

**Testimony of Peter A. Darbee
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Before the

**Committee on Environment and Public Works
United States Senate**

Legislative Hearing on America's Climate Security Act of 2007 S. 2191

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Chairman Boxer, Ranking Member Inhofe, and Members of the Committee, I am honored to appear before you this morning to offer my views on the America's Climate Security Act of 2007. I believe climate change is one of the most pressing issues of our time. It is clear that the link between greenhouse gas emissions and the Earth's warming climate is sufficient to warrant an aggressive response, the potential consequences serious and the need for action urgent. I am pleased that this Committee is showing leadership on this very important issue by having a hearing that will advance the legislative process.

PG&E Corporation is an energy holding company headquartered in San Francisco, California and the parent company of Pacific Gas and Electric Company. Pacific Gas and Electric Company is California's largest utility, providing electric and natural gas service to more than 15 million people throughout northern and central California. PG&E is a recognized leader in energy efficiency and has among the cleanest mix of electric power of any utility in the country.

Our work on energy efficiency and support of clean generating technologies are part of a broad portfolio designed to provide advanced energy solutions to our customers. Through technology and innovation we allow our customers to meet their energy needs, while providing unique opportunities for them to manage their energy use, reduce costs, promote new technologies and address climate change.

PG&E's Position on America's Climate Security Act

PG&E believes America's Climate Security Act provides a solid starting point for constructively advancing a comprehensive, national response to and policy on climate change. The framework established in the bill—a cap-and-trade system with key complementary policies and measures—provides the foundation for a program that will achieve significant and sustained emission reductions from all sectors of the economy. Specifically, the bill includes provisions that prioritize energy efficiency and technology development and deployment, as well as innovative ideas to protect electricity consumers, manage overall program costs, and provide states with the resources to help address the unique needs of their communities and citizens as we transition to a low-carbon economy and adapt to a changing environment. America's Climate Security Act takes positive steps toward recognizing that a national program must balance the economic, technology, environmental and societal challenges of combating climate change.

While we think that the bill provides a solid starting point, we recognize and anticipate that modifications will be made and issues debated as the legislative process continues, with a focus on winning passage this Congress. We plan to be a constructive voice throughout that process. For example, it is our recommendation that the cost containment measures in the bill become more robust by providing additional clarity and transparency regarding the role and workings of the Carbon Market Efficiency Board, and expanding the use and range of offsets available to meet compliance obligations. Additional measures should also be included that recognize and account for some unique characteristics of emissions from the electric power sector that are influenced by year-to-year variability in weather and precipitation. We also believe that aspects of the bill could be modified to more fully recognize early actions taken to reduce greenhouse gas emissions and to facilitate and encourage the rapid development and deployment of renewable generation and other low-emitting technologies.

PG&E bases its assessment of the bill and our recommendations on a set of principles which guide our thinking on climate policy. These include:

- **Mandatory greenhouse gas reductions are necessary.** Voluntary programs alone are insufficient and will not send the appropriate price signal to U.S. industry to make a measurable impact on global climate change. Only a mandatory, national reduction program is capable of stimulating sustained action and investment on the scale required to meaningfully reduce emissions and establish the U.S. as a leader in the response to global climate change.
- **Market-based programs minimize costs and maximize innovation.** Market-based strategies—such as cap-and-trade —provide the economic incentive and the flexibility to cut emissions in the most innovative, cost-effective ways. This approach is key to driving development of the next generation of clean, highly energy-efficient technologies and practices.
- **Long-term greenhouse gas targets provide a rational basis for action.** Addressing climate change will ultimately require stabilizing greenhouse gas concentrations in the atmosphere at a level that will avoid dangerous climate change. Setting ambitious, but achievable, targets now is important because it establishes a clear objective and sends the appropriate price signals from which incremental objectives and action plans can be created, as technologies emerge and scientific understanding progresses.
- **Broad-based participation leads to better, more cost-effective results.** Multi-sector participation creates efficiencies that will be essential to keeping costs low. A national program should eventually encompass all major sectors that emit greenhouse gases, with each sector responsible for its fair share of reductions. Sector-specific programs can, however, serve as a starting point for creating the infrastructure on which to base a broader economy-wide program and strategy.
- **Energy efficiency must be a top priority.** Improving energy efficiency is one of the lowest cost options for managing growing energy demand, while eliminating greenhouse gas emissions. Policies and incentives should encourage and maximize

improvements in energy efficiency throughout the economy. For example, utilities are empowered to aggressively pursue energy efficiency and demand response programs when regulators “decouple” the link between revenues from the sale of electric power and utility earnings by setting fixed revenue levels and thus eliminating the financial incentive to sell more energy.

- **Investment in low- and zero-emission electric generation and other technologies is critical.** Policies should lower barriers and create incentives for investment in renewable power, nuclear power, advanced coal technologies with carbon capture and storage, distributed generation, advanced transportation options, such as plug-in electric hybrid vehicles, and other low- and non-emitting technologies. Driving investment in these technologies, along with aggressive support for energy efficiency and demand response, will reduce greenhouse gas emissions, enhance and improve the efficiency and reliability of the nations’ energy infrastructure, create economic opportunities for American business, reduce reliance on imported fossil fuels, and support overall U.S. energy independence and security.
- **Early action deserves to be rewarded—not penalized.** Policies must recognize and provide credit to responsible parties that have proactively cut emissions before being required to do so. Ignoring prior efforts sends a signal that stepping up, taking risks, and taking responsibility is not something valued by policymakers. Importantly, failing to recognize early action puts these parties at a competitive disadvantage, forces them and their customers to “pay twice” for emissions reductions, and discourages similarly responsible initiatives in the future.
- **Any climate program must be economically sustainable, achieve the ultimate environmental objectives of the program, and begin to address physical impact and adaptation issues.** Some economic sectors, geographic regions and income groups may be disproportionately impacted by both climate change impacts and mandatory greenhouse gas reductions. Any climate protection program needs to take account of these impacts and provide appropriate assistance to those impacted

constituencies. At the same time, policies need to recognize that, ultimately, the majority of program costs will be born by energy consumers, and policies must therefore be structured to address this issue.

- **Near-term opportunities for cost-effective, verifiable greenhouse gas reductions should be pursued.** Policies should encourage actual greenhouse gas reductions, regardless of their geographic location or sector of the economy from which the greenhouse gas reduction opportunities originate. At the same time, a rigorous system must be developed to ensure the environmental credibility and integrity of these reductions. Taking this approach can help to encourage actions by other countries, spur technological innovation, reduce overall compliance costs, and offer ancillary benefits.
- **Standardized emissions reporting is an essential first step and must form the basis of any mandatory program.** Developing consistent and coordinated greenhouse gas emission inventories, protocols for standard reporting, and accounting methods for greenhouse gas emissions is fundamental to establishing a credible reduction program that is capable of tracking and verifying progress toward emissions goals and facilitating a tradable emissions credit system. PG&E was a Charter Member of the California Climate Action Registry, which is now working with 38 other states to develop a consistent set of reporting standards and protocols. We believe that this effort can serve as a model for a national registry system and that any national system should leverage the work that the states have already done.

These principles guided our analysis of the America's Climate Security Act and serve as the basis for some of the specific comments raised above. The remainder of my testimony will provide additional detail on these and some other aspects of the legislation. We provide them in the spirit of our pledge to work cooperatively and constructively as the issue moves through the legislative process.

Electric power consumers will bear the substantial share of the costs of a mandatory climate protection program, so including provisions to mitigate costs to electricity consumers is critical.

We support the approach taken in the America's Climate Security Act to mitigate costs to electricity consumers by allocating emissions allowances to load serving entities (e.g., regulated local electric distribution companies) on behalf of their electricity customers. This approach is consistent with those outlined in separate reports from the National Commission on Energy Policy, the California Market Advisory Committee, and the Natural Resources Defense Council; each have outlined an approach that avoids the inequities and the inefficiencies that stem from solely employing an Acid Rain-style, or input based, allocation approach, while benefiting electricity consumers.

This allocation approach can help to mitigate some of the issues surrounding allowance allocation that arose during the first phase of the European cap-and-trade experience, and that we expect to manifest itself in electric markets throughout the U.S. For example, in Europe, power companies reflected the cost of allowances in their wholesale power prices regardless of whether they initially received the allowances for free. Electricity customers pay more for electricity and power companies receive a valuable asset in the form of allowances. We expect this phenomenon to occur in competitive wholesale and retail markets throughout the U.S.

In regulated power markets, a different set of issues emerges when a large share of the allowances are allocated at no cost to generating facilities and energy regulators claim the allowances for the benefit of the energy consumers within their jurisdiction. First, some states import a significant share of their power and would never see the benefit of the allowances allocated to power plants outside of their borders. California, for example, imports 22 to 32 percent of its electricity supply and most power distribution companies, whether they are investor-owned or municipally-owned utilities, purchase power from the wholesale markets on behalf of their customers. So while customers in states that import a large share of their power supplies will face higher wholesale power prices, they see no

benefit from the free distribution of allowances to out-of-state power plants, whether they operate under cost-of-service regulation or are merchant facilities. Again, this raises important equity concerns that should be factored into the allocation methodology.

Therefore, we believe that the allocation to electricity consumers is an important provision that must be preserved in the legislation as the debate moves forward. Taking this approach will distribute the allowance value where it should go—in this case, the electricity customer—who will ultimately bear the costs associated with making the transition to lower-emitting power generation technologies through the electric rates they pay each month. A study by the U.S. Energy Information Administration suggests that households and businesses at the end of the supply chain will bear 87 percent of CO₂ compliance costs. In addition, according to the Congressional Budget Office, firms subject to a CO₂ cap would pass along most such costs to their customers in the form of higher prices, with regressive impacts on U.S. households. The distribution of allowances for consumer benefit can help offset the price increases experienced by consumers.

So, no matter if a consumer is from a competitive or regulated state, a coal-intensive or non-coal-intensive state, electricity consumers will experience higher costs; allocating allowances to local distribution companies will allow the revenues generated from the sale of allowances to be directed most effectively to end use consumers. We welcome the opportunity to offer further refinements to the language included in the America's Climate Security Act to ensure that it both achieves its intended purpose—mitigating costs to customers without impacting competitive markets or masking the price of carbon—and does so in a way that provides state regulatory bodies with the oversight they need to ensure that they have the ability to best direct the proceeds to serve the unique needs of the consumers and communities whose welfare they are charged with protecting.

Energy efficiency must be a frontline response.

We are very pleased that the bill recognizes the important role that energy efficiency will need to play in meeting our nation's climate change objectives. Existing energy efficiency technologies can help the U.S. to slow and stop current emissions trends and do so in a way that will increase the overall productivity and efficiency of the economy. The bill includes numerous provisions that provide significant incentives for states, utilities, manufacturers and consumers to aggressively pursue energy efficiency, such as: providing incentives for state's to pursue policies that "decouple" electric utility revenues from sales and implement aggressive building codes and standards; targeting of auction revenues to "buy-down" costs of new energy efficient end-use technologies; and providing allowances to load serving entities for the amount of electricity their customers save.

We believe that the energy efficiency provisions included in the bill have the potential to make significant contributions to achieving the emission reduction targets established. For example, the American Council for an Energy Efficient Economy estimated that the energy efficiency measures included in the House Energy Bill, many of which are incorporated in America's Climate Security Act, could result in emissions reductions on the order of 550 million metric tons per year by 2030, while Environmental Defense suggested in their analysis that the savings could be higher. A recent McKinsey study said that, through energy-efficiency, we could reduce the growth rate of worldwide energy consumption by more than 50 percent over the next 15 years. And McKinsey said we can do this using the technology we have available today. Finally, PG&E is an underwriter of a study on the potential for energy efficiency savings in the U.S. While the results are not final, indications are that the potential for savings in the U.S. are on par with or even exceed the potentials McKinsey found in the worldwide study. These savings would not only result in positive greenhouse gas benefits for the country, but would also help to reduce energy costs in the process. What is needed is a shift in current policy to overcome market barriers to realizing the significant potential of energy

efficiency and to accelerate its deployment. We believe that this bill provides a significant step in the right direction.

Economic sustainability must be a key program objective.

We are encouraged that the legislation recognizes that a holistic approach to cost containment must be taken and that measures need to be put in place that are designed to protect the overall economy—we believe the provisions included in the bill are a step in the right direction that will not only protect our environment, but also our economy and energy consumers. These provisions include allocation of allowances to local electric distribution companies on behalf of their customers, unlimited trading, offsets, banking, borrowing, as well as the recognition that there will need to be some other mechanism to ensure that unsustainably high CO₂ prices do not jeopardize both the existence of the program and the expansion of our economy.

In this regard, and as the legislative process progresses, we suggest that additional provisions be included to provide added transparency and clarity on the Carbon Market Efficiency Board (CMEB) to ensure that the actions of the CMEB provide the necessary cost and environmental certainty for the program. For example, we think the 180-day period currently specified in the legislation – i.e., the period after the CMEB has carried out cost relief measures to expand borrowing, but before it may increase allowances for the applicable year—is too long to prevent potentially disastrous outcomes for companies and significant segments of the economy. During the California Energy Crisis, for example, the financial health of the state’s two biggest utilities was significantly impaired in less than 180 days, requiring the state to enter into high-price contracts and take on the electric purchasing obligation for electricity consumers. California’s electric consumers are still paying for these high price contracts today and the state was required to take on additional debt obligations. We suggest shortening the period to 30 days in order to avoid such outcomes; this will be particularly important in the first 10 to 15 years of the program.

In addition, we suggest that additional criteria be included in the legislation to better define what the “trigger prices” would be to activate the CMEB powers. Currently the bill is virtually silent on what criteria will be used to determine the price, making it impossible for business to predict the future costs of the program, even within a reasonable range. Providing this clarity and transparency will remove the subjectivity from the workings of the CMEB and provide the certainty needed for investment planning by business going forward.

We also think that it should be made explicit that the CMEB can purchase credits out of the market in order to maintain the lower limit of the price range established by the Congressional Budget Office. This type of “price collar” approach can help manage overall volatility and macro-economic costs, while at the same time provide a clear path for technology investors and ensure that there is a “price for carbon” that is recognized by the broader economy. We are continuing to think through these very complex and important issues surrounding the overall functioning and transparency of the CMEB and will share them with the Committee and publicly when we finalize our initial work.

We also recommend including an additional provision that will help entities, particularly in the power sector, manage overall program costs and mitigate price volatility. Cap-and-trade programs for conventional pollutants are typically based on annual compliance periods. At the end of each year, affected sources retire allowances for each ton of emissions they generated. However, because of the long-term nature of the climate change problem, multi-year compliance periods, like those proposed by Regional Greenhouse Gas Initiative and the Clean Air Planning Act, are perfectly appropriate. This flexibility is particularly important for the electric power sector because emissions within this sector can vary significantly depending on weather and precipitation. For example, a dry year reduces hydroelectric capacity in California and the Pacific Northwest and increases PG&E’s reliance on fossil-fired power plants, increasing carbon dioxide emissions in that year. Multi-year compliance periods, particularly in the early years of the program before companies have the opportunity to bank allowances, can

allow them to manage variability such as this, while also containing costs and reducing price volatility within the sector.

Finally, with regard to offsets, we are pleased that offsets are considered as a part of the bill and believe that they are an important piece of creating an effective approach to managing the overall costs of the program. Offsets can both help provide cost-effective compliance options and do so in a way that both reduces the emissions of uncovered sectors and sources and that provides added environmental benefits, both in the U.S. and abroad. We are particularly pleased that the bill recognizes the need for independent, third-party verification of the offsets, as that is a key piece of ensuring their overall credibility.

We do have some suggestions for modifications to both the offset pool and the process. First, we suggest increasing the percentage of offsets allowed to be used as a compliance option. Again, we believe that offsets are an important cost control mechanism and one that can provide additional environmental and other ancillary benefits. Second, we suggest expanding the sources of offsets to include the preservation and restoration of wetlands and preservation of forests because research has shown that these activities represent one of the largest opportunities to sequester carbon dioxide and mitigate adverse consequences of climate change. Third, we recommend taking a performance-based approach to measuring the offsets consistent with the approach of the California Climate Action Registry. Fourth, all efforts should be made to ensure that the offsets are "real" (help reduce the overall emissions under the cap) and "permanent" (ensuring that the reductions are maintained over time). And, finally, while we appreciate that the Administrator is provided the authority to expand the offset pool beyond agriculture and forestry, we believe it is important to make explicit that these other actions are of equal weight and importance.

Encouraging the development and deployment of the most efficient, lowest-emitting power generation technologies is key.

We appreciate that the bill recognizes that new sources of power generation will also need access to emission allowances. We are encouraged that the approach taken with regard to allocating allowances to new power generating sources is based on the performance or efficiency of a facility as opposed to the amount of pollution it emits. Basing allowance allocations solely on historic emissions only serves to reward and encourage the highest emitting resources and discourages rapid development and deployment of cleaner, lower-emitting technologies.

We are actively pursuing renewable generation resources on behalf of our customers, and have made recent announcements on contracts we have signed with wind, geothermal, biogas and solar developers. Earlier this week we announced plans to contract for power from a solar facility being developed by Ausra Inc., in San Luis Obispo County, CA. Earlier this year, we announced a contract with Solel-MSP to purchase energy from the Mojave Solar Park. This project will deliver 553 megawatts of solar power, enough power to serve 400,000 homes. We believe the potential for solar thermal technology, as well as other concentrating solar power (CSP) technologies, is significant.

For example, a study by the National Renewable Energy Laboratory (NREL) on CSP potential in California and the rest of the Southwest indicated that CSP in California could produce upwards of 7 times the energy needed to serve the state. NREL also suggests that costs for CSP technologies are declining, from approximately 16 cents per kWh on average today, to approximately 8 cents per kWh in 2015, assuming at least 4,000 MW of CSP were built by then to achieve “learning curve” benefits. (This compares to estimates for advanced coal with carbon capture and storage on the order of 11 cents per kWh or a new supercritical pulverized coal plant on the order of 6 to 6.5 cents, plus the cost of carbon, which could add upwards of 1.5 cents per kWh depending on carbon prices).

This is just one example of the potential for renewable technologies. That is why we believe it is critical for a climate bill to not only support the transition to advanced coal technologies that release little or no greenhouse gases to the atmosphere, but to also provide significant support to accelerating the development and deployment of renewable technologies, as well.

While we recognize that the bill attempts to balance the interests of incumbent utilities with the need to encourage the deployment of low carbon technologies, we would encourage you to consider (1) making clear that the percent of allowances allocated to new entrants increases over time, (2) expanding the definition of new entrants to include all forms of renewable energy (the bill limits allocations to fossil fuel-fired facilities only), and (3) modifying the definition of new entrants to include facilities that commence operation in 2000 or later.

First, by gradually increasing the percent of allowances allocated to new entrants, investment in new, lower emitting generating technologies will be encouraged. The current bill directs EPA to establish a reserve of allowances for new entrants, leaving discretion for the Agency to establish a “fixed” reserve of allowances. We do not believe that this was the intent of the legislation. Rather, the size of the new source set aside should vary consistent with the methodology outlined in Sec. 3903(a)(2) of the bill (i.e., the average emission rate multiplied by the output of the facility).

Second, by including all forms of renewable generation in the new entrant reserve, investment in low carbon technologies and more rapid development and deployment of these technologies will be encouraged (helping to achieve the price points projected by NREL for CSP technologies, for example). As currently drafted, the bill may have the unintended effect of encouraging investment in fossil fuel-fired generating technologies only. Finally, by defining new entrants to include facilities that commence operation in 2000 or later, the legislation will recognize the early investments that companies have made in modern, high efficiency power plants, potentially helping to alleviate some the

claims that will be made under the early action provisions and helping to free up more allowances for other early actions.

Another alternative to adjusting the generator allocation to accommodate renewable generation would be to establish a set aside, similar to the bonus allowances established for carbon capture and storage. It is our understanding that this bonus allowance system is intended to accelerate the development and deployment of advanced coal technologies with carbon capture and storage; we suggest a parallel system be established for renewable technologies. Accelerating the deployment of all of these technologies will help to smooth the transition to a low carbon economy and provide additional economic opportunities.

Encouraging and recognizing early action is important to successfully achieving climate goals.

Overall, we are pleased to see that the legislation includes provisions to recognize actions taken by companies, consumers and states, both as a result of voluntary actions and state greenhouse gas reduction programs. We think it is important for U.S. policy to send the signal that taking risks and taking early action will be recognized under this program. To that point, in Section 3302(b), we suggest changing the timeframe for receiving credit for early action from “date of enactment of this Act” to “the first allocation period.” There will clearly be a lag between the date of enactment and the first allocation period, and in those intervening years, this program should encourage companies to continue to take action. In the alternative, companies may refrain from continuing to take actions prior to this date. At the same time, since this section is giving credit to companies that need to comply with existing state-only or regional programs, many of these programs will come into force in the 2010 to 2012 time period. Therefore, reductions made in these years should be credited as well. We also believe it is appropriate to raise the overall limit in terms of allowances available to credit early actions. The 5 percent set-aside would equate to approximately 260 million metric tons of CO₂-e in 2012. Given the spate of activity that has occurred in the economy and the plethora of state programs slated to

come on line in the 2010 timeframe, this number of allowances may be inadequate to reward credible early action.

The Time Is Now

Our country has an historic opportunity to change the way we produce and use energy in ways that will lower the threat of climate change and improve our environment. The optimist in me is certain that we're going to achieve this goal over the course of the next generation. But the realist in me knows that we can't take this outcome for granted. Achieving it will be a very substantial challenge. And that is why we are committed to being a pragmatic, responsible participant in this effort.

On behalf of PG&E, I want to thank you for the opportunity provided today. I appreciate the commitment of this Committee to addressing climate change and hope that as deliberations move forward, the focus remains on establishing a pathway to pass an environmentally effective and economically sustainable bill this Congress. I pledge my cooperation and support as the process moves forward on debating the America's Climate Security Act of 2007 both in Committee and the full Senate.

Thank you.

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