

September 1, 2015

***E-Filing  
ARB's Cap-and-Trade Website***

Ms. Shelby Livingston  
California Air Resources Board  
1001 I Street  
Sacramento, CA 95812-2828

**Re: Pacific Gas and Electric Company's Comments on the Air Resources Board's Concept Paper for the Draft Cap-and-Trade Auction Proceeds Investment Plan**

Dear Ms. Livingston:

Pacific Gas and Electric Company (PG&E) welcomes the opportunity to submit these comments on the Air Resources Board's (ARB) Concept Paper for the Draft Cap-and-Trade Auction Proceeds Investment Plan (Concept Paper).

**I. INTRODUCTION**

PG&E's detailed comments on the Concept Paper are set forth below. The following summarizes the key issues:

- Focus on expanding energy efficiency investments in the buildings sector
- Utility partners can help communities and other customers leverage additional funds
- PG&E supports the Concept Paper's focus on reducing emissions from transportation
- Funding for bioenergy projects and technologies can reduce costs of renewable energy
- Greater emphasis on quantifiable and cost-effective greenhouse gas reductions needed
- PG&E supports additional investment in research, development, and demonstration projects

**II. DISCUSSION**

**A. Clean Energy and Energy Efficiency Concept**

Focus on Expanding Energy Efficiency Investments in the Buildings Sector

Current investor-owned utility (IOU) energy efficiency programs are designed to provide incentives to move building owners above and beyond current Title 24 building codes. However, as codes have become more stringent in recent years (and will become even more so as the state

moves to zero-net-energy homes and buildings), many customers find bringing their home of building up to code challenging and cost-prohibitive. Bringing an existing building “up to code” can prove costly, and in many cases can create a disincentive to act, which only contributes to a widening energy efficiency gap. Investments that target this gap, and bring buildings both up to *and* beyond code would benefit building owners, communities, and the state as a whole.

Preliminary results from two complementary studies, one of which studied heating, cooling, and lighting energy consumption in nearly 70,000 buildings in PG&E’s service territory and the other which examined all energy consumption in 164 buildings, indicate that approximately two-thirds of the energy savings potential in California’s existing buildings is in to-code savings. These results are consistent across climate zones and market sectors. This indicates that similarly inefficient buildings exist throughout the state, including in disadvantaged communities. Given the large amount of to-code savings prevalent in California’s existing building stock, the state could achieve more energy savings by bringing these less efficient buildings up to and beyond modern codes and standards.

Investments that target this gap include programs that provide financial incentives, rebates, technical assistance, and support to customers to increase the energy efficiency of existing buildings based on energy usage reductions, as measured through normalized metered energy consumption. Programs should focus on bringing buildings up to- and beyond- Title 24 code levels, and include energy-saving operational, maintenance, and behavioral activities. Such programs can:

- Target the state’s least efficient buildings, particularly those in disadvantaged areas
- Encourage deeper whole-building upgrades and behavioral and operational energy savings
- Increase the adoption curve for building upgrades and new efficient equipment

#### Utility Partners Can Help Communities and Other Customers Leverage Additional Funds

PG&E serves as a trusted partner to local governments and communities, and has assisted those entities in leveraging State and Federal funding to achieve energy savings goals. For example, Proposition 39 was a voter-approved initiative from 2012 that funds energy efficiency initiatives for K-12 public schools and community colleges. While PG&E does not receive Proposition 39 funding directly, we instead serve as an energy advisor to help schools in our service territory access the funds.

In addition, as a result of local government projects funded by the American Recovery and Reinvestment Act (ARRA), PG&E developed advanced data reports to give municipal governments in Berkeley and Fresno more insight into their communities’ energy consumption. These projects evolved into the Green Communities Data Portal, which is now available to all

local governments in PG&E's service territory. The Green Communities Data Portal allows local governments to request and download their communities' energy usage information to support greenhouse gas (GHG) inventories and climate action planning. In addition to providing raw data, the Green Communities reports use Tableau software to provide insights to communities about their municipal, residential, and non-residential energy use, energy efficiency participation, and renewable energy installations. As of mid-2015, over 70 percent of the approximately 250 local communities in PG&E's service area had downloaded the reports from the online Green Communities Portal.

Through its existing energy efficiency (EE) program infrastructure, PG&E will ensure that local governments and other customers are able to access cap-and-trade auction proceeds to facilitate deep retrofits of some of the state's least efficient buildings.

## **B. Transportation and Sustainable Communities Concept**

### PG&E Supports the Concept Paper's Focus on Reducing Emissions from Transportation

PG&E supports the Concept Paper's continued focus on reducing emissions in the transportation sector. With an electric supply nearly two-thirds cleaner than the national average, electric vehicle operators in PG&E's service territory have ready access to a low-carbon supply of transportation fuel. The increased penetration of low to zero-GHG generation will ensure continued emissions reductions from electric vehicles. This benefit will accrue not only from new electric vehicles, but also existing electric vehicles as they age, unlike internal-combustion vehicles where the relative benefits from emissions after-treatments and other technologies deteriorate over time. Given the need for coordination between sectors, PG&E affirms the need for a "systems approach" in the Second Investment Plan and an emphasis on investments that facilitate these beneficial, cross-sector emissions reductions.

PG&E encourages ARB to ensure that investments in public transit and transit-oriented development also support the State's goals for Zero and Near Zero Emission Vehicle adoption. Technologies for both the medium and heavy duty sector that utilize electric or alternative fuels have been successfully demonstrated. Funding to deploy these technologies within California can support the State's GHG reduction goals and advance the use of clean air technologies in disadvantaged communities. Additionally, deployment of medium and heavy duty vehicles in the near term will put the state on a path to see long-term benefits.

Finally, PG&E encourages ARB to review existing and proposed utility infrastructure investment plans and encourage the development of policies and programs that are complementary to these utility investments. PG&E also supports increased investments in the State's vehicle rebate programs to ensure their sustainable success. Coupling these financial incentives with utility investments to support electric and alternative fueling infrastructure will remove significant

barriers to vehicle adoption and help the State meet its ambitious goals for Zero and Near- Zero Emission Vehicles.

### **C. Natural Resources and Waste Diversion Concept**

#### Funding for Bioenergy Projects and Technologies Can Reduce Costs of Renewable Energy

Bioenergy projects and technologies may provide broad, statewide societal benefits such as reduced water and air pollution, reduced wildfire risk, increased forest health, waste reduction and recycling, job preservation or creation, and watershed improvements. Bioenergy can also serve many valuable applications, ranging from electric generation to cleaner transportation fuels.

In addition to existing projects, the passage of recent legislation mandating organic waste recycling and a requirement for a detailed plan to address short-lived climate pollutants affords the State additional opportunities to work with sectors to reduce emissions and possibly develop renewable energy products that can compete with a variety of existing energy sources. For example, the cost to create new municipal programs (as required under AB 1826) and divert organic material from landfills and support recycling is higher than traditional waste management. As different regions in the state put these programs in place and work with organic material and bio energy producers to compensate them for bio product management, the state should see significant reductions in methane and other GHG sources. Energy product costs should be lower as a result, making bioenergy economically competitive with comparable energy products.

While bioenergy is a viable energy source and may provide a number of societal benefits and serve multiple valuable applications, many new and existing bioenergy projects need financial support to ensure a competitively priced renewable energy product is available for California's energy consumers. The Concept Paper's proposal to allocate funds to some new and existing bioenergy projects could play a key role in achieving the goal of developing cost-effective clean energy from a diverse array of resources in California.

If necessary, PG&E believes that new and existing projects and technologies providing broad societal benefits should be supported financially by the state of California as a whole, as proposed in the Concept Paper. At the same time, PG&E believes the use of Greenhouse Gas Reduction Fund (GGRF) revenue for this purpose should be of a limited duration and that these funds not serve as an ongoing method of bolstering energy sources that remain uneconomic without subsidies. Furthermore, PG&E is unsure where in the value chain GGRF revenue would be best leveraged. We therefore support any efforts by the State to better research and model this issue before investing.

#### **D. Program Administration**

##### Greater Emphasis on Quantifiable and Cost-effective GHG Reductions Needed

The Concept Paper should place greater emphasis on the need to quantify and prioritize cost-effective GHG reductions presented in dollars per metric ton of GHG emissions reduced or sequestered that could be achieved or facilitated by each investment. For example, page 3 of the Concept Paper notes that all GGRF investments “must reduce” GHG emissions, but does not suggest cost effectiveness should be a priority.

PG&E understands that ARB and its sister agencies are currently developing metrics to determine the cost effectiveness of individual projects. This methodology should also be used when evaluating broader areas for appropriations.

The AB 32 Scoping Plan requires the ARB to adopt emission reduction measures that are both technologically feasible and cost-effective (HSC section 38562, subd. (a) and (c)). As such, emission reduction measures supported by auction proceeds should also be both technologically feasible and cost-effective. Cost-effectiveness need not be the sole mechanism for prioritizing investments. Any investments that are expected to provide relatively fewer emission reductions at a high cost should be a small percentage of the overall investments and also should be strongly supported by other principles, such as the ability to deliver multiple societal benefits to protect human and natural resources, the ability to benefit disadvantaged communities, the ability to leverage other investments, or the potential over time to bring significant abatement at a more reasonable cost. The State must prioritize spending that leads to quantifiable emissions reductions over projects that might satisfy other objectives or social benefits, but lack a clear and significant potential for emissions reductions.

Achieving reductions through GGRF funds will reduce demand for allowances, meaning consumers and ratepayer will likely see a lower GHG price embedded in the products and energy they consume. Thus, by achieving the maximum number of GHG reductions with limited GGRF funds, California will be able to achieve its GHG reduction goals with the least impact to our economy.

For these reasons, PG&E strongly recommends that the ARB develop a cost-effectiveness metric, and that the ARB work with stakeholders to either recommend a range of acceptable costs per unit of GHG emission reductions, or set a minimally acceptable cost per ton. For example, the ARB could develop an index based on allowance prices, or review previously funded projects to demonstrate a range of acceptable costs. A related metric could be developed for research and development projects, particularly for technologies that hold the promise of significant, cost-effective GHG reductions.

### Accountability

With regard to the accountability of administering agencies, a review should take place at the completion of a project that receives auction proceeds, or at some significant milestone, to characterize the impact of the investment using predetermined criteria. This information could be used to inform future investment, including which supported activities should be expanded and which should sunset. For example, each Three-year Investment Plan could include a section evaluating the effectiveness of programs stemming from the previous Investment Plan.

### **E. Research, Development, and Demonstration**

PG&E strongly supports further investment in research, development, and demonstration (RD&D) activities. We note that the current GGRF expenditure plan includes no funding for research or development of advanced technologies; GGRF funding is only being directed towards deployment of existing, commercially available technologies or near-market technologies. This is an important gap that should be addressed in the Second Investment Plan. PG&E recommends a stronger focus on RD&D for low-GHG technologies and practices. Such spending is widely supported by a range of academics and policy analysts and can help produce new knowledge and tools that will be needed to achieve California's longer-term GHG reduction goals. We also recommend that, to the extent possible, RD&D efforts be administered through existing programs to ensure close coordination and avoid duplication.

### **III. Conclusion**

Thank you for the opportunity to submit these comments. We look forward to continuing our work with ARB and other stakeholders to ensure the successful investment of cap-and-trade auction revenue.

Sincerely,



Claire Halbrook

Climate Policy Principal  
Pacific Gas and Electric Company