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Pacific Gas and Electric Company_Adaptation Comments

Additional submitted attachment is included below.

Pacific Gas and Electric Company

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VIA ELECTRONIC FILING IN DOCKET 16-IEPR-04

California Energy Commission
Dockets Office, MS-4
Docket No. 16-IEPR-04
1516 Ninth Street
Sacramento, CA 95814-5512

Re: Docket 16-IEPR-04: Climate Adaptation - Comments of Pacific Gas and Electric Company

I. Introduction

Pacific Gas and Electric Company (PG&E) appreciates the opportunity to provide limited additional information on topics discussed at the June 21, 2016 Workshop on Climate Adaptation and Resiliency for the Electric Sector.

On June 1, 2016, PG&E's Chairman, CEO and President of PG&E Corporation Tony Earley spoke before the Clean Energy Ministerial in San Francisco. PG&E provides a copy of his prepared remarks for the California Energy Commission's reference.

Sincerely,

/s/

Valerie Winn

Enclosure

Enclosure 1
Comments of Pacific Gas and Electric Company
Docket 16-IEPR-04
August 3, 2016

Clean Energy Ministerial – Lunch Keynote (15 minutes)
Prepared Remarks of Tony Earley, Chairman, CEO, and President of PG&E Corporation
June 1, 2016 1:00-2:30 pm
Westin St. Francis Hotel – Grand Ballroom

[Thanks to Jim Wunderman, and to Mayor Lee for the kind introduction]

[Thanks and acknowledgments to the room (DOE & Sec. Moniz, Gov. Brown, Bay Area Council team and organizers)]

I'd like to start by asking you to picture a scenario:

In a prosperous Western state, the climate is behaving strangely. Decades of below average rainfall have produced a punishing drought. Rivers and lakes are drying up. Cities are strained. Farmers are desperate. And everyone is praying for a long winter season of heavy Pacific storms.

Unfortunately, they get their wish.

The heavens open, and then fail to close, deluging the state from one end to the other.

Deserts are flooded four feet deep. Mountain streams become torrents, washing away entire communities. In low-lying agricultural regions, the water is so high that it reaches the tops of the utility poles and cuts off communications across the state.

Even the state capitol is submerged. And on Inauguration Day, the newly elected governor has to commute to the ceremony by rowboat, and return to his mansion through a second-floor window.

When the water finally recedes, thousands are dead, and one in every eight homes has been ruined or carried away.

It sounds like a bad Hollywood disaster movie. But the astonishing truth is that all of this actually happened, right here in California, over the winter of 1861-62 … thanks to an "atmospheric river" storm that produced a truly biblical 43 days of rain.

In fact, every number associated with this event staggers the imagination. Not only was there a tremendous loss of life, including 200,000 cattle – 25 percent of the economy was destroyed, and a state built by the Gold Rush was driven into bankruptcy.

Some of the effects are still with us – the land under downtown Sacramento was raised as much as 15 feet against future flooding, and Leland Stanford added an extra story to that Governor's Mansion.

But what's truly mind-boggling is that 150 years later, the megaflood itself is mostly forgotten, and its lessons have faded away.

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Extreme weather events aren't new. We've seen plenty of recent examples, both in California and countries around the world.

But climate science tells us that these episodes are already increasing in intensity, and that rising global temperatures will make them both more frequent and less predictable.

And so, unlike our predecessors back in 1861, we have the gift of understanding what may come and how much is at stake.

And thanks to the agreement struck in Paris last year … the EPA's Clean Power Plan … and the Under 2 MOU partnership championed by Gov. Brown … we have begun taking real steps to heed the warning.

I believe we can be successful … that over the next few decades, we can create the solutions to stave off a catastrophic climate disaster. But that will depend upon governments setting the right policies, companies acting with or without mandates, and individuals stepping up to do the right things.

But even if I'm right, it won't change the fact that some degree of warming is already unavoidable.

And so our answer to the climate problem will have to contend with those effects.

The melting of the polar ice sheets means that in the San Francisco Bay Area alone, more than 200 square miles of land are vulnerable to sea level rise.

The Bay Area Council estimates that with more powerful tidal surges, a modern superstorm lasting *as few as four days* could cause $10.5 billion in economic damage, including $125 million from electric outages alone.

That's why at PG&E, our focus on sustainability has grown to encompass the need to adapt to the effects of climate change and make our systems more resilient.

We're developing robust emergency response plans and procedures, and conducting a multi-year, comprehensive assessment to evaluate

the risks from 100-year storms and sea level rise, as well as heat waves and land subsidence

But we can't do it alone – utilities and cities need to band together and prepare, while also engaging at the state and federal level.

PG&E is among the utilities that have joined the U.S. DOE's Partnership for Energy Sector Climate Resilience to share research results and best practices.

We've also committed $250,000 in shareholder funds to support a ballot measure to protect and restore wetlands around San Francisco Bay. We're proud to join with other corporate members of the Bay Area Council in voluntarily supporting this initiative, along with a number of public officials and environmental organizations.

Additionally, today, we are announcing a new shareholder-funded grant program to foster more public-private partnerships and knowledge sharing about strategies for climate resilience.

Specifically, we're pledging $1 million to support local planning efforts throughout our service area to help communities better understand, plan for, and respond to climate change risks.

Some cities and counties already have sophisticated planning efforts underway. But others are just getting started, or face budget constraints.

These grants are designed to produce solutions that others can learn from and adopt, with a particular focus on disadvantaged areas where exposure is high and resources are lacking.

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We see this as a natural extension of PG&E's commitment to support the economic vitality of the communities we serve – and our mission to reduce carbon emissions.

For me, that mission has taken on an added personal resonance in the past year.

In the last six months, I made two memorable trips: the first was with Governor Brown's California delegation to the U.N. climate talks in Paris, and the second was a part of a Detroit Zoological Society trip to Antarctica.

I came back from Paris with a great sense of optimism and faith in our ability to work collectively to solve this problem. And I came back from Antarctica with a new appreciation for how crucial it is that we fulfill that promise, sooner rather than later—a preeminent research on that trip has seen temperatures rise 12 degrees in the 30-plus years of his work in the Antarctic Peninsula.

Paris also made clear that the world is looking to California for some of those answers. And it gave me the privilege of telling the story of our success.

While much remains to be done, California's transition to a clean energy future has gone farther and moved faster than many of us thought possible just a decade ago.

On renewables alone, we've made extraordinary progress. At PG&E, this year we expect to deliver 33 percent of our energy from qualified renewables.

Add in our large hydro and nuclear, which under California's narrow definition of renewables don't count, and more than 55 percent of the

power we supply is carbon-free – light years ahead of most other utilities.

Within the next 15 years, we believe we'll be approaching 70 percent, as well as meet the state's new target of 50 percent renewables.

One big key to this progress has been the bold targets set by state policymakers.

But another has been their wisdom in enlisting utilities as partners. A critical part of progress on this point has been removing barriers to creating innovative solutions.

The California model has proven that utilities have a unique ability achieve emissions reductions and accelerate the use of low-carbon technologies – and do so quickly, on a scale others can't match.

We've demonstrated that we can move renewable energy markets and drive down costs -- while keeping the grid reliable, customer bills affordable, and the economy growing.

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And we can continue to do that – if we work together and take the right steps.

We think three keys will prove crucial.

The first is continued investment in the grid.

The grid is the backbone of the economy. It powers all the daily miracles that make modern life possible.

The smart grid we're building today will be the backbone of the clean-energy economy. With more distributed technologies coming online,

such as privately owned solar, electric vehicles, and battery storage, the grid becomes even more essential.

We see the grid serving a function similar to what the Internet does for computers – as the platform -- the network -- that can pull all of the new energy technologies together and integrate them in ways that create exponentially more value for everyone.

The second key to the future is adapting our energy policies to the new realities around us.

Right now, technology and market forces are evolving far faster than the regulatory framework, which largely remains stuck in the era of Thomas Edison. This disconnect threatens to undermine and stall our progress if not addressed.

For example, the ongoing debate on net energy metering policies in various states is an attempt to put band-aids on antiquated regulatory structures. We need to find win-win solutions quickly and be willing to make adjustments as we go forward.

Indeed, examples of how today's regulatory environment slows things down are all around us, and not limited to the energy sphere.

Those of you who flew in may have noticed the new span of the San Francisco-Oakland Bay Bridge, with its striking central tower. The original, part of which is still standing, had the longest suspended roadway in the Western United States when it opened in 1936 – one year earlier than its more famous neighbor, the Golden Gate.

It was designed with pencils, drafting paper, and slide rules; and built with far more manual labor than a modern project, and took just over three years to build.

The new span, which is only half as long, was erected with the latest in engineering software and construction techniques. It took 11 years to build, and crucial pieces are still being reworked.

As we talk about the need for resilient infrastructure, I'll leave it to you to decide whether the regulatory framework can meet the urgency of the climate challenge.

The third key flows directly from both the spirit and the letter of the Paris agreement, which is to keep the focus on reducing carbon emissions, rather than latching on to any one solution, or even any particular mix of sources.

This gives utilities the freedom to find the most viable options, maximize innovation, and provide the best value for our customers.

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My focus today has been on California. But we all know, the issue of climate change has no fixed address. Many of you come from far-away places with their own histories and challenges.

So I'd like to close by offering a few points that I hope you can take back and apply wherever home is.

First, as you tackle the enormous challenges that come with creating a clean-energy future and solving the low-carbon equation, look to the utility sector as a source for solutions.

This is an industry that was built to do big things. It's also an industry that was designed to serve the public interest … that's part of our DNA.

The second is that as you look at the problems that need solving, remember that we are more than just energy providers. We can help

with resilience … we can help with clean transportation … we can help with public awareness and education.

We reach into every home and business in the country, and we have relationships with millions of customers.

That's a tool few others can offer … and it's one you can use.

Third, look at us as partners. Just as individual countries can't eliminate carbon alone, neither can we.

Our industry is hungry for partnerships … that's something you can help facilitate and nurture.

The bottom line is, if we're going to continue to make big progress on climate change, I believe we have to take further advantage of the ability of utilities to do all these things, and do them in big ways.

But to unleash this potential, we need the right policies.

The road from Paris to a clean energy future leads right through this room … and through all of you.

The decisions you make in the next few years will shape the world's energy agenda for decades, and be essential to the ability of our countries to deliver on their climate commitments.

It's your engagement in these issues that will best ensure that we get that shared future right … and that stories such as the California Megaflood remain in the history books, where they belong.

Thank you. ***