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Pacific Gas and Electric Comments on Climate Adaptation and Resilience

Additional submitted attachment is included below.

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**POSTED ELECTRONICALLY TO
DOCKET 17-IEPR-09**California Energy Commission
Dockets Office, MS-4
Docket No. 17-IEPR-09
1516 Ninth Street
Sacramento, CA 95814-5512Re: Docket 17-IEPR-09: Pacific Gas and Electric Comments on the August 27, 2017 Joint Agency IEPR Workshop on Climate Adaptation and Resilience for the Energy System

Pacific Gas and Electric Company (PG&E) has a long history of taking action to combat climate change and is strongly committed to building greater climate resilience into its electric and natural gas delivery systems. Doing so is integral to the company's ongoing efforts to provide safe, reliable, affordable, and clean energy throughout Northern and Central California.

From extreme weather to rising tides, the threat climate change poses to crucial sectors of the United States' (U.S.) economy is becoming all too apparent. For energy providers such as PG&E, it requires taking action now to manage the potential risk to the company's assets, infrastructure, operations, employees, and customers.

As will be outlined in PG&E's November 2017 Risk Assessment Mitigation Phase (RAMP) filing before the California Public Utilities Commission (CPUC), PG&E is committed to partnering with stakeholders to ensure that the company's systems and processes are sufficiently resilient to withstand and recover from climate-driven events and long-term trends, including the critical systems and supply chains upon which PG&E depends as well as the customers and communities it serves. PG&E is increasing its climate resilience through numerous measures already underway, including the development of a climate resilience screening tool, climate impact visualization maps, and investments in the *Better Together Resilient Communities* grant program.

PG&E recognizes that we are all in this together; no one entity is responsible (or can be responsible) for climate resilience. Governments, communities, businesses and other stakeholders must work in partnership to support a flexible, regional approach to climate resilience.

I. Recommendations to Bolster Climate Resilience Actions

PG&E's experience has shown that our collective success on climate resilience requires greater coordination, collaboration, and engagement early on and throughout resilience work. PG&E recommends instituting an increased State coordination role to reduce duplication and ensure that resilience action, data requests, and research are broadly accessible, used, and useful. PG&E's specific recommendations are:

1) Create and manage a "Climate Resilience Clearinghouse" to increase access to data and efficiency of its use across all agencies and stakeholders

- PG&E applauds the Office of Planning and Research's Integrated Climate Adaptation and Resiliency Program (ICARP) for creating the State Adaptation Clearinghouse. This website links to other important information and sites, including Cal Adapt.
- PG&E also applauds the State for creating Cal Adapt. This website is an extremely useful tool for a number of reasons, including that it is a one-stop shop for up-to-date climate change forecasts in the State, and – perhaps even more importantly – the State has developed the tool with an eye toward use by stakeholders for climate planning purposes.
- PG&E recommends adding additional information to the ICARP website including:
 - Links to pertinent scientific articles and policy recommendations compiled by the State in addition to and in between the release of the state *Climate Change Assessments* and *Safeguarding California* updates. These assessments and updates are critical but only occur every few years and new research emerges continuously.
 - Information on studies funded by the State, including previous studies and their results as well as information about on-going research.
 - Information from stakeholders on their resilience work (e.g., communities, businesses, etc.). For example, critical infrastructure companies such as PG&E could provide:
 - PG&E's upcoming RAMP filing and supporting documentation
 - Information on partnerships with communities, such as the work being conducted through our *Better Together Resilient Communities* grant program.

2) Create or support a regional governance structure to help local governments coordinate and leverage resilience action (e.g., Air Management Districts)

- California currently lacks an official regional governance structure that can guide communities, businesses and other stakeholders to develop effective and cooperative regional climate resilience strategies.
- The Alliance of Regional Collaboratives for Climate Adaptation (ARCCA) has greatly advanced collective knowledge about building regional climate resilience and PG&E continues to support ARCCA's cutting-edge efforts. However, ARCCA lacks statutory authority and would benefit from dedicated funding to carry out its work. Finally, ARCCA does not yet cover 100% of the state; regional collaboratives currently encompass 80% of California's population.

- PG&E recognizes that the Air Management Districts were created by federal statute and that an analogous effort in support of regional climate resilience would be a significant undertaking. However, additional dialogue on such a framework is important for advancing how the state might further support the development of effective and cooperative regional climate resilience strategies through statutory authority, funding, and enabling statewide community engagement.

3) Design a process to engage gas and electric companies in resilience research before awards are made to ensure State-funded research leverages and does not duplicate existing energy company research

- PG&E applauds the State's continued commitment to funding state-of-the-art research in support of climate resilience.
- PG&E would like to work with the state to ensure that climate resilience work is maximized to the greatest degree possible and that it continues to support affordable, reliable, and clean energy service to customers.
- The State is transitioning from funding more foundational research on the impacts of climate change to funding research on resilience strategies and vulnerabilities of critical infrastructure. As this transition to actionable research continues, PG&E suggests that the State develop a new process to ensure that gas and electric companies are engaged in the creation of research themes to ensure state-funded research leverages and does not duplicate existing energy company research.

4) Convene a joint-agency workshop on climate resilience metrics to help track California's resilience action and successes

- Companies, communities, and other stakeholders are all working to design resilience strategies and create metrics to track success. To leverage this work and learn from each other, we suggest the State convene a joint-agency workshop on climate resilience metrics so that common metrics are used where possible to better track resilience action and successes at multiple scales across the state.

II. The Proposed California Clean Energy Equity Framework and Indicators Merit Additional Discussion.

In May 2017, the CEC released a draft report *Clean Energy Equity Framework and Indicators: An Approach for Tracking Progress of Energy Efficiency and Renewables for Low-Income Customers and Small Business Contracting Opportunities in Disadvantaged Communities*. Given one of PG&E's above recommendations to develop metrics that track how the State is performing on climate resilience, PG&E offers the following feedback on this related staff proposal.

A. Utilities can support Initiatives in Disadvantaged Communities, but Should not be Considered the Lead or Primary Entity in Advancing these Initiatives

The CEC's "proposed framework includes two types of indicators. The first type is geospatial indicators to measure local considerations related to the local economy,

geography, demography, social engagement, public health, and environmental quality. These factors interact to impact local challenges and opportunities.”¹

Utility resources should be used to support and enhance this total effort, but should not be considered lead, primary, or “total.” Conditions that affect “social engagement” and “public health” have many (and mostly) non-utility industry contributors. As a result, a metric is needed to attribute proportionate contribution to these broader societal concerns to help identify appropriate public, as well as utility, resources and which agencies should lead.

As a result, there may be some areas where a “lead agency, organization, or program administrator(s)” designation would merit further discussion. For example, where an energy agency may appear to be a likely lead for certain subparts of geospatial indicators (e.g., G4, which includes utility programs and energy infrastructure), an energy agency would not be the best lead for G4, which is intended to capture local resources, and community based organizations, in addition to the energy-related portions. Additionally, the performance indicators may include some utility elements (e.g., P1-Energy savings; or P9-System Average Interruption Duration Index), but having a single lead agency like the California Public Utilities Commission or the California Energy Commission may not be workable given one agency may lack jurisdiction over certain utilities. A joint-agency approach may be desirable in some circumstances.

B. Definitions of Geospatial Indicators Need Refinement and Clarification

Of the geospatial indicators listed on pages 1-2 of the report, PG&E notes that regional/local greenhouse gas (GHG) emissions estimates should also be reflected. Recommendations for additional clarity are noted below, based on Indicator. PG&E does not include the entire list of indicators, only those upon which it is making comments.

G2. Climate zones (physical stressors and risks related to climate change) – This indicator should include an assessment of GHG emissions. GHG emissions should be the common unit of analysis across all renewable energy and climate change reduction efforts including assessing climate effects.

G5. Public health indicators (air quality, water quality, etc.) – According to some public health research, socioeconomic factors like education and access to healthcare are primary contributors to health disparities.² If so, then one would expect, at best, modest favorable impact from climate policies that affect air and water. To ensure any metrics are correctly scaled, the public health indicators should also include all indicators of public health disparities, including social determinants (e.g., stress, access to healthcare,

¹ *Clean Energy Equity Framework and Indicators: An Approach for Tracking Progress of Energy Efficiency and Renewables for Low-Income Customers and Small Business Contracting Opportunities in Disadvantaged Communities*, pg. 1

² *Exploring the Social Determinants of Health*, Robert Wood Johnson Foundation, April 2011, Issue #4

access to quality education, food, and affordable quality housing, etc.). This indicator should also identify proportionate contribution by source so that appropriate resources are scaled to address the problems according to relative contribution.

Finally, CalEnviroScreen (G6) also includes indicators for air quality, water quality, and other environmental concerns. It is unclear how this interaction between Indicator G5 and G6 will be addressed and we are concerned that environmental factors may actually be overrepresented as a result of double-counting the same data points across two indicators.

G6. CalEnviroScreen score (disadvantaged communities) – This indicator should support Indicator G2, but does not. PG&E cautions against relying on this tool to identify communities of concern because not all socioeconomically disadvantaged communities have significant environmental concerns. CalEnviroScreen prioritizes **environmentally** impacted disadvantaged communities, and so it may not highly rank communities with significant socioeconomic disadvantage, but also comparatively lower environmental exposures. Moreover, CalEnviroScreen does not have climate effect indicators, which means—for example--that communities with high socioeconomic disadvantage in coastal areas vulnerable to sea level rise may be overlooked by the tool because the community does not rank high on the listed environmental indicators (i.e., air quality, traffic, pesticide use, hazardous waste facility, etc.). As a result, some otherwise qualifying “disadvantaged communities” may not be prioritized for energy efficiency, climate resilience, and other programs. CalAdapt should be integrated into CalEnviroScreen to address this limitation to the tool. Also, as noted above, it is unclear how this indicator (G6) will interact with Indicator G5 when many of the same data points (e.g., air quality, water quality, etc.) are included in both indicators.

C. Definitions of Performance Indicators Also Need Refinement and Clarification

On page 2 of the Draft Report, it is noted that “This framework also includes the following performance indicators. In selecting these indicators, Energy Commission staff leveraged existing data collection and indicator development efforts. Staff reviewed reports and consulted with staff at state agencies, the U.S. Department of Energy, and the Los Angeles Department of Water and Power. Energy Commission staff proposes the following set of clean energy equity indicators” As with the geospatial indicators, PG&E suggests some refinement and/or clarification for the performance indicators. PG&E does not include the entire list of indicators, only those upon which it is making comments.

P1. Energy savings (megawatt-hours [MWh] or therms saved) – This indicator should also capture GHG emissions reduced (derived from G2 baseline assessment) or avoided.

P3. Renewable energy MWh generated/MW installed – This indicator should include GHGs reduced/avoided per G2.

P4. Proportion of low-income communities and disadvantaged communities with clean energy small business contracts by utility – This indicator is problematic. It

presumes these businesses are owned and operated by “disadvantaged community members”; what if there are contracts, but they are obtained by more affluent non-disadvantaged entities doing business within the community? Are they eligible to participate and if so, how? Is the objective to reduce emissions in a disadvantaged community (DAC) regardless of whether the owner is “disadvantaged”? Or is the objective to help disadvantaged businesses reduce emissions and gain access to cost saving energy efficiency programs?

P5. Amount invested – It is not clear whose investment is being measured. Is this indicator proposed in an effort to track utility investment or that of state, regional, or local governments? There should be a proportionate contribution to the economic and societal objectives based on their proportionate attribution of responsibility to solve the broader societal concerns in these communities. The amount invested should be juxtaposed to the larger need across all the areas of concern noted (e.g., local economy, social engagement, public health, environmental quality, etc.) to determine if all stakeholders are sufficiently engaged, invested, and effective for their areas of responsibility.

P11. Number of household health and safety issues abated – While the request for data on home repairs is very helpful, the other areas proposed for inclusion in the indicator seem too broad. For example, “Investigating the need for heightened consumer protection” is unclear – Is this about contractor qualifications (P6)? Is it related to workforce development (P6)? Electricity bills as a proportion of income (P10)? PG&E recommends that this indicator be modified to focus on household repair issues.

Additionally, the public health aspects which include climate health impacts and local air quality concerns are overly broad and vague. We recommend that the public health indicators focus on climate effects and indoor air quality that can be related to housing (e.g., housing code compliance, mold abatement, and cooling and heating in extreme weather, etc.) This indicator should also be cross-referenced with P1, P3, and P5 and measured in GHGs reduced/avoided.

Air quality concerns are addressed in (G5) and can be referenced, but it is not a feasible household health and safety metric. It also should not be both a geospatial indicator and a performance indicator.

P12. Proportion of critical facilities with resilient on-site generation and storage – This Indicator merits additional discussion given it is unclear what the priority is. Is the focus to be climate resilience or on-site generation and storage? It could be that not all critical facilities will be suitable for onsite generation and storage. If the priority is resilience, does the technology or method need to be prescribed? PG&E recommends rewording this indicator to assess, “**Proportion of critical facilities with energy resources assessed sufficiently resilient to withstand (category X level) disasters and disruptions.**” If facilities are deemed deficient, then remedies including onsite generation and storage should be considered.

III. Opportunities with Federal Government in Response to Climate Change

At the August 29 Workshop, Chair Weisenmiller asked about PG&E's relationship with federal agencies and opportunities related to accessing public lands to address issues such as wildfires and tree mortality.

In response to California wildfires and related tree mortality in our service territory, PG&E believes the Federal government should consider taking additional steps to maintain safe and reliable gas and electric service, promote public health and safety, protect our natural resources, and reduce Federal regulatory and administrative burdens on our public lands, including creating Memorandums of Understanding (MOUs), using existing authorities with individual companies and industries on how business will carry out basic operation, maintenance and construction activities on Federal lands.

Specifically, the Federal government should support and advance policies that:

- *Rights-of-Way Permit Renewals:* Accelerate renewals of existing energy corridor rights-of-way, and incorporate integrated vegetation management practices and guidance for protection and conservation of the natural resources that balance benefits of pest control, cost, public health, environmental quality and regulatory compliance.
- *Regional Operations and Maintenance Plans:* Promote coordination and cooperation by adopting regionally based templates for operation and maintenance plans, which establish consistent work practices with clear expectations of the Federal land agencies and utilities. At the same time, it is important to clarify work-streams that can be performed with notifications and those which require prior agency review and approval. To the extent possible, steps should be taken to promote joint preparation of National Environmental Policy Act documents among Federal agencies for vegetation management activities to maximize efficiency and coordination, while ensuring consistency with applicable land management plans and policies, and applicable law.
- *Partnership Opportunities:* Identify and pilot-test public-private partnerships to maximize utilities' efforts and capabilities with the Federal government that balance public and workforce safety, compliance, emergency preparedness, reliability, customer satisfaction and efficiency. Under this arrangement, utilities could foster a collaborative approach and leverage resources to accomplish work across land ownership boundaries onto National Forest System lands and other public lands.
- *Liability Protection and Funding Support:* Local counties, the U.S. Forest Service, Caltrans, CAL FIRE, PG&E and Southern California Edison are spending millions of dollars to remove dead or dying trees to prevent wildfires, property damage and personal injury, and traffic obstructions. According to the California Tree Mortality Task Force, in the last year, 51,607 miles of roads and power lines have been inspected and cleared of dead trees. There is more work on the horizon, but permitting, insurance liability,

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funding, and workforce availability present challenges. In order to accelerate additional job-creating and safety-enhancing activities, the Federal government should consider repurposing existing funding for prevention and forest-thinning related activities, simplifying and accelerating permitting, and better dispersing liability and risk.

IV. Conclusion

PG&E appreciates this opportunity to comment on the August 29 Joint Agency IEPR Workshop on Climate Adaptation and Resilience for the Energy System and looks forward to continued participation in this process.

Sincerely,

/s/

Wm. Spencer Olinek