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| DOCKET | |
| 07-OIIP-1 | |
| DATE | NOV 14 2007 |
| RECD. | NOV 14 2007 |

**DOCKET 07-OIIP-01
CALIFORNIA ENERGY COMMISSION
REPLY COMMENTS OF PACIFIC GAS AND
ELECTRIC COMPANY (U 39 E) ON ALLOWANCE
ALLOCATION ISSUES UNDER AB 32**

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Dated: November 14, 2007

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I. INTRODUCTION

Pursuant to the ruling of the Administrative Law Judges dated October 15, 2007 (ALJs' Ruling) and guidance dated November 8, 2007, Pacific Gas and Electric Company (PG&E) provides its reply comments on the allocation of greenhouse gas (GHG) emissions allowances under AB 32. PG&E's comments are organized as follows: (1) An executive summary of PG&E's overall comments; (2) Responses to opening comments by other parties; and (3) Supplemental factual information that PG&E believes would be useful to the CPUC, Energy Commission and stakeholders in determining the most cost effective and fair method for allocating emissions allowances under AB 32.

**II. EXECUTIVE SUMMARY OF PG&E'S REPLY COMMENTS ON
ALLOCATION OF ALLOWANCES FOR GREENHOUSE GAS EMISSIONS
UNDER AB 32**

In its opening comments, PG&E recommended that the allocation of greenhouse gas (GHG) emissions allowances be designed to achieve two over-arching objectives: (1) Speed the transition to a low carbon economy in order to achieve sustained and significant long-term GHG reductions; and (2) Mitigate the costs incurred by customers to achieve these long-term GHG reductions.

Most parties, including those opposed to a "cap and trade" program that would

utilize emissions allowances, supported PG&E's second objective, the goal of mitigating the costs of achieving AB 32's GHG reduction targets.^{1/} However, surprisingly few commenters focused on how the allocation of allowances would help or hurt the first objective, speeding the transition to a low carbon economy.^{2/}

In PG&E's opinion, focusing on the second objective (customer costs) without focusing on the first objective (GHG reductions) is a fatal flaw in the allocation methodologies recommended by several parties. For example, LADWP and SCPA object to the compliance cost burdens that a sales- or output-based allocation methodology would impose on their customers. Instead, they advocate a method based on "grandfathering" of historical emissions. However, what LADWP and SCPA fail to note is that allocating more allowances to higher-emitting utilities such as their own is simply another way to delay the permanent and sustained GHG reductions intended by AB 32. After all, an emissions "allowance" is just that: a permit to emit CO₂, and the more allowances allocated to a higher-emitting utility, the more CO₂ it can emit. Likewise, the fewer allowances allocated to a lower-emitting utility, the more allowances the lower emitting utility will need to purchase, possibly from the higher emitting utility that will have lower cost emissions reduction opportunities within its own portfolio. The end-result of LADWP's and SCPA's sole focus on customer costs is a massive and inequitable shifting of costs from higher-emitting utilities to lower-emitting utilities and commensurate delays in the permanent, sustained GHG reductions intended by AB 32.

Likewise, SCE's proposal to allocate allowances based on "economic harm"

^{1/} See, e.g., LADWP at 2; SCPA at 11- 12; SCE at 4.
^{2/} See, e.g., NRDC/UCS at 12; Environmental Defense at 2- 3.

unfortunately would delay or defer the most economically efficient, permanent GHG reductions and impose higher costs on California consumers and businesses. This is because basing allocations on “economic harm”, like LADWP’s and SCPA’s proposal, would shift the costs of reducing CO2 from higher emitting sources to lower emitting sources, thus rewarding higher emitting sources for their continued inaction while penalizing lower emitting sources for their prior actions and lower emissions. Although the “economic harm” proposal openly seeks to “ease the pain” of emissions reductions by high emitters, it shifts the pain elsewhere rather than eliminating it, because it does not (and cannot) delay or defer the overall GHG reductions required to meet AB 32’s statewide 2020 emissions limit. In the case of the “economic harm” proposal, the “pain” is shifted to the consumers and businesses served by low emitting cost-based sources of energy, mostly utility-owned nuclear, hydroelectric and energy efficiency investments (including, ironically, those by SCE’s customers), a result which is both inequitable and inefficient, given that those customers’ electric rates already include the higher initial capital costs of those lower-emitting or more efficient sources.

PG&E agrees with NRDC and UCS that the implications of California’s decisions on GHG emissions allocations will extend far beyond the State and affect the allocation of GHG reduction costs between California and the rest of the country.^{3/} Any recommendation that includes free or “grandfathered” allocation of allowances based on historical emissions or “economic harm,” could severely de-position California consumers and businesses in the allocation of allowances under a national program, because the GHG emissions of California utilities overall are much lower relative to

^{3/} NRDC/UCS at 4- 5.

those of utilities in other states. This is another reason for the CPUC and Energy Commission to reject “grandfathering” or “economic harm”-based methods for allowance allocation.

The debate over the allocation of GHG allowances reinforces PG&E’s view that the primary objective of allowance allocation should be to mitigate costs to consumers, who will ultimately bear the costs associated with transitioning to a low carbon energy supply. Whether these customers are served by a low-emitting or high-emitting utility, all customers will pay for this transition through their monthly energy bills. In addition, the debate has served to further support PG&E’s position that allocating allowances to the state’s load serving entities (LSEs) on behalf of their customers is the most efficient and effective way to ensure that the allowance value flows through to those customers. Again, whether a utility generates its own power or procures its power needs from the competitive wholesale market, allocating allowances to LSEs on behalf of their customers will ensure all customers have access to the value of the allowances. As stated in our previous comments, each LSE then would use the allowance value to maximize benefits and minimize costs to customers under the direction of either the CPUC or their local governing board of a non-CPUC regulated LSE. Under either a source based or first-seller approach, this would require the LSE during each compliance period to make the allowances available through an auction to those entities that are required under the program to hold emissions allowances. Some parties argue that auctioning of allowances is subject to manipulation or complexity. PG&E agrees that auctions must be—and can be—designed with care and non-discriminatory provisions to avoid manipulation and market distortions. However, the need for careful design of

auctions should not be used as an argument against the fundamental need for an auction in the first place, or, worse, an argument for an allocation scheme that transfers value from customers to other parties. The answer is that only an allocation to LSEs on behalf of their customers that directs the revenues from sale of the allowances to mitigate customer costs, can avoid a massive cost shift to utility customers.

The debate over methods for allocating GHG allowances should not obscure or re-litigate the reason we are at this point in time in responding to climate change: Beginning in the 1980s, California utilities and the consumers and businesses they serve have responded to the growing national and international call for action on climate change. Some utilities have done more than others, but now is the time for all of California to lead the rest of the country in accelerating the transition to a carbon-free economy by achieving sustained, permanent reductions in GHGs. Now is *not* the time, in the guise of protecting customers of high-emitting GHG sources, to backtrack on the actions California already has taken or on the actions we must take in the future to stop and reverse the causes of climate change.

III. CONTRARY TO LADWP, SCPPA AND SCE, ALLOCATION OF ALLOWANCES BASED ON “GRANDFATHERING,” “HISTORICAL EMISSIONS,” OR “ECONOMIC HARM” WILL PENALIZE CALIFORNIA’S PRIOR INVESTMENTS IN CLEAN ENERGY AND ENERGY CONSERVATION, DELAY PERMANENT ECONOMIC REDUCTIONS IN GHG EMISSIONS, AND DE-POSITION CALIFORNIA IN THE NATIONAL DEBATE OVER CLIMATE CHANGE LEGISLATION

LADWP and SCPPA’s “Grandfathering” and “Hybrid” Proposals

LADWP and SCPPA apparently oppose any “cap and trade” form of GHG regulation which would utilize emissions allowances as a means of achieving GHG

reductions.^{4/} However, if a “cap and trade” approach is adopted, LADWP and SCPA support a “grandfathering” method of administratively allocating allowances for free to GHG emitters or complying entities, with the higher-emitting entities getting more “free” allowances than lower-emitting entities.^{5/} LADWP and SCPA strongly oppose allocating allowances based on utility sales or output or any other method that immediately “benchmarks” a utility’s current emissions against an average or target set for all utilities.^{6/} SCPA even recommends that California be split in half for purposes of establishing higher “baseline” emissions limits for higher-emitting Southern California utilities and lower limits for relatively cleaner Northern California utilities.^{7/} LADWP and SCPA justify their proposals on pure equity: Because their GHG emissions are higher than those of lower-emitting utilities such as PG&E and SMUD, their customers will have to pay relatively more to reduce their GHG emissions, and that is allegedly not fair.^{8/}

The greatest fault in LADWP’s and SCPA’s proposal is that it contradicts the fundamental reason for allocating emissions allowances in the first place, and therefore itself is *inequitable*. The purpose of AB 32, like any greenhouse gas regulatory program, is to speed the transition to a low carbon economy in order and achieve long-term, sustained reductions in greenhouse gas emissions at least economic cost. The purpose of a market-based “cap and trade” GHG regulatory program is to internalize the cost of GHG emissions in the cost of goods and services in the economy, which by

^{4/} LADWP at 2; SCPA at 3- 5 (analogizing “load-based” cap proposal to existing California regulation of criteria air pollutants under Clean Air Act.)

^{5/} LADWP at 6- 7, 12- 14; SCPA at 5- 6, 13- 21.

^{6/} LADWP at 14- 15; SCPA at 28- 31.

^{7/} SCPA at 9, 35.

^{8/} LADWP at 6- 7, 12- 14; SCPA at 2, 12- 16.

definition means that electricity generated by higher-emitting fuels carries a higher per-unit CO2 allowance cost than electricity generated by lower-emitting fuels. An output or sales-based method for allocating GHG allowances ensures that GHG costs per unit of electricity sold reflect the different per-unit internalized cost of GHG emissions. In contrast, a method that allocates allowances based on current or historical GHG emissions effectively reduces the per-unit cost of GHGs in electricity generated by higher-emitting fuels compared to that generated using lower-emitting fuels. This means lower-emitting utilities must bear the burden of reducing their emissions the same amount as higher-emitting utilities that have more low cost emissions reducing opportunities within their own portfolio, even though the lower-emitting utilities emit less CO2 and have fewer extensive emissions reducing opportunities within their portfolios. This is unfair and inequitable.

To their credit, LADWP and SCPPA propose that their “grandfathered” allocations ramp down over time so that by 2020, allowances would be allocated based on a “benchmark,” presumably the average emissions of all California utilities.^{9/} The trouble with this approach is that it still punishes the customers of lower-emitting utilities because they would receive fewer allowances to help mitigate the costs of the transition – some of which they are already paying for. The result would be a large cost shift to the customers of lower-emitting utilities from higher-emitting utilities during the crucial period 2012- 2020, when all utilities are required to reduce their emissions to meet AB 32 limits.^{10/}

^{9/} LADWP at 13- 14; SCPPA at 2, 28.

^{10/} Nor does LADWP’s approach protect the large investments the customers of lower-emitting utilities have made since the early 1980s, when the risks of climate change and potential regulation of GHGs began to be recognized by California and utilities generally.

Even if “equity” were an overriding reason for skewing the economic design of GHG emissions allocations, LADWP’s and SCPPA’s “equity” arguments are contrary to fact. LADWP’s and SCPPA’s investments in long-term coal-fired generating plants and unit contracts were not based on ignorance of the related environmental risks and consequences. First of all, regardless of the climate change risks of GHGs, the coal investments by LADWP and SCPPA were and always have been subject to the risk of stricter air and water quality regulations for criteria air pollutants and water discharges, given the inherent nature of coal extraction, combustion and waste disposal. Second, LADWP, SCPPA and the municipalities that own them have been on notice and in fact have affirmed publicly the need to address the risks of GHG emissions and global climate change.^{11/} That LADWP and SCPPA have continued with their coal-fired power investments in the face of the environmental risks and growing consensus on the dangers of GHG emissions is not evidence that such investments were economic mistakes at the time or imprudent. However, their decisions to continue with those investments in no way justify a proposal to shift the GHG-related compliance costs of those investments under AB 32 to the customers of other utilities who are served by lower-emitting but more expensive sources of energy and energy efficiency.

Nor were the electricity procurement decisions of other California utilities prior to AB 32 serendipitous and therefore not deserving of “equitable” consideration in their own right. In the 1970s, after the oil embargo and before cleaner natural-gas fired generation was available, PG&E and other California utilities chose to pursue nuclear

^{11/} See, e.g. Global Climate Protection Act, Title XI of Pub.L. 100.204, 101 Stat. 1407, note following 15 U. S. C. §2901 (1987); “Green LA – An Action Plan to Lead the Nation in Fighting Global Warming,” City of Los Angeles, May, 2007, p. 4.

and hydroelectric projects for their baseload energy needs, instead of coal-fired generation.^{12/} Then, after the Fuel Use Act was repealed, PG&E and other utilities pursued more efficient gas-fired generation. Simultaneously, beginning in the 1970s and 1980s and continuing ever since, PG&E and a number of other utilities led the way nationally with aggressive and significant investments in customer energy efficiency programs and procurement from independent renewable generators.

These investments in clean energy and energy efficiency by PG&E and certain other California utilities were intentional and benefited California's environment and the environment throughout the West, compared to the alternative of coal-fired generation chosen by LADWP and SCPPA. These clean energy and energy conservation investments have made California a national leader. But these investments have not been cost-free to PG&E's customers, and the system-average electric rates of PG&E and the other two major investor-owned utilities in California are generally as high if not higher than the rates of LADWP and the members of SCPPA. And these low-emitting investments and relatively higher costs will continue in the post-AB 32 era, because PG&E and other California utilities are already embarked on ambitious resource procurement policies and programs that pre-date enactment of AB 32. These programs will result in investment of billions of dollars more in energy efficiency and renewable energy over the next twenty years.

LADWP's and SCPPA's "grandfathering" proposal would penalize these past investments by PG&E and other lower-emitting utilities, and at the same time send a signal that inaction on GHG reduction in the future, in California and around the

^{12/} For example, the Diablo Canyon Nuclear Power Plant and the Helms Pumped Storage Project, both owned and operated by PG&E.

country, may be rewarded with further “grandfathering” of existing GHG emissions.

PG&E believes that allocation of AB 32 allowances should encourage and not delay emissions reductions investments. The CPUC and Energy Commission should reject LADWP’s and SCPPA’s “equity” arguments and instead recommend an output- or sales-based methodology, adjusted for verified customer energy efficiency savings, that recognizes and reinforces investments in energy efficiency and other zero-GHG resources made by customers of lower-emitting, more energy efficient utilities. In addition, in evaluating LADWP’s and SCPPA’s “equity” arguments, the CPUC and Energy Commission should consider the relative lower marginal costs of compliance for high carbon versus low carbon energy portfolios and the resulting lower compliance cost-per-unit for utilities like LADWP and SCPPA whose prior investments in energy efficiency and renewable energy are less than those of cleaner utilities. Because of prior investments in the “low hanging fruit” of energy efficiency and renewable energy projects, low-emitting utilities like PG&E will have less opportunity than higher-emitting utilities to further reduce the carbon content of their portfolio.

PG&E also disagrees with LADWP’s argument that distributing allowances based on retail sales creates a perverse incentive to increase sales and electric generation, and reduces energy efficiency, demand-side management and distributed generation.^{13/} This is a “red herring” argument. First, PG&E has proposed that allowances be distributed to LSEs on behalf of their customers in a manner based on sales, adjusted for verified customer energy efficiency savings. This could further be modified to account for verified demand response as well. We believe that this approach supports California’s

^{13/} LADWP at 15.

stated energy policy of prioritizing energy efficiency and demand response; a priority that PG&E endorses. In addition, contrary to LADWP's assertion, a sales based approach has the greatest impact on encouraging zero-GHG energy sources and stimulates the greatest amount of early investments and actions by participants.

Another argument for "grandfathering" cited by LADWP is that "windfall profits" only occurred under the European Union's "grandfathering" approach because allowances were over-allocated to generators beyond their historical emissions.^{14/} Contrary to LADWP, the generators in Europe included the price of the allowances in the costs of electricity passed through directly to consumers. This will happen under AB 32 and any cap-and-trade program whether generators receive excess allowances or not, and the result is that generators will not pay for the allowances, and customers will. If higher-emitting utilities like LADWP and SCPA receive more allocations under "grandfathering" than under a sales- or output-based approach, the costs of those additional allowances are very likely to be incurred by the customers of lower-emitting utilities through their procurement of power and allowances, similar to the way excessive allocations resulted in "windfall profits" by generators in the EU.

SCE's "Economic Harm" Proposal

SCE proposes to allocate allowances using an "economic harm" calculation that allocates additional allowances to generators whose emission rates are higher than that of the marginal generating unit in the market, and no allowances at all to generators whose emissions rates are lower than the marginal unit.^{15/} The "economic harm" proposal would apply equally to independently-owned generation and to utility-owned

^{14/} LADWP at 13.

^{15/} SCE, *passim*.

generation, including existing hydroelectric and nuclear generation and new renewable generation.^{16/} SCE concedes that its “economic harm” approach is a form of historical emissions allocation, or “grandfathering.”^{17/}

First of all the “economic harm” proposal suffers from the same inequitable allocation problem as other methods that would allocate all allowances directly to generators for free based on an administrative formula, rather than through an auction. Allocating all allowances to generators for free will prevent utilities from mitigating the cost increases passed on to utility customers by the generators. As SCE notes, the value of allowances does not go away with an allocation for free, and as a result the economic opportunity cost of the allowance is factored into the prices paid for the generation that receives the free allowances.^{18/}

Secondly, the “economic harm” calculation, even if accurate, still amounts to a form of allocation based on “historical” emissions, with the same economic and equity problems associated with LADWP’s and SCPPA’s proposal and other historical emissions methods. Additional allocations to higher-emitting sources are still a subsidy for those customers that are served by the higher-emitting sources, at the expense of customers who rely on lower-emitting sources for their electricity (or under SCE’s proposal, no allocations at all to sources with marginal emissions below the marginal unit). Subsidies of higher-emitting technologies are not only regressive, they also reduce the incentives for investment in new, lower-emitting technologies, further delaying the transition to a low carbon economy.

^{16/} *Id.*

^{17/} SCE at 5, 20.

^{18/} SCE at 2- 3.

PG&E is also concerned with the mechanical complexity of the “economic harm” proposal. The setting of a marginal emissions rate will likely result in perverse incentives for generators (merchant and utility owned) that are near such a marginal rate. First, above some deemed marginal emissions rate, all facilities will be fully or at least proportionally compensated for their high emissions. This means that facilities with emissions below the marginal emissions rate will receive no allowances and no compensation, regardless of how close or how far from the marginal emissions rate they are. Facilities with emissions slightly above the marginal rate will receive some compensation, and facilities with emissions well above the marginal rate will receive a higher level of compensation without regard to the other operating or other fuel input costs associated with generating electricity. Like the default emissions rate proposed for unspecified electricity imports under the AB 32 reporting rules, any “marginal emissions rate” that is chosen is an arbitrary, fictional number, creating arbitrary gaming and market distortions above and below the arbitrary rate. And, again, if these allowances are allocated to competitive generators, there is no means of ensuring that the allowance value flows through to customers.

Finally, unlike LADWP’s proposal, the “economic harm” proposal does not include a transition over time to an electric utility-wide low emissions benchmark for allowance allocation, in effect granting these subsidies to higher-emitting generators in perpetuity. This open-ended subsidy simply is contrary to the goal of a speedy transition to a low carbon economy, and provides open-ended and unwarranted profits to entities which currently have high emitting resources.

In summary, the “economic harm” proposal at best will slow progress to GHG

emissions reductions. At worst, it will compensate highest emitters based solely on their higher emissions, at the expense of lower emitters, with the risk of litigation, unintended consequences and gaming of emissions rates above and below the marginal rate. PG&E, like SCE, wishes there were a “magic bullet” that would allow all sources of GHG emissions to make a smooth and cost-free transition to a low- and zero-emitting economy. Unfortunately, there is no “magic bullet,” and the “economic harm” that this proposal seeks to mitigate would only delay the transition, defer needed investments in clean technologies, and shift the costs of GHG emissions from higher emitting sources to lower emitting sources in an uneconomic and inequitable fashion.^{19/}

IV. MOST PARTIES AGREE WITH PG&E THAT GHG ALLOWANCE ALLOCATIONS SHOULD BE FOR THE BENEFIT OF UTILITY CUSTOMERS IN ORDER TO MINIMIZE COSTS TO CONSUMERS AND BUSINESSES. THIS IS ESSENTIAL TO AVOID MASSIVE COST SHIFTS TO CUSTOMERS FROM OTHER PARTIES WHO DO NOT PAY THE ULTIMATE COSTS OF MAKING THE TRANSITION TO A LOW CARBON ECONOMY

Amidst all the debate over how to allocate emissions allowances, most commenters appear to agree that California consumers and businesses will bear the ultimate costs of compliance with AB 32 no matter what allocation method is adopted.^{20/} Therefore, most commenters also agree that “windfalls” and “wealth transfers” to entities other than utility customers should be avoided.^{21/}

This consensus on mitigating costs to customers and avoiding cost shifts to customers should not be overlooked in the debate over allowance allocation. It is for

^{19/} PG&E notes that it appears that SCE’s customers would face higher costs of compliance under SCE’s “economic harm” proposal than under an output- or sales-based allocation methodology, given that SCE’s proposal would appear to allocate zero allowances to gas-fired generation owned or procured by SCE whose marginal emissions rates are less than the arbitrary “marginal rate” used by SCE’s proposal.

^{20/} See, e.g. TURN at 7- 8; SDG&E/SoCal Gas at 5; LADWP at 2; SCPPA at 12; SCE at 2.

^{21/} See, e.g., SCPPA at 16, 21; SCE at 10- 11; TURN at 8.

this very reason that PG&E consistently has argued, and will continue to argue, that GHG emissions allowances should be allocated for the benefit of the utility customers who bear the costs of complying with AB 32. PG&E also will continue to recommend that the way to do this is to allocate the allowances to the LSEs who are in the best position, along with their regulatory or governing bodies, to ensure that the benefits of the allowances are delivered to their customers and communities.

Some parties appear to continue to ignore or minimize the problem created by direct allocations to generators and other entities other than for the benefit of utility customers.^{22/} PG&E recommends that the CPUC and Energy Commission reject any and all allowance allocation proposals that would allocate allowances in a manner that is not for the direct or indirect benefit of the utility customers who are ultimately paying the costs of the program.^{23/}

V. AUCTIONS CAN AND SHOULD BE DESIGNED TO BE FAIR, OPEN, TRANSPARENT AND EFFICIENT

As PG&E has proposed, under a first seller point of regulation, LSEs would be administratively allocated allowances on behalf of their customers and sell those allowances to those with a compliance obligation. We have suggested that this can and should be done using a fair, open and transparent auction. We believe that this is the most appropriate means by which to ensure that the allowance value is provided to customers and to address the unique needs and circumstances of the customers and

^{22/} IEP at 9; SCE at 6- 7. Calpine at 6- 7.

^{23/} PG&E agrees that there may be certain social or subsidy programs, such as research and development of zero-emitting or low-emitting technologies, that would provide indirect benefits to utility customers. PG&E also agrees that the CPUC and the Energy Commission, as well as the governing bodies of local publicly-owned utilities, are in the best position and have the most experience in evaluating and overseeing the benefits and costs of various utility customer-funded programs. PG&E recommends that the CPUC and Energy Commission continue their respective roles in connection with any programs funded by AB 32 allowances.

communities served by each utility. We believe that administratively distributing allowances to support public purposes, such as mitigating customer costs, is both efficient and ensures that the value will be directed to support its intended purpose.

Several parties who object to some form of an auction, such as that proposed by PG&E, appear to do so based on risks associated with the design of such auctions.^{24/} PG&E is in favor of a structured, well-designed market mechanism, including an open and carefully-designed auction mechanism to sell allowances allocated for consumer benefit, to ensure the transparent, open and non-discriminatory exchange transactions needed to support the allowance trading market. It is axiomatic that, even if allowances are administratively allocated, a mechanism is needed to monetize the value of the allowances used to meet the program goals. The method chosen for this monetization not only must avoid market power and manipulation, it also must avoid large and inequitable cost shifts to those who pay the ultimate costs of the allowances from those who bear none or only some of the costs.

Thus, consideration of the design of an auction should be independent of the debate over auction vs. free allocation. In PG&E's view, the debate is over: "free" or administrative allocation of allowances to entities other than to LSEs for the benefit of utility customers creates an inequitable shift of costs from those entities to those customers.

PG&E agrees that any auction, like the allowance market itself, must be carefully designed, monitored and supervised. Some of the auction concerns, such as risk of hoarding or speculation, exist in any market and cannot necessarily be addressed solely

^{24/} See, e.g., LADWP at 8.

through auction design but should also be dealt with in the overall design, monitoring and regulation of the market. Auction design considerations should include, among others, auction frequency, bidding format, bid information disclosure, bidder financial assurances, purchase limits, reserve prices, market monitoring, and administrative oversight and costs.

Smaller and more frequent auctions may enhance longer-term price discovery, minimize the adverse outcome associated with any one auction, better accommodate the business plans of complying entities, enhance the liquidity of the auction market and support a secondary market. Administrative costs for both the auctioneer and the participants need to be minimized. Price stability and market liquidity can be enhanced if all the allowances of a particular vintage are auctioned prior to the beginning of the compliance period. Finally, the auction should be run by a single independent entity in order to avoid irrelevant differences in price signals.

PG&E notes that the RGGI cap-and-trade program already is considering and evaluating the design of auctions to support a “cap and trade” program. The recent RGGI paper on auction design should be considered as a reference for how an auction market could be designed in a manner that carefully considers the concerns expressed by commenters in this proceeding.

Lastly, LADWP opposes the use of an auction, citing experience in the RECLAIM market. This comparison is flawed in that, unlike the limited RECLAIM program, there will be many market design elements that a cap and trade market for GHG will be able to employ that will allow California to mitigate the potential for market power and manipulation as mentioned above, including but not limited to:

trading across multiple sectors, availability of offsets, banking, increased percentage of allowances available for auction (only 2.7% were available for auction in the RECLAIM market), multiple opportunities to participate in the auction, and linking with other GHG trading markets, among others. PG&E heartily endorses the need for careful design of the entire GHG “cap and trade” market mechanism, including consideration of “lessons learned” from other emissions trading markets, including RECLAIM and the EU markets. But the experience with RECLAIM does not demonstrate that an arbitrary “command and control” regulation as recommended by LADWP is categorically more efficient or fair than a market-based “cap and trade” program. Nor does the experience with RECLAIM justify a form of administrative or “free” allocation of allowances that would result in a massive transfer of wealth from the customers of lower-emitting utilities to the customers of higher-emitting utilities, further delaying the transition to permanent GHG reductions for all Californians. PG&E looks forward to future proceedings, including the ARB’s consideration of an AB 32 “scoping plan,” where key market and auction design criteria can be evaluated. However, contrary to the parties opposing an auction, it is premature for this proceeding to conclude that an auction cannot be designed fairly and efficiently.

VI. PG&E AGREES WITH SDG&E/SOCAL GAS THAT SOURCES OF GHG EMISSIONS IN THE NATURAL GAS SECTOR ARE DIFFERENT FROM THOSE IN THE ELECTRIC SECTOR, AND THEREFORE ALLOWANCE ALLOCATION ISSUES SHOULD BE TREATED DIFFERENTLY

San Diego Gas & Electric Company and Southern California Gas Company (SDG&E/SoCal Gas) succinctly summarize in their opening comments as follows the key difference between sources of GHG emissions in the natural gas sector and sources of GHG emissions in the electric sector:

For natural gas distribution companies, the actual combustion process and the non-combustion use of natural gas (and associated GHG emissions) are outside the control of the distribution company (except for its own large point sources such as compressor stations) and the GHG content of the fuel is not alterable. The only control of customer usage by the utility is via energy efficiency programs. A much larger influence on GHG reductions can be made in this sector via controls established by the State, through state appliance and building standards, and by the customer, through choice of the type of equipment (gas or electric, level of efficiency) and operation and maintenance of the equipment. Making the natural gas distribution companies part of a cap-and-trade system will provide price signals to gas customers, but in the last several years, energy usage by customers use has been shown to be highly price inelastic. A programmatic approach through distribution companies' energy efficiency programs and appliance and building standards is preferred by SoCalGas and SDG&E for this sector.

(SDG&E/SoCal Gas, Opening Comments, p. 20.)

PG&E agrees with the general thrust of SDG&E/SoCal Gas' comments. In the electric sector, the choice of fuels used to generate electricity is made largely by utilities and generators, not the retail customers. In contrast, in the natural gas sector, the choice of fuel and technology is largely made by the retail core gas customers themselves, not by the utilities or natural gas producers or transporters, because it is the retail customer who chooses the furnaces, boilers, hot water heaters, and other appliances that combust natural gas and emit the bulk of GHGs in the natural gas sector. Given the capital-intensive nature of the residential and commercial building stock and the gas-burning appliances used in those buildings, investments in GHG-reducing technologies are driven more by building and appliance codes set by local, state and Federal governments and by financing costs for the large capital outlays required to replace or retrofit those buildings and appliances.

Thus, the decision on whether and how to design a cap-and-trade system in the retail natural gas sector should be considered carefully and probably separately from the

design and implementation of a similar system in the electric sector. PG&E recommends that these issues be considered in the natural gas sector phase of this proceeding as the implementation plans for AB 32 move forward.

VII. SUPPLEMENTAL INFORMATION

Based on statements at the November 5, 2007, allocation workshop in this proceeding, PG&E suspects that some parties may provide supplemental information which they allege “proves” that the customers of lower-emitting utilities, such as PG&E, are better able to “afford” the costs of GHG reductions than the customers of higher-emitting utilities, such as LADWP and SCPPA.

In order to be sure that the record in this proceeding is as factually accurate as possible, PG&E provides the following supplemental information on (1) Investor-owned utility system average rates; (2) A chronology of public events since 1987 indicating that global climate change caused by CO₂ emissions has presented a known regulatory and financial risk to utilities investing in GHG-emitting sources of energy; and (3) The negative cost consequences for California consumers and businesses generally if a national GHG cap-and-trade program were to allocate emissions allowances on a “grandfathered” basis rather than based on output or sales.

A. California Investor-Owned Utility Rates

The following is a summary of the 2007 system-average retail electric rates of California’s three largest investor-owned utilities. The information is from written response to questions provided by the CPUC to the California Legislature in February, 2007.

System average electric rates for all the three major electric utilities as of January 2007

Average Rates in cents per kilowatt hour

| Year | PG&E | SCE | SDG&E |
|------|------|------|-------|
| 2007 | 14.0 | 14.3 | 14.5 |

Source: CPUC President Michael Peevey, Responses to Questions in Preparation for the February 13, 2007, Hearing of the California Senate Energy, Utilities and Communications Committee.

B. Chronology of Public Events Identifying GHG Emissions Risks

The following excerpt from the recent U.S. Supreme Court decision in greenhouse gas emissions is a chronology of citations to public sources in which the risk of greenhouse gas emissions and potential actions to constrain those emissions were identified and acknowledged by public policymakers and other decision-makers in California and elsewhere:

In the late 1970's, the Federal Government began devoting serious attention to the possibility that carbon dioxide emissions associated with human activity could provoke climate change. In 1978, Congress enacted the National Climate Program Act, 92 Stat. 601, which required the President to establish a program to "assist the Nation and the world to understand and respond to natural and man-induced climate processes and their implications," *id.*, §3. President Carter, in turn, asked the National Research Council, the working arm of the National Academy of Sciences, to investigate the subject. The Council's response was unequivocal: "If carbon dioxide continues to increase, the study group finds no reason to doubt that climate changes will result and no reason to believe that these changes will be negligible... . A wait-and-see policy may mean waiting until it is too late."¹¹

Congress next addressed the issue in 1987, when it enacted the Global Climate Protection Act, Title XI of Pub. L. 100-204, 101 Stat. 1407, note following 15 U. S. C. §2901. Finding that "manmade pollution--the release of carbon dioxide, chlorofluorocarbons, methane, and other trace gases into the atmosphere--may be producing a long-term and substantial increase in the average temperature on Earth," §1102(1), 101 Stat. 1408, Congress directed EPA to propose to Congress a "coordinated

national policy on global climate change," §1103(b), and ordered the Secretary of State to work "through the channels of multilateral diplomacy" and coordinate diplomatic efforts to combat global warming, §1103(c). Congress emphasized that "ongoing pollution and deforestation may be contributing now to an irreversible process" and that "[n]ecessary actions must be identified and implemented in time to protect the climate." §1102(4).

Meanwhile, the scientific understanding of climate change progressed. In 1990, the Intergovernmental Panel on Climate Change (IPCC), a multinational scientific body organized under the auspices of the United Nations, published its first comprehensive report on the topic. Drawing on expert opinions from across the globe, the IPCC concluded that "emissions resulting from human activities are substantially increasing the atmospheric concentrations of ... greenhouse gases [which] will enhance the greenhouse effect, resulting on average in an additional warming of the Earth's surface."¹²

Responding to the IPCC report, the United Nations convened the "Earth Summit" in 1992 in Rio de Janeiro. The first President Bush attended and signed the United Nations Framework Convention on Climate Change (UNFCCC), a nonbinding agreement among 154 nations to reduce atmospheric concentrations of carbon dioxide and other greenhouse gases for the purpose of "prevent[ing] dangerous anthropogenic [*i.e.*, human-induced] interference with the [Earth's] climate system."¹³ S. Treaty Doc. No. 102-38, Art. 2, p. 5 (1992). The Senate unanimously ratified the treaty.

Some five years later--after the IPCC issued a second comprehensive report in 1995 concluding that "[t]he balance of evidence suggests there is a discernible human influence on global climate"¹⁴--the UNFCCC signatories met in Kyoto, Japan, and adopted a protocol that assigned mandatory targets for industrialized nations to reduce greenhouse gas emissions. Because those targets did not apply to developing and heavily polluting nations such as China and India, the Senate unanimously passed a resolution expressing its sense that the United States should not enter into the Kyoto Protocol. See S. Res. 98, 105th Cong., 1st Sess. (July 25, 1997) (as passed). President Clinton did not submit the protocol to the Senate for ratification.

On October 20, 1999, a group of 19 private organizations¹⁵ filed a rulemaking petition asking EPA to regulate "greenhouse gas emissions from new motor vehicles under §202 of the Clean Air Act." App. 5. Petitioners maintained that 1998 was the "warmest year on record"; that carbon dioxide, methane, nitrous oxide, and hydrofluorocarbons are "heat trapping greenhouse gases"; that greenhouse gas emissions have significantly accelerated climate change; and that the IPCC's 1995 report warned that "carbon dioxide remains the most important contributor to [man-made] forcing of climate change." *Id.*, at 13 (internal quotation marks omitted). The petition further alleged that climate change will have serious adverse effects on human health and the environment. *Id.*, at 22-35. As to EPA's statutory authority, the petition observed that the agency itself had already confirmed that it had the power to regulate carbon dioxide. See *id.*, at 18, n. 21. In 1998, Jonathan Z. Cannon, then EPA's General Counsel, prepared a legal opinion concluding that "CO² emissions are within the scope of EPA's authority to regulate," even as he recognized that EPA had so far declined to exercise that authority.

Id., at 54 (memorandum to Carol M. Browner, Administrator (Apr. 10, 1998) (hereinafter Cannon memorandum)). Cannon's successor, Gary S. Guzy, reiterated that opinion before a congressional committee just two weeks before the rulemaking petition was filed. See *id.*, at 61.

Fifteen months after the petition's submission, EPA requested public comment on "all the issues raised in [the] petition," adding a "particular" request for comments on "any scientific, technical, legal, economic or other aspect of these issues that may be relevant to EPA's consideration of this petition." 66 Fed. Reg. 7486, 7487 (2001). EPA received more than 50,000 comments over the next five months. See 68 Fed. Reg. 52924 (2003).

Source: *Massachusetts, et al v. EPA, et al* 549 U.S. ____ (April 2, 2007), No. 05-1120, mimeo at pp. 4- 6 (footnotes omitted), memorandum opinion of the U.S. Supreme Court regarding applicability of Clean Air Act to greenhouse gas emissions.

C. Reduction in Allocation of GHG Emissions Allowances to California if National Cap-and-Trade Program Allocates Allowances Based on "Grandfathering" Rather Than Based on Output or Sales

PG&E has performed a calculation using publicly available data from the U.S. Department of Energy, Energy Information Administration, to compare the effects on California of a national cap-and-trade program that allocates GHG emissions allowances on a "grandfathered" or historical emissions basis, to a program that allocates allowances based on output or sales.

Using 2006 recorded sales and GHG emissions, and assuming an allowance price of \$20/metric ton of CO₂, the cost of allowances to California would be \$2.1 billion per year higher under a "grandfathered" or historical emissions based allocation method, than under a sales-based method.

The following is a summary of the calculation and assumptions. PG&E is prepared to provide further workpapers in support of this calculation upon request.

Option 1. Allocate CO₂ allowances based on 2006 recorded sales

California Load-Serving Entities receive 7.2% of all allowances.
(Source: U.S. Department of Energy, Energy Information Administration
http://www.eia.doe.gov/cneaf/electricity/epa/sales_state.xls).

Option 2. Allocate allowances based on 2006 CO2 emissions:
Including all in-state generators (even merchants and QFs) and ownership shares of out-of-state plants, California entities receive 2.7% of all allowances. (Source: Fuel use by type (coal, gas, etc.) in power plants (including QFs) from DOE/EIA form 906/920. California ownership shares of out-of-state coal from WECC roster of existing plants as of 1/1/2006. Emission factors from April 2005 version of California Climate Action Registry.)

Annual allowances issued: 2.35 billion allowances (1 allowance for each metric ton emitted by the U.S. electricity sector in 2006). (Source: DOE/EIA form 906/920.)

Allowance price: \$20/metric ton of CO2.

The value received by California entities is then:

Option 1. \$3.4 billion/year (\$47B/year * 7.2%)
Option 2. \$1.3 billion/year (\$47B/year * 2.7%)
Difference: \$2.1 billion/year

VIII. CONCLUSION

For the reasons stated above PG&E recommends that the CPUC and Energy Commission adopt and recommend the policies on allocation of emissions allowances under AB 32 as described in PG&E's opening and reply comments.

Respectfully Submitted,

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Dated: November 14, 2007