations
- Link climate polities with larger issues such as poverty, housing security, and racial equity. Linking other policies and activities with climate adaptation can improve economic and social resilience of residents. o Portland Climate Action Plan Equity Considerations and implementation objectives9 ▪ Disproportionate Impacts • Does the proposed action generate burdens (including costs), either directly or indirectly, to communities of color or low-income populations? If yes, are there opportunities to mitigate these impacts?
- Shared Benefits • Can the benefits of the proposed action be targeted in progressive ways to reduce historical or current disparities?
- Accessibility • Are the benefits of the proposed action broadly accessible to households and businesses throughout the community — particularly communities of color, low-income populations, and minority, women and emerging small businesses?
- Engagement • Does the proposed action engage and empower communities of color and low-income populations in a meaningful, authentic and culturally appropriate manner?
- Capacity Building • Does the proposed action help build community capacity through funding, an expanded knowledge base or other resources?
- Alignment and Partnership • Does the proposed action align with and support existing communities of color and low-income population priorities, creating an opportunity to leverage resources and build collaborative partnerships?
- Relationship Building

City of Portland and Multnomah County 2015 Climate Action Plan

<https://www.portlandoregon.gov/bps/article/583501> Developed 9 equity considerations (on page 12 of the report) Disproportionate impacts, shared benefits, accessibility, engagement, capacity building, alignment and partnership, relationship building, economic opportunity and staff diversity, accountability.

The integration of equity in the Portland/Multnomah County 2015 Climate Action Plan, July 12, 2016. <https://www.portlandoregon.gov/bps/article/583501> p. 12

Appendix C. Topic 4 Session 1 Agenda

California Public Utilities Commission

Proceeding #: R1804019: Climate Adaptation

Working Group Agenda

March 25, 2019

Topic 4: Vulnerable and Disadvantaged Communities

A. Meeting Agenda

Facilitator: Nuin-Tara Key, Governor's Office of Planning and Research

Outcome: Discuss the definition of vulnerable and disadvantaged communities in the context of climate adaptation.

1:00-1:10pm: Stakeholder Introductions

1:10-1:20pm: Presentation from Facilitator, Nuin-Tara Key

1:20-1:35pm: Staff presentation of memo and proposed definitions

1:35-2:50pm: Discuss Definition of Vulnerable and Disadvantaged communities and relationship between the two

2:50-3:00pm: Next Steps

Appendix D. Topic 4 Session 2 Agenda

California Public Utilities Commission

Proceeding #: R1804019: Climate Adaptation

Working Group Agenda

May 21, 2019

Meeting Agenda

Facilitator: Nuin-Tara Key, Governor's Office of Planning and Research

Outcome: To discuss a process for identifying and prioritizing climate change adaptation investments and activities that benefit vulnerable and disadvantaged communities. To discuss how the CPUC and investor-owned utilities should include vulnerable and disadvantaged communities in the identification and prioritization of climate change adaptation investments and activities.

10:00-10:10am: Welcome and Stakeholder Introductions

10:10-10:20am: Presentation of Staff proposal memo - community engagement

10:20-10:40am: Presentation on San Joaquin Valley Disadvantaged Communities Community Engagement Approach by Abigail Solis, Self Help Enterprises

10:40am-12:00pm: Discussion

12:00-1:00pm: Lunch Break

1:00-1:15pm: Presentation of Staff proposal memo - assessment of impacts to vulnerable and disadvantaged communities

1:15-1:30pm: Presentation from APEN about example investments

1:30-1:45pm: Presentation from Jason Vargo, California Department of Public Health, Data types available to identify community vulnerability

1:45-3:30pm: Discussion

3:30-3:45pm: Next Steps

Appendix E. Phase 1 Climate Change Adaptation Rulemaking Schedule

Event	Date
Scoping Memo Issued	Oct 10, 2018
Comments on Scoping Memo	15 days after Scoping Memo issued
Working group process (meetings, proposals, reports, comments, and replies)	Q4 2018 through Q2 2019, with each topic addressed sequentially
Final set of working group session report comments and replies received	Summer 2019
Proposed Decision	90 days following submission
Commission Decision	September 2019

Appendix F. List of Attendees at the Working Group Meetings on Climate Vulnerable and Disadvantaged Communities

Date of Meeting/Description	In-Person Attendees	Webex Attendees
March 25, 2019 / Initial Meeting on Climate Vulnerable and Disadvantaged Communities (Topic 4 Session 1)	Alex Goelzer Ameé Raval Cliff Rechtschaffen Dan Hopper Dhaval Dagli Eugene Lee Jennifer Pezda Jonathan Parfrey Julia Hatton Karen DeGannes Kristin Ralff-Douglass Liane Randolph Mike Claiborne Meghan O'Brien Mohit Chhabra Nathan Bengtsson Nuin-Tara Key Pam Doughman Reese Rogers Sarah Lee Sarah Owens Sonya Ziaja Steve Campbell Susanne Casazza Tim Lyons	Alice Glasner Benjamin Hodges Bryan Landry Carolyn Sims Carolyn Yvellez CEC Podium Danjel Bout David Cheng Dawn Anaiscourt Deanna Haines Eric Arzola Fernando Pina Gregg Morris Ingacio Fernandez Jane Krikorian Jeff Williams Jessie Knapstein Joe Vaccaro John Friedrich Johnny Tran Jonathan Knapp Kathleen Ave Katie Giannecchini Kendra Talley Kristy Chew Lorraine Gonzalez

		Mari Davidson Maya Alunkal Palle Jensen Peter Gleick Rosanne Ratkiewich Sabrina Lawrence-Gomez Stephen Koenig Tim Olsen Yu Hou
May 21, 2019 / Full-Day Meeting on Climate Data Sources, Models, and Tools (Topic 4 Session 2)	Amee Raval Cliff Rechtschaffen Dan Hopper Dhaval Dagli Jane Oliveira Jennifer Pezda Julia Hatton Karen DeGannes Kristin Ralff-Douglass Liane Randolph Marlene Murphy-Roach Nathan Bengtsson Nuin-Tara Key Reese Rogers Rob Kay Sarah Lee Steve Campbell Susanne Casazza Tim Lyons	Ignacio Fernandez, SCE Dorothy Murimi, CEC Paul Chernick, Resource Insight Kenney Smith, CEC Sonya Ziaja, Public Advocates Office Kristy Chew, CEC Jane Krikorian, Utility Consumers' Action Network Kavya Balaraman, NewsData Abigail Jacob, CEC Gregg Morris, Green Policy Institute Jeff Williams (LADWP) Laura Mameesh, Olivine Inc Michael Claiborne Juliette Hart, USGS Jack Hawks, California Water Association Maya Alunkal, SCE Gwooden, Sempra Utilities, susan Wilhelm, CEC Deanna Haines, Sempra Utilities, Karineh Gregorian, Sempra Utilities, Laura, Communities for a Better Environment Corinne Sierzant, Sempra Utilities, Holly Hill, SCE