

BEFORE THE PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA

Order Instituting Rulemaking to
Consider Strategies and Guidance for
Climate Change Adaptation.

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**ORDER INSTITUTING RULEMAKING TO CONSIDER STRATEGIES AND
GUIDANCE FOR CLIMATE CHANGE ADAPTATION**

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ORDER INSTITUTING RULEMAKING TO CONSIDER STRATEGIES AND GUIDANCE FOR CLIMATE CHANGE ADAPTATION

Summary

This Order Instituting Rulemaking considers strategies to integrate climate change adaptation matters in relevant Commission proceedings. Robust climate adaptation planning in a time of worsening climate impacts is a prudent next step to ensure the safety and reliability of all investor-owned public utilities.

Climate impacts are being experienced across California, and many of the industries the Commission regulates will be affected. As a result, we anticipate this Rulemaking to have multiple phases to deal with aspects of the water, telecommunication, electric, and natural gas utilities that require adaptation to climate change. The electricity and natural gas utilities will be the only utilities addressed in Phase 1 of this proceeding, though some subjects in Phase 1, such as climate projections, may relate to all utilities.

In Phase 1 of this Rulemaking, we expect to consider:

- How to define climate change adaptation for the electricity and natural gas utilities.
- Ways to address climate change adaptation issues in Commission proceedings and activities to ensure safety and reliability of utility operations.
- Data, tools, and resources necessary for utility planning and operations related to climate adaptation.
- Risks facing the electric and natural gas utilities with respect to climate change adaptation and the magnitudes of these risks.
- Guidance to electric and gas utilities on how to incorporate adaptation into their planning and operations.

Because climate change adaptation is an issue relevant across numerous proceedings, the Commission invites all interested persons to participate in this

proceeding to ensure that adaptation to climate change and resilience are fully considered. Interested persons may comment on this Rulemaking, the proposed questions herein, and the preliminary scoping memo, consistent with the schedule and procedure described herein.

1. Jurisdiction

The Commission has broad authority and jurisdiction over investor-owned public utilities, as provided in state statute, including Public Utilities (Pub. Util.) Code §§ 216, 222, 228, 399.11 through 399.31, 451, 761 784, 950 through 969.

In particular, public utilities have a responsibility to furnish and maintain service and facilities as necessary to promote public health and safety:

Every public utility shall furnish and maintain such adequate, efficient, just, and reasonable service, instrumentalities, equipment, and facilities...as are necessary to promote the safety, health, comfort, and convenience of its patrons, employees, and the public. (Pub. Util. Code § 451.)

The Commission also has broad responsibility and authority to protect public health and safety:

The commission may supervise and regulate every public utility in the State and may do all things, whether specifically designated in this part or in addition thereto, which are necessary and convenient in the exercise of such power and jurisdiction. (Pub. Util. Code § 701.)

We recognize these broad authorities as we consider strategies for integrating climate change adaptation standards into our processes and those of the investor-owned utilities.

2. Background

2.1. The Need for Electric and Gas Utilities to Adapt to Climate Change

California is experiencing impacts from climate change, such as rising sea levels that can potentially inundate power plants and substations, increased temperatures that cause undue strain on transformers, increased line losses between electric generators and load, and increased overall electric demand.

In 2012, Lawrence Berkeley National Lab (LBNL) issued a report entitled, *Estimating Risk to California Energy Infrastructure from Projected Climate Change*.¹ The report identified which types of energy assets will be affected, how they will be affected, under what conditions they will be affected, and the consequences of those effects. LBNL's model shows higher temperatures may necessitate up to 38% additional peak generation capacity and up to 31% additional transmission capacity by the end of the century due to the compromising effects of higher temperatures on power plant capacity, transformer and substation capacity, and transmission and distribution line losses, coupled with higher peak electricity demand.

The report also suggests that key transmission corridors are vulnerable to increased fire frequency. For example, the report shows a 40% increased probability of wildfire exposure for some major transmission lines, including the transmission line bringing hydropower generation from the Pacific Northwest during peak demand periods. Finally, the report identifies energy infrastructure vulnerable to sea level encroachment. Up to twenty-five coastal power plants

¹ *Estimating Risk to California Energy Infrastructure from Projected Climate Change*, July 2012, prepared by LBNL for California Energy Commission (CEC) under Public Interest Energy Research (PIER) grant number 500-99-013. (Report is available online at: <http://www.energy.ca.gov/2012publications/CEC-500-2012-057/CEC-500-2012-057.pdf>).

and eighty-six substations were found to be at risk of flooding or compromised operation due to sea level rise.²

Other studies reinforce the findings of significant impacts on electric and gas utilities. The CEC funded a study by the Pacific Institute, *The Impacts of Sea Level Rise on the California Coast*, that further explored the impacts of floods and sea level rise on coastal power plants.³ In a 2016 report, *Climate Change and the Electricity Sector: Guide for Climate Change Resilience Planning*, the United States Department of Energy (DOE) enumerated projected climate change hazards and their implications for the electric sector.⁴

Clearly, future changes in the climate will have a significant impact on the electric system. However, further analysis is required to better understand the vulnerabilities each utility faces.

2.2. State of California's Efforts on Climate Adaptation

This section details the numerous efforts on climate adaptation that the State of California has already undertaken, including executive orders, reports, guidance for infrastructure planning, data-driven planning tools, and statewide climate change assessments.

² *Estimating Risk to California Energy Infrastructure from Projected Climate Change* (LBNL), at 1.

³ *The Impacts of Sea Level Rise on the California Coast*, May 2009, prepared by the California Climate Change Center for CEC under PIER grant number CEC-500-2099-024F. (Report is available online at: <http://pacinst.org/wp-content/uploads/sites/21/2014/04/sea-level-rise.pdf>).

⁴ *Climate Change and the Electricity Sector: Guide for Climate Change Resilience Planning*, September 2016, Office of Energy Policy and Systems Analysis, Department of Energy. (Report is available online at: <https://www.energy.gov/epsa/downloads/climate-change-and-electricity-sector-guide-climate-change-resilience-planning>).

2.2.1. Executive Orders

Much of the climate-related efforts in California have been concentrated on mitigating the impacts of climate change through reduced emissions. Those efforts continue. However, in 2008, the state also began to scale up its efforts to adapt to the climate change effects that the state was already facing.

Two primary Executive Orders on climate change adaptation exist. In 2008, then-Governor Schwarzenegger issued Executive Order S-13-08,⁵ which called for the California Natural Resources Agency (CNRA) to develop an adaptation strategy for the state. That strategy, the *2009 California Climate Adaptation Strategy*,⁶ summarizes the best-known science on climate change impacts in the state, assesses vulnerabilities, and outlines possible solutions that can be implemented within and across state agencies to promote resiliency. In 2014, CNRA issued an update and renamed the report *Safeguarding California*. The report was once again updated in January 2018.

The second Executive Order, B-15-30,⁷ issued by Governor Brown in 2015, called for the reduction of greenhouse gas (GHG) emissions to 40% below 1990 levels by 2030 as well as a series of adaptation actions. The Executive Order called for an update of *Safeguarding California* every three years, charged each sector with developing an implementation plan based on the recommendations in the *Safeguarding California* report, and called for consideration of the impacts of climate change on future infrastructure investments. We summarize the relevant

⁵ Executive Order S-13-08, November 2008, Governor Schwarzenegger.

⁶ *2009 California Climate Adaptation Strategy*, 2009, California Natural Resources Agency report to the Governor. (Report is available online at: http://resources.ca.gov/docs/climate/Statewide_Adaptation_Strategy.pdf).

⁷ Executive Order B-15-30, April 2015, Governor Brown. (Available online at: <https://www.gov.ca.gov/news.php?id=18938>).

portions of the infrastructure investment report in the following Section 2.2.3, below.

Most recently, in March 2018, Governor Brown and legislative leaders announced a coordinated effort to develop solutions that will make California more resilient to natural disasters and climate change. Citing this winter's Thomas Fire in Ventura and Santa Barbara counties as the largest in recorded history, and the subsequent mudslides as among the most lethal the state has ever encountered, the leaders announced that, amongst other efforts, they will work to ensure that utility and public infrastructure is designed, constructed, and operated to maximize resiliency to extreme weather events and natural disasters. In addition, this effort will include consideration of updates to liability rules and regulations for utility services in light of changing climate and the increased severity and frequency of extreme weather events.⁸

2.2.2. Safeguarding California Reports

As the organizing strategy for state government climate change adaptation activities, *Safeguarding California* helps organize and synthesize activities in three general areas: State Policies and Programs, Local and Regional Action and Projects, and Research and Tool Development. All of these areas are interconnected, and CNRA is working with its many agency partners to spur progress in all areas.

Safeguarding California outlines actions different sectors need to take relating to climate adaptation. For the energy sector, the 2014 plan called for additional research on the impacts of climate change and the development of a

⁸ Press release can be found at: <https://www.gov.ca.gov/2018/03/13/governor-brown-and-legislative-leaders-partner-to-bolster-climate-resilience-and-improve-disaster-planning-management-and-response>.

repository for all relevant scientific knowledge. That repository has since been developed through the CEC and is known as Cal-Adapt.

The *Safeguarding California Plan: 2018 Update*⁹ was released this January and reiterates six goals for the energy sector:

- E-1: Continue to support climate research for the energy sector to better inform climate adaptation and mitigation strategies.
- E-2: Use common climate scenarios in all energy research and planning, and work to help standardize climate scenarios across state government planning and investment.
- E-3: Continue incorporating implications of climate change into all energy sector planning and decision-making.
- E-4: Support local adaptation planning efforts and increase outreach about available analytical tools.
- E-5: Investigate means to provide long-term support for Cal-Adapt advancement, maintenance, and expansion.
- E-6: Increase climate resiliency in low-income and disadvantaged communities.

2.2.3. Future Infrastructure Investment Guidance

Upon issuance of Executive Order B-30-15, the Governor's Office of Planning and Research was directed to convene a Technical Advisory Group to develop implementation guidance for the consideration of future climate conditions in State agency infrastructure planning.

The Technical Advisory group included members from nearly every State agency, local and regional governments, non-governmental and community-based organizations, and the private sector. The resulting document provides

⁹ *Safeguarding California Plan: 2018 Update*, January 2018, Natural Resources Agency. (This report is available online at: <http://resources.ca.gov/climate/safeguarding>).

high level guidance on what future conditions to plan for and how State agencies should approach planning differently in light of a changing climate.

Representatives from all of the California's investor-owned electric utilities participated in this effort, as did staff from the Commission.

The report, *Planning and Investing for a Resilient California: A Guidebook for State Agencies*,¹⁰ was released in January. The guidebook does not directly apply to utilities but provides a useful framework for future consideration of climate change. Importantly, it also calls for use of standard climate scenarios using Cal-Adapt.

2.2.4. Cal-Adapt Planning Tool

Cal-Adapt¹¹ is a web-based climate adaptation planning tool designed to provide access to up-to-date, peer-reviewed, and high-quality science, information and data produced by California's scientific and research community. Cal-Adapt was developed by the University of California, Berkeley's Geospatial Innovation Facility, with funding and advisory oversight by the ratepayer-funded, CEC-administered PIER Program and Electric Program Investment Charge (EPIC), and with advisory support from Google.org.

Cal-Adapt synthesizes volumes of existing climate change scenarios and climate impact research based on "downscaled¹²" United Nations International Panel on Climate Change (IPCC) models to describe how climate may evolve in

¹⁰ *Planning and Investing for a Resilient California: A Guidebook for State Agencies*, February 2018, Governor's Office of Planning and Research. (This report is available online at: http://opr.ca.gov/docs/2017111-Building_a_Resilient_CA.pdf).

¹¹ The Cal-Adapt website can be found at: <http://www.cal-adapt.org>.

¹² Downscaled climate projections in Cal-Adapt.org are the result of a statistical technique called Localized Constructed Analogs that uses past history to add improved fine-scale detail to global climate models. They are provided by Scripps Institution of Oceanography. (More information is available at: <http://cal-adapt.org/data/loca/>).

California, both statewide and at the local level. The downscaled data are based on two global emission scenarios – a high Representative Concentration Pathway¹³ (RCP) 8.5 scenario and a medium RCP 4.5 scenario.

In addition to downscaled models of future potential climate scenarios, Cal-Adapt also offers historical observed daily temperature and precipitation data from approximately 20,000 National Oceanic and Atmospheric Administration Cooperative Observer stations that form the basis of a gridded dataset from 1950 to 2013. It is a key resource in state and local planning, and one that we will also consider in this Rulemaking for utility climate adaptation planning.¹⁴

2.2.5. The California Climate Change Assessments

Even before Executive Order S-13-08, the CEC had begun researching the impacts of climate change. Since initiating this work in 2001, the CEC has been pioneering research on the impacts of climate change in California’s electric and natural gas sectors – most notably in its California Climate Change Assessments.¹⁵

The first California Climate Change Assessment (First Assessment), completed in 2006, began the work of downscaling global climate models in order to provide information about expected climate impacts at a regionally-relevant scale. The First Assessment provided support for passage of

¹³ Representative Concentration Pathways (RCPs) are four GHG concentration (not emissions) trajectories adopted by the IPCC for its fifth Assessment Report in 2014.

¹⁴ For examples of Cal-Adapt being applied in local planning, see *California Adaptation Planning Guide*, July 2012, California Emergency Management Agency. (This report is available online at: http://resources.ca.gov/docs/climate/01APG_Planning_for_Adaptive_Communities.pdf).

¹⁵ Information and documentation on all four California Climate Assessments are available at: http://climatechange.ca.gov/climate_action_team/reports/climate_assessments.html.

the Global Warming Solutions Act (Assembly Bill 32) and the development of the California Air Resources Board's 2008 Scoping Plan for reducing GHG emissions.

The Second Assessment, completed in 2010, provided initial estimates of some of the economic impacts of expected and unfolding climate risks in the state, such as costs to coastal economies from sea level rise. It also provided support for the 2009 California Climate Change Adaptation Strategy.

The Third Assessment, completed in 2012, was shaped by requests for additional information regarding state vulnerabilities to climate change, including risks in the water, energy, and agriculture sectors.

The Fourth Assessment is expected in August 2018. This research effort seeks to understand the scope, timing, cost and feasibility of various mitigation options to address climate risks. Accurately understanding climate risks and mitigation options will allow the state to prioritize actions and investments to safeguard the people, economy and natural resources of California.

The electric and natural gas investor-owned utilities (IOUs) have participated in each of these Assessments, which are funded in part through EPIC.

2.3. Electric and Natural Gas Utility Efforts on Climate Adaptation

California utilities are already experiencing impacts from climate change such as increased temperatures, an increased number of wildfires, sea level rise, and severe drought.¹⁶ Alarming, 2017 saw five of the top twenty most

¹⁶ Climate scientists have not determined whether the recent drought was caused by climate change, but all scientists working on the topic agree that climate change made the drought worse.

destructive fires (in terms of structures burnt) and the largest fire in California history (in terms of acres burnt).

The electric and gas utilities are beginning to build additional resilience and redundancy into their infrastructure investments from a climate adaptation perspective, although they have been doing so from an overall safety and reliability perspective for decades. For example, starting in 2008, the Commission initiated a Rulemaking (R.) 08-11-005, that developed dozens of new regulations to reduce wildfire instances and impact, many of which address vegetation management. The new regulations were approved by the Commission in Decision (D.) 17-12-024, and are designed to enhance safety in high fire-threat districts now found throughout California.

The following sections describe other utility-related safety- and resiliency-driven efforts that have a climate adaptation overlap.

2.3.1. Risk Assessment and Mitigation Phase (RAMP)

Beginning in 2014, the Commission required large electric and gas investor-owned utilities in the state to develop risk prioritization and mitigation plans that were informed by probabilistic risk models.¹⁷ These plans, which amongst other risk drivers also consider climate change impacts, are called the Risk Assessment and Mitigation Phase filings; they are the basis for the first phase of the General Rate Case (GRC) process for each IOU.

To date, both Pacific Gas and Electric Company (PG&E) and San Diego Gas & Electric Company (SDG&E) have submitted RAMP filings. Southern California Edison Company (SCE) does not currently have a RAMP filing but

¹⁷ D.14-12-025, *Decision Incorporating a Risk-Based Decision-Making Framework into The Rate Case Plan.*

will file one as part of its next GRC. PG&E's filing identified the company's top 22 safety risks, as well as the costs associated with controlling the risks, and a future mitigation plan. Climate change was listed as one of the risks.

PG&E's Climate Resilience RAMP model explores six risk drivers that will likely increase with rising GHG emissions: (1) rising sea levels; (2) major storm events; (3) increasing temperatures and heat waves; (4) wildfires; (5) drought; and (6) subsidence.

The mitigation action proposed by PG&E is to conduct further research that will "help PG&E anticipate and plan for a changing 'new normal' in terms of weather and climate-change related events."¹⁸ Similarly, SDG&E's RAMP filing listed climate change as a future safety risk and also proposed time and resources to research it further.

Wildfire was presented as its own risk in each of the PG&E and SDG&E filings. Both IOUs have extensive plans to mitigate against future wildfires and the damage those may cause to their systems and their customers.

2.3.2. Participation in Federal Government Resiliency Efforts

The DOE has established a Partnership for Energy Sector Climate Resilience (Partnership), "an initiative to improve the resilience of energy infrastructure to extreme weather and climate change impacts through the acceleration of investment in technologies, practices, and policies that will enable a resilient 21st century energy system."¹⁹ Through this Partnership, the DOE and

¹⁸ Investigation 17-11-003, 2017 Risk Assessment and Mitigation Phase Report of Pacific Gas and Electric Company (U 39 M) at 22-2.

¹⁹ Information on the Partnership is available at: <http://energy.gov/epa/partnership-energy-sector-climate-resilience>.

its partners will develop resources to facilitate risk-based decision making and pursue cost-effective strategies for a more climate-resilient energy infrastructure.

The Partnership effort is currently focused on electric utilities and has 18 member utilities, including SCE, PG&E, SDG&E, and Sacramento Municipal Utility District. The first Partnership task called for all partners to identify priority climate and weather-related vulnerabilities, as described in the following section. Subsequent group efforts include defining a resilient utility and developing a cost/benefit analysis for adaptation and hardening strategies.

2.3.3. Electric and Gas Utility Vulnerability Assessments

The first steps toward electric and gas sector climate resilience, according to the DOE Partnership, are to examine all of the climate change-related vulnerabilities of the system, and then envision all the potential remedies to those vulnerabilities. The utility, along with its regulators and stakeholders, must then establish priorities according to its goals and objectives as an electric provider.

The DOE issued a guidance document in 2016 that recommends beginning adaptation planning in the electric sector with a vulnerability study, and clarifies that “[c]limate change and extreme weather vulnerability in the energy context is a function of an asset’s or system’s exposure to climate-related risks and its sensitivity to them.”²⁰ The document recommends a four-step process for vulnerability studies:

1. Identify Key Climate Risks

²⁰ *Climate Change and the Electricity Sector: Guide for Climate Change Resilience Planning*, September 2016, Office of Energy Policy and Systems Analysis, Department of Energy, at 2. (Report is available online at: <https://www.energy.gov/epsa/downloads/climate-change-and-electricity-sector-guide-climate-change-resilience-planning>).

- i. What could happen, when, and under what future conditions?
2. Develop Inventory of Assets and the Potential Effects
 - i. How will assets perform under new conditions?
 - ii. How will compromised assets affect the system and customers?
3. Identify and Prioritize Vulnerabilities
 - i. What vulnerabilities will impact areas such as financial, service disruption, or operational?
4. Assess Magnitude and Probability of Impacts
 - i. What is the likelihood of an asset being impacted and what is the consequence of that impact?
 - ii. How do vulnerabilities fit into four categories: low likelihood/low consequence; low likelihood/high consequence; high likelihood/low consequence; and high likelihood/high consequence?

In January 2016, the Policy and Planning Division (PPD) of the Commission issued a staff paper encouraging the large investor-owned electric utilities to conduct robust assessments consistent with the DOE guidance.²¹ PPD recommended not only identifying the magnitude and probability of climate impacts to their key assets, but to expand their vulnerability assessments to also include assessments of:

- Current and future generation and distribution assets not owned by the utility;
- The entire supply chain for fuel and critical parts;

²¹ *Climate Adaptation in the Electric Sector: Vulnerability Assessments and Resilience Plans*, Policy and Planning Division, California Public Utilities Commission, January 2016. (Available online at: [http://www.cpuc.ca.gov/uploadedFiles/CPUC_Public_Website/Content/About_Us/Organization/Divisions/Policy_and_Planning/PPD_Work/PPD_Work_Products_\(2014_forward\)/PPD%20-%20Climate%20Adaptation%20Plans.pdf](http://www.cpuc.ca.gov/uploadedFiles/CPUC_Public_Website/Content/About_Us/Organization/Divisions/Policy_and_Planning/PPD_Work/PPD_Work_Products_(2014_forward)/PPD%20-%20Climate%20Adaptation%20Plans.pdf)).

- Assets relied on in the telecommunications and water sectors;
- California-wide and regional grid as an interconnected system;
- Emergency management procedures;
- Vulnerable communities; and
- Internal, operational, institutional, and regulatory barriers.

Most of the vulnerability studies that have been conducted by electric utilities to date have concentrated on the assets within the direct control of the utility. However, there are many other asset types that electric IOUs rely on and could consider in their vulnerability assessments. Additionally, it would be valuable for natural gas utilities to also conduct robust vulnerability assessments.

PG&E, SCE, and SDG&E have all submitted vulnerability assessments to the DOE as part of their membership agreement. The PG&E report is available online.²² However, future iterations of these studies would be required in order to meet all of the DOE and PPD recommended assessment areas.

3. Order Instituting Rulemaking

The Commission opens this Order Instituting Rulemaking (OIR) on its own motion in response to the Executive Orders and in light of new information and tools that are available to the electric and gas utilities to determine how the Commission should address adaptation to climate change.

This OIR contains a preliminary scoping memo pursuant to Rule 7.1(d) of the Commission's Rules of Practice and Procedure that sets forth the scope and schedule of this Rulemaking proceeding, preliminarily determines the category

²² This report is available online at http://www.pgecurrents.com/wp-content/uploads/2016/12/PGE_climate_resilience_report.pdf.

of this proceeding and the need for hearings, and addresses other matters that are customarily the subject of scoping memos.

3.1. Preliminary Scoping Memo

Phase 1 of this Rulemaking will broadly consider how to best integrate climate change adaptation into the investor-owned electric and gas utilities' existing planning and procurement processes.

Specifically, the scope of Phase 1 of this Rulemaking is to consider how to address climate change adaptation for the investor-owned electric and gas utilities to ensure safety and reliability of utility operations. The Commission will primarily focus on threshold questions surrounding available data, tools, and resources. For example, the Commission may consider the adoption of specific climate scenarios and parameters based on the Cal-Adapt recommended models and other resources to develop future planning parameters for utility planning and modeling purposes. The scope may further include consideration of robust utility-conducted vulnerability assessments, and the scope and breadth of those assessments.

The Commission may also consider ways in which adaptation can be incorporated into specific Commission proceedings and activities, including the development of specific procedures. Guidance resulting from this OIR will instruct utilities on how to incorporate adaptation in their investment plans, program design, and operations.

The scope for future phases of this proceeding will be considered at a later time. However, it is anticipated that future phases will consider climate adaptation for the water and telecommunications utilities.

3.2. Initial Questions and Information

Within 30 days of the mailing date of this OIR, we direct the respondents named in Section 4 below and invite others to respond to the following questions:

1. How should the Commission define climate adaptation for IOUs?
2. What climate-related data sources, scenarios, tools, and other resources should be used to inform Commission activities and utility planning?
3. What climate parameters should the Commission use to determine climate-driven risks and resilience for electric and natural gas utilities?
4. How should climate scenarios, climate-relevant parameters, and resilience metrics be used in electric and gas utility planning and operations, and in Commission proceedings, to address climate adaptation in a consistent manner?
5. How can electric and natural gas utilities identify climate impacts specifically relevant to disadvantaged communities, and address those impacts?

3.3. Preliminary Schedule

The preliminary schedule for Phase 1 is summarized below. The schedule may be revised by the assigned Commissioner or the assigned Administrative Law Judge (ALJ) to develop an adequate record, provide due process, and conduct this proceeding in an orderly and efficient manner. The assigned Commissioner or the assigned ALJ will schedule a Prehearing Conference as soon as practicable.

Event	Date
Comments on OIR and questions herein, and preliminary scoping memo	30 days from mailing date of OIR
Prehearing Conference	TBD
Scoping Memo	TBD
Comments on the Scoping Memo	30 days after Scoping Memo issued
Workshop on issues	TBD
Workshop Report	TBD
Comments on the Workshop Report	15 days from the Workshop Report
Reply Comments on the Workshop Report	30 days from the Workshop Report
Proposed Decision	9 months from the Workshop date

While the preliminary schedule is subject to change, we anticipate this first phase of this proceeding will be resolved within 12 months from the issuance of this OIR.

3.4. Proceeding Category and Need for Hearings

Pursuant to Rule 7.1(d), we preliminarily determine that (1) the category for this Rulemaking proceeding is quasi-legislative, as that term is defined in Rule 1.3(d), and (2) there is no need for evidentiary hearings in this proceeding. As permitted by Rule 6.2, parties may address these preliminary determinations in their written comments that are to be filed and served in accordance with the preliminary schedule for this proceeding. The assigned Commissioner will make a final determination regarding the category of this proceeding and the need for hearings in a scoping memo issued pursuant to Rules 7.1(d) and 7.3(a).

Pursuant to Pub. Util. Code § 1708, the Commission intends to conduct this proceeding using notice and comment rulemaking procedures. Accordingly, the comments submitted pursuant to the preliminary schedule may constitute the record used by the Commission to decide matters within the scope of this proceeding. In addition to responding to those questions, parties should include in their comments all information they want the Commission to consider in this proceeding.

3.5. *Ex Parte* Communications

This proceeding is preliminarily categorized as quasi-legislative. In a quasi-legislative proceeding, *ex parte* communications with the assigned Commissioner, other Commissioners, their advisors, and the ALJ are permitted without restriction or reporting as described in Pub. Util. Code § 1701.4(b) and Article 8 of the Commission's Rules of Practice and Procedure.

Any workshops in this proceeding shall be open to the public and noticed in the Commission's Daily Calendar. The notice in the Daily Calendar shall inform the public that a decision-maker or an advisor may be present at the workshop. Parties shall check the Daily Calendar regularly for such notices.

4. Respondents

All California investor-owned electric and natural gas utilities are named as respondents to Phase 1 of this Rulemaking: PG&E, SCE, SDG&E, Southern California Gas Company, PacifiCorp, Liberty Utilities (CalPeco Electric) LLC, Bear Valley Electric Service, Southwest Gas, Alpine Natural Gas Operating Company, Lodi Gas Storage, Wild Goose Storage, Central Valley Storage, and Gill Ranch Storage. Because the general data, models, and tools adopted in this proceeding may be relevant to future proceedings of telecommunication and water utilities, we invite their participation in Phase 1.

5. Service of OIR

In addition to the Respondents, a copy of this OIR will also be served via electronic mail to the following interested persons and entities, listed in Appendix 1:

- Class A & B Water Companies
- Wireless providers of LifeLine service
- Facilities based wireless carriers
- Providers of video or broadband service registered with the Commission pursuant to Digital Infrastructure and Video Competition Act of 2006

While all utilities subject to the Commission's jurisdiction may be bound by the outcome of this proceeding, only those who notify us that they wish to be on the service list will be accorded service through the remainder of this proceeding.

In addition, a copy of this OIR will be served via electronic mail to the service lists for the following proceedings:

1. The Safety Model Assessment Proceedings, Consolidated Applications (A.) 15-05-002, et al.
2. Physical Security for Electric Supply Facilities, R.15-06-009
3. Distribution Resources Plans, R.14-08-013
4. Integrated Distributed Energy Resources Planning, R.14-10-003
5. Integrated Resource Planning, R.16-02-007
6. PG&E GRC, A.15-09-001
7. SCE GRC, A.16-09-001
8. SDG&E GRC, A.17-10-007
9. Fire Safety, R.15-05-006
10. PG&E Gas Transmission and Storage Proceeding, A.17-11-009

11. PG&E Risk Assessment and Mitigation Phase, I.17-11-003

Furthermore, this OIR will be served via electronic mail on the following state agencies:

12. Governor's Office of Planning and Research
13. California Governor's Office of Emergency Services
14. California Energy Commission
15. California Natural Resources Agency
16. California Department of Forestry and Fire Protection

Service of this rulemaking does not confer party status or place a person or organization that has received such service on the service list for this proceeding, except that Respondents are automatically parties. Persons or entities that file comments on the Rulemaking will be conferred party status. To be placed on the service list, persons or entities should follow the instructions below.

E-mail communication about this OIR proceeding should include, at a minimum, the following information on the subject line of the e-mail:

R.18-04-019 - Climate Change Adaptation Rulemaking. In addition, the party sending the e-mail should briefly describe the attached communication; for example, "Comments." As required by Rule 1.10(e) paper format copies, in addition to electronic copies, shall be served on the assigned ALJ, unless the assigned ALJ directs otherwise in a future ruling.

6. Addition to Official Service List

Addition to the official service list is governed by Rule 1.9(f) of the Commission's Rules of Practice and Procedure.

Any person will be added to the "Information Only" category of the official service list upon request, for electronic service of all documents in the proceeding, and should do so promptly in order to ensure timely service of

comments and other documents and correspondence in the proceeding. (See Rule 1.9(f).) The request must be sent to the Process Office by e-mail (process_office@cpuc.ca.gov) or letter (Process Office, California Public Utilities Commission, 505 Van Ness Avenue, San Francisco, California 94102). Please include the Docket Number of this Rulemaking in the request.

Persons who file responsive comments become parties to the proceeding (see Rule 1.4(a)(2)) and will be added to the “Parties” category of the official service list upon such filing. *In order to assure service of comments and other documents and correspondence in advance of obtaining party status, persons should promptly request addition to the “Information Only” category as described above; they will be removed from that category upon obtaining party status.*

7. Public Advisor

Any person interested in participating in this proceeding who is unfamiliar with the Commission’s procedures may obtain more information by visiting the Commission’s website at <http://consumers.cpuc.ca.gov/pao>, by calling the Commission’s Public Advisor at 866-849-8390 or 415-703-2074 or 866-836-7825 (TTY)), or by e-mailing the Public Advisor at public.advisor@cpuc.ca.gov.

8. Intervenor Compensation

In accordance with Pub. Util. Code § 1804(a)(1) and Rule 17.1, a customer who intends to seek an award of compensation must file and serve a notice of intent to claim compensation no later than 30 days after the date of the prehearing conference or as otherwise directed by the assigned Commissioner or ALJ.

O R D E R

Therefore, **IT IS ORDERED** that:

1. The Commission institutes this Rulemaking on its own motion to consider strategies to integrate climate change adaptation standards and related matters.
2. The assigned Commissioner may refine the scope of this proceeding.
3. The following California investor-owned electric and natural gas utilities are named as respondents to Phase 1 of this Rulemaking: Pacific Gas and Electric Company, Southern California Edison Company, San Diego Gas & Electric Company, Southern California Gas Company, PacifiCorp, Liberty Utilities (CalPeco Electric) LLC, Bear Valley Electric Service, Southwest Gas, Alpine Natural Gas Operating Company, Lodi Gas Storage, Wild Goose Storage, Central Valley Storage, and Gill Ranch Storage.
4. California investor-owned telecommunications and water utilities are invited, but not required, to participate in Phase 1.
5. Respondents shall file and serve preliminary information and respond to the questions herein within 30 days of the mailing date of this Rulemaking.
6. Any person may file comments on the preliminary scope and questions contained in this Rulemaking within 30 days of the mailing date of this Rulemaking.
7. The preliminary schedule for this proceeding is set forth in Section 3.3 herein. The assigned Commissioner or the Assigned Administrative Law Judge may modify the proceeding schedule for the reasonable, efficient and orderly conduct of this proceeding.

8. The preliminary category of this proceeding is quasi-legislative as that term is defined in Rule 1.3(d) of the Commission's Rules of Practice and Procedure.

9. The preliminary determination is that there is no need for evidentiary hearing in this Rulemaking proceeding. The deadline in this Rulemaking to file and serve notices of intent to claim intervenor compensation is 30 days after the date of the prehearing conference or as otherwise directed by the assigned Commissioner or the assigned Administrative Law Judge.

10. The Executive Director shall cause this Order Instituting Rulemaking to be served on the Respondents.

11. The Executive Director shall cause this Order Instituting Rulemaking to be served on the Class A & B Water Companies, as well as on the entities listed in Appendix 1, including the Communications Carriers of Last Resort, wireless providers of LifeLine service, certain facilities-based wireless carriers, and providers of video or broadband service registered with the Commission pursuant to Digital Infrastructure and Video Competition Act of 2006.

12. The Executive Director shall cause this Order Instituting Rulemaking to be served on the following service lists of the following proceedings: Safety Model Assessment Proceedings, consolidated Applications (A.) 15-05-002 et al.; Physical Security for Electric Supply Facilities, Rulemaking (R.) 15-06-009; Distribution Resources Plans, R.14-08-013; Integrated Distributed Energy Resources Planning, R.14-10-003; Integrated Resource Planning, R.16-02-007; Pacific Gas and Electric Company (PG&E) General Rate Case, A.15-09-001; Southern California Edison Company General Rate Case, A.16-09-001; San Diego & Electric Company General Rate Case, A.17-10-007; Fire Safety, R.15-05-006; PG&E Gas Transmission

and Storage Proceeding, A.17-11-009; and PG&E Risk Assessment and Mitigation Phase, Investigation 17-11-003.

13. The Executive Director shall cause this Order Instituting Rulemaking to be sent via electronic mail to the following organizations: Governor's Office of Planning and Research, California Governor's Office of Emergency Services, California Energy Commission, California Natural Resources Agency, and the California Department of Forestry and Fire Protection.

14. This order is effective today.

Dated April 26, 2018, at San Francisco, California.

MICHAEL PICKER
President
CARLA J. PETERMAN
LIANE M. RANDOLPH
MARTHA GUZMAN ACEVES
CLIFFORD RECHTSCHAFFEN
Commissioners

Appendix 1

Communications Carriers of Last Resort:

Pacific Bell Telephone Company dba AT&T California

Frontier Communications of California

MCImetro Access Transmission Services, LLC

Calaveras Telephone Company

California-Oregon Telephone Company

Ducor Telephone Company

Foresthill Telephone Company

Happy Valley Telephone Company

Hornitos Telephone Company

Kerman Telephone Company

Pinnacles Telephone Company

The Ponderosa Telephone Company

Sierra Telephone Company

Siskiyou Telephone Company

The Volcano Telephone Company

Winterhaven Telephone Company

Facilities Based Wireless Carriers:

Cellco Partnership

GTE Mobilnet of Ca., Ltd. Ptrnrshp

Los Angeles Smsa Limited Partnership

Sacramento Valley Ltd. Partnership

Fresno Msa Ltd. Partnership

AirTouch Cellular

Santa Barbara Cellular Systems, Ltd.

AT&T Mobility Wireless Operations Holdings

Alltel Communications, LLC

Pinnacles Cellular Inc.

Verizon Wireless (VZW) LLC

Modoc RSA Limited Partnership

California Rsa No. 4 Ltd. Partnership

United States Cellular Corporation

T-Mobile West LLC

New Cingular Wireless Pcs, LLC

Metropcs California, LLC

Accessible Wireless, LLC

Onvoy Spectrum, LLC

Redding MSA Limited Partnership

State Video Franchise Holders:

Frontier

AT&T

Cox Communications

Charter Communications and its subsidiaries (CCO SoCal I and II, Falcon Cable Systems, Falcon Telecable, Time Warner Cable Pacific West, Bright House Networks)

Northland Cable Television

Comcast

Baldwin County Internet/DSSI Service

Calaveras Cablevision

USA Communications

Astound Broadband

SureWest Televideo

Redwood IPTV

Mediacom

Suddenlink and its subsidiaries (Cequel III Communications I, NPG Cable, Cebridge Acquisition)

Greenfield Communications

CalNeva Broadband

Horizon Cable TV

Media 3 Communications

Google Fiber California

Sonic Telecom

Access Cable Corporation

Lone Pine Television

Sierra Television

Golden Valley Cable & Communications

Orion Broadband

Velocity Communications

Inyo Networks

Giggle Fiber

Race TV

The City of Beverly Hills

Wireless Providers of LifeLine Service:

AirVoice

Amerimex

Assurance Wireless

Boomerang

Global Connection

i-Wireless

Tag Mobile

Telrite

Telscape Wireless dba TruConnect

TracFone

Blue Jay Wireless

Class A & B Water Utilities:

Alisal Water Corporation

Bakman Water Company

California Water Service Company

California American Water Company

Del Oro Water Company

East Pasadena Water Company

Fruitridge Vista Water Company

Golden State Water Company

Great Oaks Water Company

Liberty Utilities (Apple Valley Ranchos Water, and Park Water)

San Jose Water Company

San Gabriel Valley Water Company

R.18-04-019 ALJ/JHE/ek4/lil

Suburban Water Systems

(END OF APPENDIX 1)