Pacific Gas and Electric Company®

Diane Ross-Leech
Director
Environmental Stewardship

Mailing Address
P.O. Box 770000
San Francisco, CA 94177

Street/Courier Address
77 Beale Street, Room 2473
San Francisco, CA 94105

(415) 973-5696
Fax: (415) 973-2280
Email: dpr5@pge.com

January 13, 2012

California Energy Commission
Dockets Office, MS-4
Docket No. 09-RENEW EO-01
1516 Ninth Street
Sacramento, CA 95814-5512

Re: **Desert Renewable Energy Conservation Plan: Comments of Pacific Gas and Electric Company on the *"2040 and 2050 Acreage Needs for Renewable Generation"* Draft Calculator**

Pacific Gas and Electric Company ("PG&E") appreciates the opportunity to provide comments on the California Energy Commission's ("CEC") Desert Renewable Energy Conservation Plan ("DRECP") *2040 and 2050 Acreage Needs for Renewable Generation* Draft Calculator ("calculator"), published in December 2011. PG&E strongly supports California's clean energy goals and commends the collaborative efforts of the Administration, the State, and federal agencies to address the complex issues associated with achieving California's greenhouse gas ("GHG") reduction goals and 33%-by-2020 Renewable Portfolio Standard ("RPS") mandate.

As a participant in the stakeholder process, PG&E has the following preliminary comments on the calculator:

- Reliability, safety, and affordability of electric service are key criteria for successfully achieving California's clean energy and carbon reduction goals. PG&E is concerned that the calculator does not consider whether the electric system is operable with the high volume of intermittent resources the calculator models. The focus on reliability, safety, and affordability may make it challenging to meet GHG reduction targets using a high level of intermittent renewables, given renewable energy has been historically more expensive than other energy alternatives and that additional supporting infrastructure like energy storage may be needed to ensure system reliability.

- PG&E is concerned that the calculator assumes that PG&E's Diablo Canyon Power Plant will not be relicensed. Diablo Canyon is a safe, reliable, cost-effective, and GHG-free resource that provides clean electricity that contributes to California's GHG reduction goals. PG&E recently applied for a 20-year extension of its Diablo Canyon operating licenses, which currently expire in 2024 and 2025. While the application is temporarily delayed as advanced seismic studies are performed, it is premature to assert that Diablo Canyon plays no role in California's energy

- future. The calculator should include this nuclear generation resource in its forecast energy mix, at a minimum, through 2044 and 2045.

- Given recent focus on the 33%-by-2020 legislation, PG&E requests that a 2020 calculator scenario is provided. This will allow stakeholders to plan for the near-to-medium term and is more consistent with PG&E's internal planning analyses and metrics. Furthermore, given the time to develop supporting infrastructure, like transmission, a 2020 or 2030 scenario may be desirable to ensure sufficient time is allowed to develop a comprehensive strategy.

- The calculator includes significant new combined heat and power ("CHP") resources. It is unclear whether CHP potential of this magnitude exists, or whether CHP in operation will significantly reduce GHG emissions. The CEC should further consider these assumptions (both CHP potential and CHP's ability to reduce GHG emissions) before including large amounts of CHP additions in long-term planning scenarios. For example, a recent study by Energy and Environmental Economics, Inc. ("E3") entitled "Meeting California's Long-Term Greenhouse Gas Reduction Goals" (available at: http://ethree.com/documents/GHG6.10/CA_2050_GHG_Goals.pdf) presents four pathways to cut California's GHG emissions to 85 MMT in 2050. The electric generation mix in 2050 is shown for each pathway in Figure 26 on p. 75 of that report. CHP is notable by its absence—no new generation from CHP occurs in any of the four pathways. It may be prudent to develop a scenario that does not include any new CHP to meet 2050 GHG reduction goals.

- It is unclear how the share of statewide RPS resources was allocated and will be allocated to the DRECP area. More detailed locational information would be helpful. For example, without more granular information, it is difficult to understand how much resource capacity there is in the DRECP and what the limit on resource potential is for the area.

- The probabilities associated with each of the calculator's scenarios are difficult to determine, especially when considering such a long time horizon. Therefore, PG&E recommends that calculator output be used to develop a range of plausible scenarios, rather than to identify the most likely result or outcome.

- The intent and scope of the calculator should be more clearly defined. For example, the CEC should further clarify that the calculator was developed as a tool to inform the DRECP Conservation Strategy. It is not obvious that the calculator is not intended to be predictive and therefore, the CEC should advise that this calculator not be used to provide recommendations in other forums.

PG&E is happy to discuss these comments with the CEC Staff and appreciates Staff's work in developing the calculator. We look forward to continuing to work with the CEC and other stakeholders to develop the DRECP and further advance renewable development and desert conservation in the state.

Sincerely,

Diane Ross-Leech

Diane Ross-Leech

cc: D. Vidaver by email (dvidaver@energy.state.ca.gov)