BEFORE THE PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA AND THE CALIFORNIA ENERGY COMMISSION

Order Instituting Rulemaking to Implement the Commission's Procurement Incentive Framework and to Examine the Integration of Greenhouse Gas Emission Standards into Procurement Policies.	Rulemaking 06-04-009 (Filed April 13, 2006)
Order Instituting Informational Proceeding – AB 32.	CEC Docket No. 07-OIIP-01

SOUTHERN CALIFORNIA PUBLIC POWER AUTHORITY REPLY COMMENTS ON ELECTRIC SECTOR CAP-AND-TRADE, ALLOWANCE ALLOCATION, AND FLEXIBLE COMPLIANCE MECHANISMS

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In accordance with the Administrative Law Judges' ("ALJs") Rulings dated April 16, 2008, May 1, 2008, May 6, 2008, May 13, 2008, and May 20, 2008 in the captioned proceedings, the Southern California Public Power Authority ("SCPPA")[1] respectfully submits this reply to opening comments filed by various parties on June 2, 2008, regarding issues raised in the ALJs' Rulings. In accordance with the Rulings, this reply comment is being submitted simultaneously to the California Public Utilities Commission ("CPUC") and the California Energy Commission ("CEC") (jointly, "Commissions"). This reply comment is also being submitted to the California Air Resources Board ("CARB") at ccplan@arb.ca.gov.

Cap-and-Trade

In their opening comments, various parties urged the Commissions to focus on programmatic measures to achieve Assembly Bill ("AB") 32 greenhouse gas ("GHG") emission reduction goals. They point out that the Commissions' focus on cap-and-trade issues has been a distraction from a topic that is particularly within the Commissions' core expertise, the implementation and administration of retail provider energy efficiency, renewable resource, and other programs that could result in concrete emission reductions.

At this time, the Commissions do not have available to them information that demonstrates that including the electric sector in a single-cap multi-sector cap-and-trade program would be a cost effective measure to achieve GHG emission reductions within the electric sector. Conversely, as discussed in Section I below, the Commissions *do* have data available to them through the May 13, 2008 Results from their consultant, Energy and Environmental Economics, Inc. ("E3"), demonstrating that including the electric sector in a multi-sector cap-and-trade program would result in nearly *no* electric sector emission reductions until very high levels of allowance prices are reached. Likewise, the Commissions have available to them information from E3 showing that substantial reductions could be obtained through programmatic measures for a fraction of the cost of buying allowances.

The E3 Results and information provided by commenting parties demonstrate that renewable resource, energy efficiency, and similar programs can achieve AB 32 goals in the electric sector *without* a cap-and-trade program. Thus, SCPPA continues to recommend that the Commissions revisit and rescind their March 13, 2008 recommendation that the electric sector be included in the single-cap multi-sector cap-and-trade program. SCPPA recommends that the Commissions defer making any recommendation about including the electric sector in a cap-and-trade program until

[1] SCPPA is a joint powers authority. The members are Anaheim, Azusa, Banning, Burbank, Cerritos, Colton, Glendale, Los Angeles Department of Water and Power, Imperial Irrigation District, Pasadena, Riverside, and Vernon.

adequate information becomes available that would permit the Commissions to reach a reasoned decision on the topic.

Allowance Allocation

The opening comments demonstrate that difficulties afflict all three of the fundamental approaches to allocating emission allowances that were outlined in the joint CPUC and CEC Staff in their Staff Paper on Options for Allocation of GHG Allowances in the Electricity Sector ("Staff Paper"), Attachment 1 to the April 16, 2008 ALJs' Ruling. An emission-based administrative allocation of allowances to deliverers would be likely to result in windfall profits to the deliverers. The windfall profits could be eliminated only by an expedited transition away from an emission-based allocation, but that raises the questions of why there should be an emission-based allocation of allowances to deliverers in the first place. An output-based administrative allocation of allowances to deliverers might ameliorate the windfall that deliverers may get if they received a free allocation of allowances, but the theory that the windfall would be ameliorated is untested by any modeling that is currently available to the Commissions in the record.

Given the difficulties that surround both an emission-based administrative allocation of allowances to deliverers and an output-based administrative allocation of allowances to deliverers, various parties including the Staff suggest that allowances should be auctioned with a return of the auction revenues to retail providers. However, in the absence of any information about how including the electric sector in a multi-sector cap-and-trade program could affect allowance prices, it appears from the information in the record about the high prices that would be required to affect dispatching of generation facilities that an auction of allowances to electric sector deliverers would generate billions of dollars of revenues each year. SCPPA has not seen any proposal which would insure that if those massive auction revenues were accumulated, there would not be substantial

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This comment is sponsored by Anaheim, Azusa, Banning, Burbank, Cerritos, Colton, Glendale, Pasadena, and Riverside.

diversions of auction revenues to other purposes such as those advocated by the Market Advisory Committee ("MAC") and the Economic and Technology Advancement Advisory Committee ("ETAAC").

For these and other reasons as discussed more fully in Section II below, SCPPA is skeptical about the viability of the various allowance allocation mechanisms that have been proposed to date.

Flexible Compliance Mechanisms

Assuming that the electricity sector is to be included in a single-cap multi-sector cap-and-trade program, various parties argue that the use of flexible compliance mechanisms should be limited while other parties argue that flexible compliance mechanisms should be used more generously. As discussed in Section III below, the parties that advocate liberal use of flexible compliance mechanisms have the better side of the argument. If the Commissions decide, despite the current lack of supporting evidence, to continue recommending that the electric sector be included in a single-cap multi-sector cap-and-trade program, the use of banking, borrowing, multi-year compliance periods, rolling compliance periods, compliance extensions, alternative compliance payments, offsets, linkages to other programs, "price-trigger" safety valves, market participation rules, an independent market monitoring agency, an independent market intervention agency, and alternative compliance options should be considered without exception as features of the cap-and-trade program.

Combined Heat and Power

Some parties that have financial interests in combined heat and power ("CHP" or "cogeneration") projects urge that an allowance allocation methodology be designed to subsidize CHP projects. These parties argue that CHP is an emission reduction measure that justifies subsidization. However, other commenting parties point out that there is no need for more subsidization of CHP. As discussion in Section IV below, the parties that argue against designing a cap-and-trade program to further subsidize CHP provide convincing arguments.

I. THE COMMISSION SHOULD REVISIT THE INTERIM OPINION AND DEFER MAKING ANY RECOMMENDATION THAT THE ELECTRIC SECTOR SHOULD BE INCLUDED IN A SINGLE-CAP MULTI-SECTOR CAP-AND-TRADE PROGRAM UNTIL OBTAINING FURTHER INFORMATION

In its opening comments, SCPPA urged the Commissions to reconsider their Interim Opinion recommendation that electric sector deliverers be subject to California single-cap multi-sector cap-and-trade program and, upon reconsideration, defer making a recommendation about whether the electric sector should be included in such a program until obtaining information about how including the electric sector in a statewide multi-sector cap-and-trade program might affect allowance prices. SCPPA Opening Comments at 20. Several parties share SCPPA's view. The Northern California Power Agency ("NCPA") urges that "the Joint Commissions should not rush to make recommendations on the structure of a cap-and-trade program until such time as a record has been fully and thoroughly developed." NCPA at 6. Instead of focusing on the cap-and-trade program, the "Joint Commissions should recommend to CARB that California focus on non-market based emissions reduction programs, because these programs will continue to be useful tools for emissions reductions regardless of whether the program is State-wide, regional, or federal." NCPA at 13.

Similarly, the Coalition of California Utility Employees and California Unions for Reliable Energy ("CUE/CURE") observe that "the Commissions have provided absolutely no evidence or analysis showing that market-based mechanisms would be superior or even effective." CUE/CURE Opening Comments at 2. "More importantly, this narrow focus on a market-based mechanism is diverting attention from the programmatic work that is at the core of the state's efforts to reduce GHG emissions." *Ibid*.

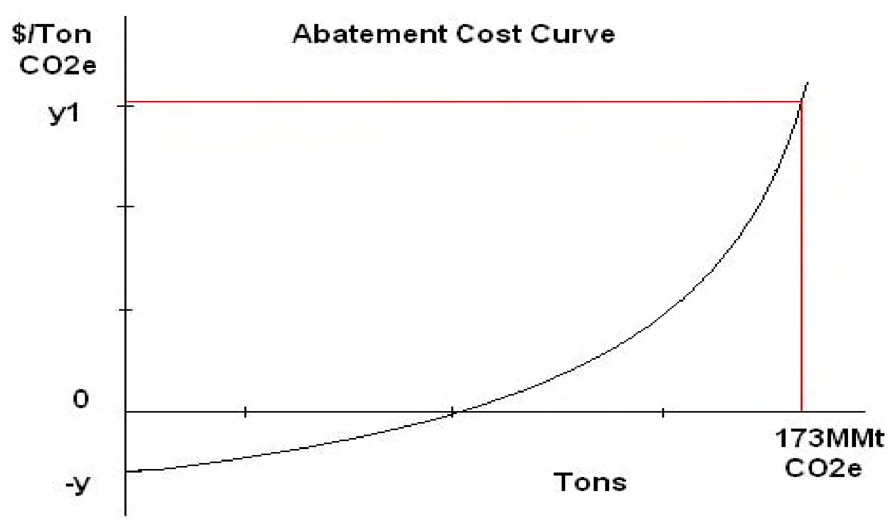
Other commenting parties, however, continue to support requiring the electric sector to participate in a single-cap multi-sector cap-and-trade program. However, as discussed in SCPPA's Opening Comment, there is no adequate record support for that recommendation. AB 32 clearly requires that any emission reduction measure must be "cost-effective." The information that the Commissions have available to date shows that including the electric sector in a California-only multi-sector cap-and-trade program would *not* be a cost effective emission reduction measure. Conversely, the record shows that pursuing programmatic emission reduction measures for the electric sector would be likely to be successful in fully achieving concrete GHG emission reductions and a full electric sector contribution toward meeting AB 32 goals for California.

A. The Record Demonstrates that Including the Electric Sector in a California-Only Multi-Sector Cap-and-Trade Program Would Not Be Cost-Effective

AB 32 repeatedly requires that any program adopted by the CARB shall result in GHG emission reductions that are *cost effective*: "The State Board shall adopt rules and regulations in an open public process to achieve the maximum technologically feasible and *cost-effective* greenhouse gas emissions reductions…." Cal. H&S Code §38560 (emphasis added). Similarly, AB 32 requires that "the state board shall prepare and approve a scoping plan, as that term is understood by the state board, for achieving the maximum technologically feasible and *cost-effective* reductions in greenhouse gas emissions…." Cal. H&S Code §38561(a) (emphasis added). "On or before January 1, 2011, the state board shall adopt greenhouse gas emission limits and emission reduction measures by regulation to achieve the maximum technologically feasible and *cost-effective* reductions in greenhouse gas emissions…." Cal. H&S Code §38562(a) (emphasis added). Thus, it is indisputable that any "rules and regulations," "scoping plan," or "greenhouse gas emission limits and emission reduction measures" that are developed by CARB must be cost effective.

1. Defining "Cost Effectiveness"

AB 32 defines "cost-effective" or "cost-effectiveness" as meaning "the cost per unit of reduced emissions of greenhouse gases adjusted for its global warming potential." Cal. Pub. H&S Code §38505(d). The CARB staff has designed an approach to establishing the cost-effectiveness of emission reductions "strategies" that might be pursued by CARB to accomplish the AB 32 emission reduction goal. The CARB staff projects that "a broad spectrum of strategies" will be needed to achieve emission reductions of 173 MMt CO_2e from the projected "business-as-usual" 2020 emissions level. The CARB staff's graphical representation of the cost of abating 173 MMt CO_2e is the following:



CARB Cost-Effectiveness White Paper, p. 32, AB 32 Technical Stakeholder Working Group Meeting (June 3, 2008). Any strategy that would have a cost expressed in dollars per ton CO_2e that would fall on CARB's abatement cost curve below y_1 would be cost effective in accordance with AB 32. The CARB staff explains:

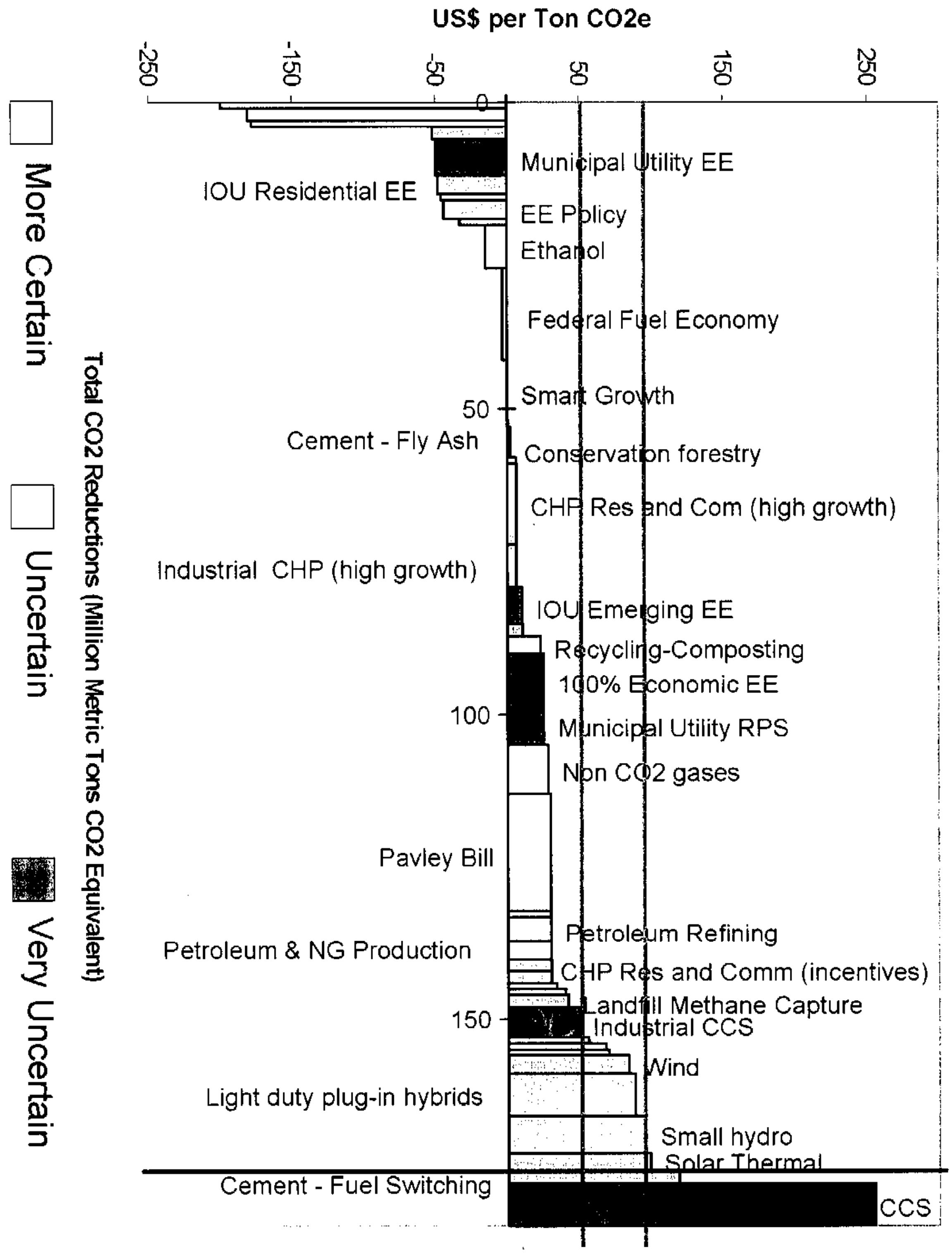
> The range of cost-effectiveness of a number of strategies can serve as background for establishing the reasonableness of a proposed regulation's cost-effectiveness. The highest cost-effective strategy and the least cost-effective strategy can form the range representing the bundle that in total demonstrate a path for reaching the emission reduction target. In the example shown in Exhibit 2, the lowest value

> would be \$ y and the highest value \$ $y_{1.}$ Any proposed regulation falling within this range or, depending on additional factors required by AB 32, reasonably close to this range would be considered cost-effective and would meet the AB 32 cost-effectiveness requirement. That is because the suite of strategies or "the bundle" demonstrates how the 2020 emission reduction target can be reached in conjunction with other approaches. As the actual BAU 2020 emissions level may be greater or less than the current estimate, the range of the bundle of measures should remain flexible and be able to accommodate a higher or lower upper end of the range of cost-effectiveness.
>
> In addition, the bundle can be updated as additional technological data and strategies become available. As ARB moves from developing the Scoping Plan to developing specific regulations, and as regulations continue to be adopted, updated cost-effectiveness estimates will be established.

Ibid at 6.

2. Identifying Cost-Effective Measures

Professor James Sweeney, Precourt Institute for Energy Efficiency, Stanford University presented a cost-effectiveness analysis of AB 32 measures on June 3, 2008 showing how various measures fit within the CARB staff's abatement cost curve. According to Professor Sweeney, "an individual measure is **cost effective** under a given target emission reduction if and only if it costs no more than the marginal costs associated with target emission reduction," as shown at y_1 on the CARB staff's abatement cost curve. A Cost-Effectiveness Analysis of AB 32 Measures, p. 12, CARB AB 32 Technical Stakeholder Working Group Meeting (June 3, 2008) ("Sweeney Presentation") (emphasis in original). Professor Sweeney presented a chart showing the various measures that would be sufficient to achieve the AB 32 goal of achieving emissions reductions of 173 $MMtCO_2e$ from the 2020 business-as-usual level:


US$ per Ton CO2e
-250
-150
-50
0
50
150
250
Total CO2 Reductions (Million Metric Tons CO2 Equivalent)
50
100
150
Municipal Utility EE
IOU Residential EE
EE Policy
Ethanol
Federal Fuel Economy
Smart Growth
Cement - Fly Ash
Conservation forestry
CHP Res and Com (high growth)
Industrial CHP (high growth)
IOU Emerging EE
Recycling-Composting
100% Economic EE
Municipal Utility RPS
Non CO2 gases
Pavley Bill
Petroleum Refining
Petroleum & NG Production
CHP Res and Comm (incentives)
Landfill Methane Capture
Industrial CCS
Wind
Light duty plug-in hybrids
Small hydro
Solar Thermal
Cement - Fuel Switching
CCS
More Certain
Uncertain
Very Uncertain

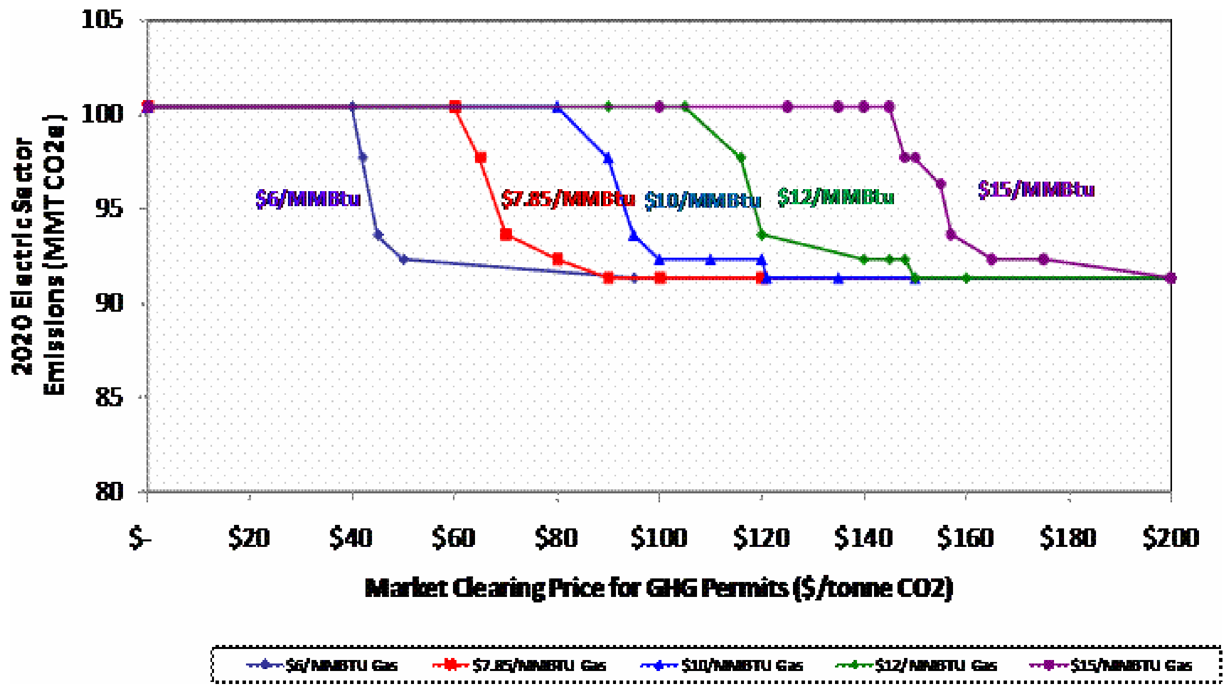
Ibid at 18. Professor Sweeney projects that the AB 32 emissions reduction goal can be accomplished by the measures shown in the chart. Further, Professor Sweeney's chart shows that the emission reductions required by AB 32 can be achieved by measures that are at or below approximately $100 per ton CO_2e. In fact, most are under $50 per ton CO_2e. A cap-and-trade program is not among the strategies that are shown on the chart.

3. A Cap-and-Trade Program Is Not a Cost-Effective Strategy

Even though it was not depicted on Professor Sweeney's chart, a single-cap multi-sector cap-and-trade program is one of the strategies that CARB might consider to accomplish "cost-effective greenhouse gas emission reductions" under AB 32 in the electric sector. Emission reductions could be achieved through imposition of the cap-and-trade scheme on the electric sector if the cost of allowances reached a level that was sufficient to prompt a change in the order for dispatching emission-producing generation resources.

Currently, gas-fired generation is the marginal resource in California. Coal-fired generation is an infra-marginal resource which is dispatched ahead of gas-fired generation. Including the electric sector in a California-only single-cap multi-sector cap-and-trade program could result in a reduction of emissions by raising allowance prices to levels such that gas-fired generation would displace coal-fired generation in the dispatch order.

The E3 Results show, however, that if the electric sector were included in a multi-sector cap-and-trade program, gas-fired generation would tend to displace coal-fired generation only if there were lower gas prices and higher allowance prices. E3 Results, Slide 23. Currently, gas prices are nearing $12/MMBtu. If gas prices are assumed to be at or above $12/MMBtu, allowance prices exceeding $100/ton CO_2 would be required to alter the dispatch of coal-fired generation:



Thus, at today's gas prices, including the electric sector in a California-only single-cap multi-sector cap-and-trade program would not be among the cost-effective strategies shown on Professor Sweeney's chart. The cap-and-trade strategy would result in redispatching coal-fired resources only if allowance prices were above the $100/ton CO_2e marginal cost of emission reduction strategies. Accordingly, based on the E3 Results in combination with the June 3, 2008 presentations at the CARB Technical Stakeholder Working Group Meeting, *including the electric sector in a California-only single-cap multi-sector cap-and-trade program would not be a cost-effective strategy for achieving GHG emission reductions under AB 32.*

B. A Cap-and-Trade Program Cannot Be Exempted from Being Tested for Cost Effectiveness

Although the record that is currently available to the Commissions shows that including the electric sector in a single-cap multi-sector cap-and-trade program would fail the AB 32 cost effectiveness test, a possible retort is that the cap-and-trade program should not be subject to the test. Professor Sweeney presented this argument at the June 3, 2008 CARB AB 32 Technical Stakeholder Working Group Meeting. He argued that a cap-and-trade program is not an emission reduction measure in itself but, rather, is an "instrument" to be used to motivate regulated entities to undertake "measures" to attain emission reductions: "I will use 'instrument' to mean system to motivate the measures, e.g., minimum sales mandate or cap-and-trade system." Sweeney Presentation at 14.

Exempting a cap-and-trade program from being tested for cost-effectiveness is impermissible under AB 32. The CARB's AB 32 "rules and regulations," "scoping plan," and "greenhouse gas emission limits and emission reduction measures [adopted] by regulation" must be aimed at achieving "cost-effective reductions in greenhouse gas emissions." Cal. H&S Code §38560, §38561(a), §38562(a). Thus, if the CARB were to adopt single-cap multi-sector cap-and-trade program for California by "rules and regulations" or a "scoping plan" that was designed to reach emission reductions that were *not* cost-effective, the rules, regulations, and scoping plan would be inconsistent with the statutory mandate in AB 32.

AB 32 provides for the CARB to "include in the regulations adopted pursuant to Section 38562" the use of "market-based compliance mechanisms…." Cal. H&S Code §38570(a). But that provision does not exempt regulations that would provide for a market-based compliance mechanism to be exempt from being tested for cost effectiveness. Section 38562 specifically requires that any measures that CARB adopts "by regulation" shall achieve "cost-effective reductions in greenhouse gas emissions…." Thus, the requirement of cost-effectiveness applies to any "market-based compliance mechanism" or any other program, mechanism, or measure that the CARB might adopt to achieve AB 32 emission reduction goal. If including the electric sector in a single-cap multi-sector cap-and-trade program would not fit on the CARB staff's cost abatement curve and fall under the marginal cost of achieving the emission reductions required to accomplish AB 32 emissions reduction goal, including the electric sector in a California-only multi-sector cap-and-trade program would be unlawful.

C. A Cap-and-Trade Program Could Be Very Expensive for the Electric Sector

Including the electric sector in a multi-sector cap-and-trade program could be very expensive for the electric sector. As shown above, allowance prices would have to exceed \$100/ton CO_2 to result in dispatching gas resources ahead of coal resources, and there is no information in the record whatsoever showing that emission reductions could be achieved more cheaply from other sectors so as to depress allowance prices below \$100/ton CO_2. If allowances were auctioned and cost \$100/ton CO_2, electric sector "deliverers" would be required to pay approximately **\$98 billion** during the nine year 2012 to 2020 period, or **\$10.9 billion per year**, to buy allowances. Scenario 7, E3 Results, Slide 88. The one SCPPA member for which the E3 Calculator provides data on a utility-specific basis, the Los Angeles Department of Water and Power ("LADWP"), would be required to spend approximately \$1.5 billion for allowances in 2012 alone, 56 percent of the utility's projected total budget (excluding the cost of buying allowances) of \$2.7 billion. *Ibid.*

1. Programmatic Measures Are Much Cheaper

From the data currently available to the Commissions, it would be far preferable for the electric sector to pursue emission reductions programmatically without being required to participate in a cap-and-trade program. E3 projected the cost of pursuing the measures that constituted its "Reference Case" and also calculated the incremental cost that would be required for the electric sector to pursue what E3 called an "Aggressive Policy Case" or "33 percent RPS/High-Goals EE" case. E3's Reference Case emission reduction goals could be achieved by the electric sector for a total of \$600 million (\$29/ton CO_2 x 21.1 MMT CO_2 = \$600 million). E3 Results, Slide 16. Similarly, E3's "33% RPS/High EE" goals could be achieved for \$4.97 billion (\$168 \$/ton CO_2e x 29.6 MMT CO_2e = \$4.97 billion). *Ibid.* The 21.1 MMT CO_2e reduction in annual emissions that would result from the Reference Case and the 29.6 MMt CO_2e reduction that would result from the

"33% RPS/High EE" case would cost a total of approximately $5.5 billion, approximately 1/20 of the $98 billion that would be spent on allowances during the nine year period 2012 through 2020.

2. Programmatic Measures May Be Even Less Expensive Than Projected by E3

The ratio between allowance costs and actual mitigation costs in California may be even worse than projected by E3. E3's projected cost of achieving the "33 percent RPS/High EE" objectives may be substantially overstated. LADWP found that if "more realistic prices of $12 for natural gas and $90 for coal in 2020" were assumed, fossil generation costs can increase so as to make "the 33 percent RPS and aggressive energy efficiency very cost effective on their own merit, even with the conservative allowance price of $30/ton." LADWP at 9. The Natural Resources Defense Council and the Union of Concerned Scientists ("NRDC/UCS") agree with LADWP: "However, at a natural gas price of approximately $13.50/MMBtu the 33% RPS/High-Goals EE scenario does not cost any more than the reference scenario. At natural gas prices of $14/MMBtu and higher, the 33% RPS/High-Goals EE scenario actually results in lower total costs." NRDC/UCS at 9.

The California Wind Energy Association and the Large-Scale Solar Association ("CWEA/LSA") also agreed with LADWP. "CalWEA and LSA are confident that, far from the relatively high cost per metric ton ('tonne') predicted by the E3 model for 33% RPS, the carbon reduction component of RPS costs may well approach zero—and could possibly even become negative; in other words, the carbon reduction may come at no additional cost, and may even save money relative to gas-fired generation." CWEA/LSA at 8. CWEA and LSA contend that assuming a market heat rate of 8,000 Btu per kWh and a "gas price scenario of $10 per MMBtu in 2008, $15 per MMBtu in 2020, reduced the GHG mitigation cost for a 33% RPS to a *negative* $11 per ton—i.e., renewables would provide carbon reductions at an overall cost savings, not at any additional expense." CWEA/LSA at 10 (emphasis in original).

While requiring the electric sector to participate in a California-only single-cap multi-sector cap-and-trade program would have the potential for causing regulated entities to incur massive allowance costs with *no* significant emission reduction benefits, a programmatic approach could have very low or even negative costs. As a result, the disproportion between electric sector allowance costs and the cost of mitigation measures that were examined by E3 may be substantially greater than 1/20, assuming allowance prices of \$100/ton CO_2.

3. NCEP Explains Why Allowance Costs Are Disproportional to Actual Mitigation Costs

A substantial disproportion between allowance costs and the cost of actual electric sector mitigation measures should be expected. It is consistent with findings by the National Commission on Energy Policy ("NCEP"). The NCEP found that a cap-and-trade which required regulated entities to buy allowances would be extremely costly in comparison to actual emission reduction costs.

The Staff attached a white paper from the NCEP entitled "Allocating Allowances in a Greenhouse Gas Trading System" as Appendix A to the Staff Paper ("NCEP White Paper"). The NCEP found that the total expenditures on allowances would be approximately *ten times* actual emissions mitigation costs. The NCEP said: "Modeling analyses of the program design first outlined by the Commission in its 2004 report suggested the total value of emissions allowances during the first phase of program implementation is on the order of \$30-\$40 billion each year…." NCEP White Paper at 4. However, "actual emissions-mitigation costs are estimated to average only roughly \$4 billion per year over the first ten-year implementation period, or roughly one tenth of the estimated \$30-40 billion allowance value associated with the trading program." *Ibid* at 5. NCEP explained the reason for the 1/10 ratio between amounts spent on allowances and the amount spent on actual mitigation measures:

> Given that mitigation costs, at the margin, determine the price (or value) of each allowance, the mismatch between aggregate allowance value and aggregate mitigation costs might seem counter-intuitive. In fact, however, this mismatch is a simple function of the fact that the number of tons being reduced under the policy is much smaller than the number of tons that continue to be emitted (and for which allowances are issued).

Ibid.

D. A Cap-and-Trade Program Would Be Inappropriate as an "Instrumentality" to Achieve Emission Reductions Through Other Measures in the Electric Sector

Professor Sweeney contended at the CARB June 3, 2008 Technical Stakeholder Working Group Meeting that a cap-and-trade program should be evaluated as a "instrument" that could be used to motivate the use of other measures to obtain emissions reductions. Sweeney, *Ibid* at 14. However, using a cap-and-trade program to provide an incentive for regulated entities to employ other strategies or measures to attain emissions reductions is inappropriate for the electric sector. While the use of a cap-and-trade system might have the claimed benefits for other sectors, the electric sector may be unique in that many emissions reduction measures require significant capital investments. CWEA/LSA explained that this is particularly true of renewable resource projects:

> Renewables are a capital-intensive industry with long-term planning needs, both for the facilities themselves and the transmission infrastructure necessary to support them. It is unrealistic to expect the substantial investment needed for renewables to exceed the current 20% target based on a brand new pricing signal from a yet-to-be established cap-and-trade system, which, based on the experience of other markets, is certain to be somewhat volatile in its fledgling years.

CWEA/LSA at 2. CWEA explained further:

> Capital investments in energy production, especially after the boom-and-bust California has experienced the energy sector, presently require long-term commitments; although energy market pricing signals may someday provide sufficient stimulus for merchant investment, those

> market signals cannot be expected to drive capital-intensive investment until they are proven to be robust, stable and reasonably predictable.

CWEA/LSA at 6. The Sacramento Municipal Utility District ("SMUD") succinctly summarized the problem with trying to use cap-and-trade market signals to spur the type of investment that will be needed in the electric sector to accomplish reductions in GHG emissions: "Relying upon incremental market signals, in a market that will not begin until 2012, to incent these high capital infrastructure projects is a plan to fail." SMUD at 8. The Commissions should not accept on faith the claims that using a cap-and-trade system as an "instrumentality" to spur investments in non-market measures to attain GHG emissions reductions would be appropriate, for the electric sector.

II. ALLOWANCE ALLOCATION OPTIONS ARE AFFLICTED BY FATAL FLAWS OR UNANSWERED QUESTIONS

Assuming that a record were ultimately developed that provided a rational basis for including the electric sector in a California-only single-cap multi-sector cap-and-trade program, various proposals were presented by the Staff in the April 16, 2008 Staff Paper and were considered by commenting parties for allocating allowances among regulated entities.

As presented by the Staff and discussed by the parties, the allocation proposals generally involve (1) an administrative allocation of allowances based on historical emissions, (2) administrative allocation of allowances based on output, or (3) auctioning. Both the Staff and various parties mix these proposals by suggesting transition schedules under which there would be a progressive shift from one of the allocation methodologies to another. Further, both the Staff and various parties propose that if an auction approach were adopted, it should be accompanied by a procedure for "returning" or "recycling" revenues to electric sector retail providers so that the revenues could be used one way or another for the benefit of consumers.

Both the emission-based and the output-based approaches for allocating allowances administratively to deliverers raise issues that must be addressed as a condition for further consideration of the proposals. However, auctioning is not a panacea. Auctioning would have the potential to generate enormous auction revenues that would be disproportionate to the cost of actual electric sector mitigation measures, and no party has presented a proposal that would ensure that all of the auction revenues would be returned to the electric sector. Absent a secure mechanism for returning auction revenues, the auction approach could result in a massive transfer of wealth from the electric sector to others.

A. An Emission-Based Administrative Allocation of Allowances to Deliverers

Several commenting parties support an administrative allocation of allowances to deliverers that is based on historical emissions. However, like the Staff, these parties propose a transition over time to a 100 percent allocation of allowances through an auction. For example, the Division of Ratepayer Advocates ("DRA") proposes that 25 percent of allowances be auctioned in 2012 with 75 percent being distributed on the basis of historical emissions, but DRA proposes a 15 percent annual increase in the proportion of allowances that would be allocated through auctioning so that 100 percent of total available allowances would be auctioned by 2017. DRA at 5. The Western Power Trading Forum ("WPTF") proposes that 25 percent of allowances be distributed by auction in 2012 with 75 percent being distributed on the basis of historical emissions, but WPTF proposes a 10 percent annual increase in the percentage of auctioned allowances so that 100 percent of the allowances would be distributed by auction by 2020. WPTF at 9. Dynegy proposes that 100 percent of allowances should be administratively allocated on the basis of historical emissions in 2012 with a slower transition to full auctioning than is proposed by either DRA or WPTF. Dynegy proposes that there should be a "eventual transition to auction…over at least a 15 year time period." Dynegy at 9.

In evaluating an administrative allocation of allowances on the basis of historical emissions, the Staff's "primary concern" was that "the value of allowances will be factored into electricity costs despite the allowance being allocated freely…." Staff Paper at 17 (citations omitted). The Staff was concerned that the deliverers that receive allowances for free would factor the opportunity cost of the allowances into deliverers' price for electricity. This would result in "large profit increases for deliverers who are not also retail providers." Staff Paper at 20.

The proponents of an administrative allocation of allowances to deliverers on the basis of historical emissions effectively admit the potential for an administrative allocation of allowances to result in windfall profits by universally proposing a transition schedule to full auctioning. Regardless of the length of the transition schedule, there would be a potential for windfall profits for the duration of the transition period. The inherent susceptibility of an emission-based administrative allocation of allowances to lead to unregulated deliverers receiving windfall profits for even a short transition period is a fatal flaw that disqualifies the approach as a viable methodology for allocating allowances to electric sector deliverers.

B. An Output-Based Administrative Allocation of Allowances to Deliverers

In the Staff Paper, Staff noted that a possible benefit of an output-based administrative allocation of allowances to deliverers is that, unlike an emission-based administrative allocation to deliverers, "an output-based allocation does not result in a large transfer of wealth from customers to deliverers." Staff Paper at 26. The wealth transfer could be avoided because "deliverers will find that they have an incentive to increase their delivery levels," in which case "deliverers are likely to find they cannot pass on the entire value of their allowances." *Ibid* at 26. Thus, an output-based allocation "results in lower customer costs than emission-based allocation." *Ibid* at 27.

1. Staff's Modifications of the Output-Based Approach

Staff proposed some modifications to the "pure" output-based allocation approach. Staff explained that a "pure output-based allocation will likely result in a large redistribution of money from customers of retail providers that depend on high-GHG sources of power to less GHG-intensive retail providers." *Ibid* at 27. Providing free allowances to deliverers of power from existing nuclear, hydropower, or other zero-GHG plans “would generate large amounts of revenue from these entities when they sell allowances. *Ibid* at 31. This led the Staff to recommend that the “pure” output-based approach should be modified so that the administrative allocation of allowances to deliverers would be “limited to fossil fueled generated electricity….” *Ibid*.

Even if an output-based allocation of allowances to deliverers were limited to electricity generated with fossil fuel, gas deliverers would still be preferred over coal deliverers. This would lead to a wealth transfer from consumers that were more dependent on coal-fired generation to consumers that were more dependent on gas-fired generation. *Ibid* at 31. To address this further wealth transfer issue, Staff proposed that, in addition to limiting an administrative output-based allocation so that allowances would only be provided to fossil-fuel generated electricity, there should be a fuel-specific allocation so that more allowances are given to coal-fired generation than to gas-fired generation. *Ibid*. Staff proposed that allowances be allocated to coal-generated electricity and gas-generated electricity on a two-to-one basis.

As a third modification to the “pure” output-based allocation approach, Staff proposed that there should be a transition from an output-based administrative allocation of allowances to an auction. Specifically, Staff proposed that 90 percent of allowances should be administratively allocated to deliverers on the basis of output in 2012 with 10 percent being allocated through an auction and that the administrative allocation of allowances should decline each year so that 100 percent of the allowances would be auctioned by 2018. Staff Report at 32.

Staff’s proposals to (1) limit the output-based allocation of allowances to existing nuclear, hydropower, and other zero GHG plants and (2) to fuel-differentiate the allocation of allowances are important modifications to a pure output-based administrative allocation that would ameliorate the wealth transfers that would occur in the absence of the Staff’s proposed modifications. However, Staff’s proposed transition to 100 percent auctioning by 2018 is ill-advised. The primary claimed virtue of an output-based administrative allocation of allowances is that such an allocation would mitigate the impact that either auctioning or an emission-based administrative allocation would have on market clearing prices. Staff Report at 26-27. That benefit would be lost if there were a sharp shift in five years from 90 percent of allowances being allocated on output in 2012 to 100 percent being allocated on the basis of auction by 2018, as suggested by Staff.

2. SMUD's Modifications of the Staff's Approach

In its opening comments, SMUD supports the Staff's "preferred output-based approach" but with several modifications. First, while SMUD supports Staff's modification of the "pure" output-based approach so as to eliminate any allocation to existing nuclear, hydro, or other zero-GHG generation, SMUD recommends "allocating allowances to new renewables, defined as those renewables constructed after the passage of AB 32." SMUD at 15. SMUD argues "this would reward early action and incentivize entities to more rapidly achieve and go beyond any statewide RPS targets." SMUD at 15.

Second, SMUD proposes that the fuel-differentiated allocation of allowances to coal and gas should be progressively reduced. SMUD does not propose a specific transition schedule: "Because the E3 model is not capable of quantifying the results for this scenario, specific values for the rate of transition would need further evaluation in order to address inter-regional wealth transfer issues." SMUD at 15. "The specific rates of transition require further evaluation of the E3 model…." *Ibid* at 16. However, SMUD presents a bar chart graphically depicting the transition. The bar chart suggests that that the rate of reduction would be quite gradual.

SMUD at 16.[2]

Third and most importantly, SMUD proposes that there should be *no* transition from an output-based allocation to auctioning during the period 2012 to 2020. *See* SMUD at 13-16.

This feature of SMUD's proposal remedies a critical flaw in the Staff's "preferred output-based approach." SMUD's elimination of the transition to auctioning would allow California to enjoy the primary claimed benefit of the output-based approach – the mitigation of the impact that auctioning would have on market clearing prices – for the entire AB 32 period from 2012 to 2020.

3. An Overarching Question About the Output-Based Approach

There is still an overarching factual question about any output-based administrative allocation of allowances. Although the claim that an output-based allocation would have a much smaller impact on the market clearing price of electricity than either auctioning or an administrative emission-based allocation of allowances, further modeling is needed to determine the accuracy of that claim. From the materials in the record to date, the ameliorative impact of an output-based allocation of allowances appears to be based more on theory rather than analytical modeling results. SCPPA urges the Commissions to undertake the requisite modeling to verify the claimed effect that an output-based administrative allocation of allowances would have on market clearing prices.

Subject to the outcome of that modeling effort, SCPPA believes that an output-based allocation of allowances *as modified by the Staff* (1) to eliminate any allocation to non-fossil output and (2) to fuel-differentiate the allocation to fossil-based output *and as further modified by SMUD* (3) to permit an allocation to post-AB 32 renewables, (4) to have a gradual transition away from fuel differentiation, and (5), most importantly, to eliminate Staff's proposed transition to auctioning during the period 2012-2020 is an option that should be further explored if CARB ultimately determines that the electric sector should be included in a single-cap multi-sector cap-and-trade program.

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[2] SMUD does not mention a specific fuel differentiation factor such as the two-one ratio suggested by the Staff.

C. Full Auctioning With a Return of Revenues

Various parties advocate full auctioning of allowances to deliverers as the electric sector point of regulation. *See, e.g.*, NRDC/UCS at 5; Pacific Gas and Electric Company ("PG&E") at 21. In the Interim Opinion, the Commissions stated that "the majority of the proceeds from the auctioning of allowances from the electricity sector should be used in ways that benefit electricity consumers in California, such as to augment investments in energy efficiency and renewable energy or to provide customer bill relief." D.08-03-018 at 9. Accordingly, just as the Staff's proposals for auctioning focus primarily on the disposition of auctioned revenues, Staff Report at 33, the parties that recommend that allowances be allocated to deliverers through auctions generally recommend that the auction proceeds be returned to retail providers to be used for the benefit of consumers rather than shareholders. NRDC/UCS observe:

> It is important to note that E3 results show that auctioning *without* revenue recycling (i.e., assuming that the revenues are used for unrelated purposes outside of the electricity sector) results in high costs for customers of all retail providers. Thus, it is imperative that auctioning in the electricity sector employ revenue recycling to the retail providers on behalf of their customers.

NRDC/UCS at 12.

1. Problems with Revenue Recycling

There is a fundamental problem with the proposals for auctioning allowances to deliverers with subsequent recycling of auction revenues to retail providers for the benefit of their consumers. The proposals universally assume that a secure mechanism can be established by the CARB to assure that the auction revenues will not be siphoned off for other purposes before being distributed to the retail providers. SCPPA is deeply skeptical that a secure mechanism can be established, particularly in a state that has seen funds that are "guaranteed" for various purposes such as highway construction or education regularly being diverted to other purposes when the State confronts its frequent budget crises. Although Staff's proposal for returning auction revenues to retail providers for the benefit of their consumers may have a theoretical attraction, the proposal is afflicted with the practical problem that it may be extremely difficult to design a secure and dependable mechanism for returning auctioned revenues to retail providers.

A second concern about auction revenue recycling is that it would permit producers of "clean" electricity to reap additional economic rents due to the higher market clearing price that would result from auctioning allowances to deliverers. E3 projected that producers of "clean" electricity would gain additional economic rents of $700 million per year, but that projected windfall is conservatively based on an allowance value of $30/ton CO_2. E3 Results, Slide 25. If higher allowance prices are assumed, the windfall increases proportionately. "Clean" producers would realize a $2.1 billion per year windfall if allowances were valued at $90/ton CO_2.

A third concern is that there may be volatility in auction revenues. As SMUD observed, that could make "it difficult to plan and implement an effective infrastructure and programs with the revenue…." SMUD at 17. Furthermore, the volatility in auction revenues would create "a situation of surplus or shortfall each year." *Ibid*. Surpluses would increase "the likelihood that surpluses will be reallocated to other programs, while shortfalls will hamstring effective program implementation." *Ibid*.

Given these concerns, SCPPA does not recommend auctioning of allowances to electric sector deliverers with a subsequent recycling of revenues. An administrative allocation of allowances to deliverers that would not result in windfall profits to unregulated generators and would simultaneously avoid wealth transfers from customers of retail providers that depend on high-GHG sources of electricity to less GHG-intensity retail providers would be preferable.

2. PG&E's Revenue Recycling Proposal.

Throughout this proceeding, PG&E has supported an auction revenue recycling proposal that would result in wealth transfers from the consumers of some retail providers to others. In its October 31, 2007 comments on allowance allocation issues, PG&E recommended that allowances should be allocated to retail providers on the basis of "sales, adjusted for verified customer efficiency savings…." PG&E Comments on Allowance Allocation Issues at 2 (October 31, 2007). In order to get the allowances from retail providers to deliverers that would be the point of regulation in the electric sector, the allowances would "be auctioned off" with the revenues being returned to the retail provider in proportion to the sales-based allocation of allowances. *Ibid*.

PG&E's "sales based approach" was criticized by the Staff in the Staff Paper as leading "to a large redistribution from coal-dependent retail providers to less GHG-intensive retail providers." Staff Paper at 38. The Staff recognized that wealth transfers would be a likely consequence if auctioned revenues were recycled to retail providers for the benefit of their consumers on a basis other than the historical emissions associated with each retail providers' total portfolio. Particularly, a wealth transfer could result if there were a sales-based allocation of allowance revenue rights:

> A sales-based allocation of ARRs in 2012 might lead to a large redistribution from coal-dependent retail providers to less GHG-intensive retail providers. In fact, the effect is likely to be identical to a pure output-based allocation. Coal-dependent retail providers might be saddled with rate increases due to GHG allowance costs in the first year of the cap. Assigning ARRs on the basis of retail providers' historical emissions would produce strikingly different results, with little potential for wealth transfer among customers of different retail providers at the beginning of the cap-and-trade program.

Staff Paper at 38. Accordingly, Staff proposed that, at least the outset of the AB 32 program in 2012, "the revenues from the auction would be distributed to the retail providers in proportion to their emissions from their entire portfolio in a base period." Staff Paper at 39.

In spite of Staff's criticism of PG&E's proposal to recycle revenues to retail providers on the basis of sales, PG&E continues to advocate "allocation of allowance value to utilities for the benefit of their customers based on current output or sales….” PG&E Comment at 27. PG&E does not recognize or attempt to contest Staff's pointed criticism of PG&E's sales-based allocation of auction revenues to retail providers. PG&E's sales-based approach to allocating auction revenues to retail providers is a bold bid for a wealth transfer that should be rejected by the Commissions just as categorically it has been rejected by the Staff.

3. NRDC/UCS's Proposal for Revenue Recycling with a "Use it or Lose it" Provision.

NRDC/UCS propose 100 percent auctioning of allowances to deliverers with auction revenues being returned to retail providers for the benefit of their consumers. NRDC/UCS propose that the Commissions select from among four methodologies for allocating "auction revenue rights" ("ARRs"). All of NRDC/UCS's methodologies would end with a "100 percent sales-based distribution in 2020…:"

- 100 percent sales-based ARR throughout the 2012-2020 period,
- 100 percent emissions-based ARR in 2012 with straight line transition to 100 percent sales-based ARR in 2020;
- 50 emissions-based/50 percent/sales-based ARR in 2012 with straight line transition to 100 percent sales-based ARR in 2020; and
- 23 percent emissions-based/77 percent sales-based ARR in 2012 with straight line transition to 100 percent sales-based ARR in 2020.

NRDC/UCS at 16-17. NRDC/UCS say that they do "not have a single preferred approach for the ARR method, except that we recommend that the ARR basis should transition to 100 percent sales-based (adjusted for verified energy savings) distribution in 2020 or earlier." NRDC/UCS at 17.

Like PG&E's proposal, NRDC/UCS's proposal would result in wealth transfers from the consumers of utilities that have a more GHG-intensive portfolio to the consumers of utilities that have a less GHG-intensive portfolio. NRDC/UCS's proposal for, ultimately, a 100 percent sales-based allocation of auction revenues to retail providers should be rejected just as soundly as PG&E's for resulting in a wealth transfer.

There is an even more onerous feature of NRDC/UCS's proposal. NRDC/ UCS propose a "use it or lose it" in which retail providers would be required to invest auction revenues in energy efficiency or other specified GHG emission reduction measure or forfeit the revenue to the state:

> Under such a system, revenues that are recycled back to retail providers *must* be invested in the retail providers' service territories in specified ways that benefit their customers and result in long-term investments to reduce their GHG emissions (e.g., energy efficiency, renewable energy, etc.). These investments would be subject to oversight and verification that the investments meet appropriate criteria. If a retail provider fails to use the revenues recycled to it in appropriate ways and within a specified time limit, the revenues are forfeited to the state.

NRDC/UCS at 12. The requirement that auction revenues that are received by retail providers must be forfeited by the state if not used within a specified time limit on GHG emission reduction measures would be likely to result in a massive transfer of wealth from electric consumers to others.

The rationale for having a return of auction revenues to retail providers for the benefit their consumers is to prevent the revenues from leaving the electric sector. As explained by the Staff: "Auctioning of allowances without refund of auction revenues to retail providers would increase consumer costs substantially because deliverers would have to recover the cost of the allowances in their bid prices contracts, or retail rates. The expenditures for allowances would constitute a transfer from deliverers (and ultimately consumers) to the State." Staff Paper at 37. NRDC/UCS's "use it or lose it" condition would subvert the purpose of having revenue recycling by causing a transfer of wealth from electric sector consumers to the state.

If allowance prices of approximately $100/ton CO_2 were assumed, the electric sector would be required to pay approximately **$98 billion** to buy allowances during the nine-year 2012 to 2020 period. However, the cost of E3's "Reference Case" energy efficiency, renewables, CSI, and CHP measures that would generate 21.1 MMt CO_2 emission reductions annually by 2020 are projected to cost only **$600 million**. The E3's "33% RPS/High EE" energy efficiency, renewables, CSI and CHP measures are projected to cost only **$4.97 billion** to generate emission reductions of 29.6 MMT CO_2 million by 2020. Thus, for a total of approximately **$5.5 billion** in cost to both utilities and customers, electric sector emissions can be reduced to 78.6 MMt CO_2 per year by 2020, well below the 1990 electric sector emissions level of 110.6 MMt CO_2. E3 Results, Slides 13-16.

Parties including NRDC/UCS and LADWP contend that E3's projected costs of attaining the 33% RPS/High EE goals case are higher than they should be, as discussed above. Assuming, however, that E3 has correctly projected the cost of "Reference Case" and "33% RPS/High EE" measures, the electric sector payment of nearly $98 billion over the nine years 2012 to 2020 assuming allowance prices of $100/ton $CO_{2,}$ would be roughly *20 times* the cost of E3's projected electric sector emission reduction measures. That would result in roughly *95 percent* of the auction revenues being forfeited to the state. Thus, NRDC/UCS's proposed "use it or lose it" proposal has a potential to cause a massive wealth transfer from electricity consumers to others, contrary to what the Staff sees as being primary reason for having auction revenue recycling in the first place.

NRDC/UCS's proposal to recycle revenues to retail providers on the basis of output with a "use it or lose it" provision has a potential to result in wealth transfers *both* among retail providers *and* from electric consumers to the state. NRDC/UCS's proposal should be rejected.

4. Coupling SMUD's Output-Based Allocation Concepts with Staff's "Preferred Auction Approach"

Coupling some of SMUD's proposals and the Staff's "preferred auction approach" to revenue recycling envisioned could result in a revenue recycling concept that would have more promise than either the Staff's "preferred auction approach" or the proposals made by commenting parties, assuming auctioning and revenue recycling were to be pursued.

In developing its proposal for revenue recycling, the Staff determined that a sales-based allocation of auction revenues to retail providers would result in wealth transfers from more carbon-intensive retail providers to less carbon-intensive retail providers. As a result, the Staff proposed in its "preferred auction approach" that "ARRs be assigned at the start of the program on an historical emission basis." Staff Report at 39. Unfortunately, however, Staff suggested a transition away from allocating auction revenues 100 percent on the basis of emissions so that by 2020 50 percent of the revenues would be allocated on emissions and 50 percent on sales. Such a sharp transition to allocating auction revenues substantially on the basis of sales would result in potential for wealth transfers among retail providers for up to half of the auction revenues.

Applying some of SMUD's output-based allocation concepts to the half of auction revenues that Staff would allocate on an output basis would reduce the wealth transfer potential of the Staff's transition to a 50/50 emissions/output allocation of auction revenues. First, applying the SMUD approach, there would be no allocation to output associated with nuclear or hydropower resources. SMUD at 14. Second, for the portion of revenues that Staff would allocate on an output basis, more revenues would be allocated to coal output than to gas output. Although SMUD does not identify an allocation ratio, the Staff has suggested the two-one ratio: "The weighting factor for coal-fired electricity is 2, based on the fact that coal plants emit approximately 1 metric ton of GHGs for every MWh produced and gas plants emit approximately 0.5 metric ton per MWh." Staff Report at 30. SMUD proposes a transition over time so that the 2-1 allocation to coal would be ramped down in favor of gas and new renewables. SMUD at 16. SMUD does not propose a specific rate of transition, but SMUD provided an example of the ramp-down of the fuel differentiation between coal and gas that was gradual. SMUD at 16.

Third, although SMUD would, in general, not allocate to output from non-fossil generation, SMUD would allocate to output from renewable resources constructed after the enactment of AB 32 to "reward early action and incentivize entities to more rapidly achieve and go beyond any statewide RPS targets." SMUD at 15.

The dual features of SMUD's fuel differentiated allocation to coal-fired and gas-fired output and the elimination of any allocation to nuclear, hydropower, or pre-AB 32 renewables output would substantially eliminate the wealth transfer effects that would arise under the Staff's proposed transition to a 50 percent output-based allocation of auction revenues. SCPPA cannot endorse any proposal for auctioning with revenue recycling as the palliative to the wealth transfer implications of pure auctioning. No proposal has been made for any revenue recycling mechanism that which would provide adequate security that tens of billions of dollars of auction revenues will not be diverted to other state purposes instead of being returned to retail providers for the benefit of their consumers. However, applying the SMUD concepts to the allocation of the portion of auction revenues that would be allocated on the basis of output as proposed by the Staff would reduce the wealth transfer potential of the Staff proposal and be a more promising approach to revenue recycling, assuming that CARB elects to pursue including the electric sector in a cap-and-trade program with auctioning of allowances and revenue recycling.

III. FLEXIBLE COMPLIANCE MECHANISMS

AB 32 clearly provides that while CARB shall design a program to achieve the AB 32 GHG emission reduction goal by 2020, CARB must design regulations that seek to minimize the costs to California. Cal. Pub. H&S Code §38562(b)(1). Thus, if CARB were to include the electric sector in a single-cap multi-sector cap-and-trade program, CARB is statutorily required to examine flexible compliance mechanisms that could assist in containing the costs of the program. The opening comments submitted on June 2, 2008, suggest more than a dozen measures that should be considered in order to contain the potentially rampant cost of including the electric sector in a single-cap multi-sector cap-and-trade program:

- Trading
- Banking
- Borrowing
- Multi-year compliance periods
- Rolling compliance periods
- Compliance extensions
- Alternative compliance payments
- Linkage to other programs
- Offsets
- Safety valves
- Market participation rules
- Market intervention board
- Market oversight board

If the Commissions were to continue to recommend to CARB that the electric sector be included in a single-cap multi-sector cap-and-trade program, all of these cost containment measures should be commended to CARB. Additionally, retail providers that are also deliverers of electricity should be permitted to elect to be subject to direct regulation of the emissions associated with their deliveries that are dedicated to serving retail load without being required to acquire allowances.

A. Trading

TURN proposes that CARB consider a "cap-and-auction" program under which regulated entities would be required to acquire allowances through an auction but would not be permitted to trade allowances on a secondary market. TURN proposes to cap allowance prices at $30/ton so as to generate approximately $3 billion per year. TURN calculates that auction proceeds of approximately $3 billion per year is "an amount that is probably sufficient to fund all low-income and energy efficiency programs for both IOUs and POUs statewide." TURN at 20.

If single-cap multi-sector cap-and-trade program were to be adopted, trading should be permitted. TURN's proposal for a "cap-and-auction" program without trading is a transparent attempt to turn an electric sector cap-and-trade program into a carbon fee program aimed at generating a specific amount of revenues. While a carbon fee program provides both certainty about the level of allowance prices and relative certainty about the amount of revenues that would be generated, particularly if allowance prices are capped at a level as low as $30/ton CO_2, as proposed by TURN, the program would not achieve the purported twin objectives of the cap-and-trade program, namely, providing some certainty of achieving a given level of emissions reductions while providing an incentive for regulated parties to seek least-emission reduction options. TURN admits: "A carbon fee or tax does not provide certainty of achieving any particular level of emission reductions, but does provide price certainty." TURN at 8. The Commissions should not recommend TURN's "cap-and-auction" proposal to CARB.

B. Banking

There appears to be a consensus among commenting parties that if a cap-and-trade program were to be adopted, regulated entities should be permitted to bank allowances during a current compliance period for use in a future compliance period. However, there may be a need for reasonable limits on banking to prevent attempts at hoarding and market manipulation. NRDC/UCS observe: "Some constraints on banking, such as limits on the number of allowances an entity may bank and limits on the number of compliance periods an entity may wait to surrender allowances, may be appropriate to prevent hoarding and market distortions from allowances being kept out of circulation for too long." NRDC/UCS at 22-23. An alternative constraint on banking may be to prohibit non-regulated entities such as traders from banking allowances so that only regulated entities would be permitted to bank allowances.

Morgan Stanley Capital Group, Inc. ("Morgan Stanley") proposes that, as an alternative to banking, allowances should be issued without expiration dates. Morgan Stanley at 11. Morgan Stanley's concept may have some merit if only regulated entities were permitted to hold allowances. However, if unregulated entities are permitted to hold allowances, the absence of expiration dates may circumscribe the use of anti-hoarding mechanisms such as those suggested by NRDC/UCS.

C. Borrowing

Some commenting parties argue that borrowing from future compliance periods should not be permitted. "Allowing covered entities to borrow allowances from future compliance periods would likely discourage actions to reduce emissions in earlier years…." NRDC/UCS at 23. These parties miss an important virtue of permitting borrowing. Not only would borrowing be an important flexible compliance mechanism for entities such as electric generators that could experience abnormal and unpredictable spikes in emissions during a given compliance mechanism. Borrowing would facilitate long term investments in emission reduction measures that may not provide an immediate benefit during a current period but would result in a substantial step reduction in emissions during a future period.

Dynegy observes that "it takes 3-5 years to develop, license, construct and begin operations for a new power plant and considerably longer for new major transmission projects." Dynegy at 9. CWEA/LSA observe that it could take "5-7 years' lead time… to plan, permit and construct transmission…." CWEA/LSA at 7. Permitting borrowing would permit a regulated entity to undertake a long-term investment in emissions reductions during a current period while borrowing allowances from a future period in which a new renewable energy project and associated transmission would become operational. Allowing borrowing is an important tool that could be used by regulated entities to undertake precisely the sort of long-term investments in emission reductions that the Commissions and CARB should encourage.

D. Multi-Year Compliance Periods

Most commenting parties agree that compliance periods should be longer than a single year. Longer periods can both allow entities such as electricity generators that might experience fluctuations in emissions due to weather conditions to smooth their use of allowances. Also, multi-year compliance periods would allow regulated entities time to make investments and realize emission reduction benefits from the investments during a single compliance period. “We believe that the CPUC/CEC should recommend that CARB implement a three year compliance period in order to allow capped entities time to make investment decisions necessary to meet their obligations.” NRDC/UCS at 22.

Although multi-year compliance periods and borrowing are aimed at similar policy objectives, both should be allowed. For example, while having a longer compliance periods such as three years may encourage investment projects that may result in emission reductions in one or two years, three year compliance periods would not accommodate investments in projects that require a long lead time such as transmission lines.

E. Rolling Compliance Periods

In addition to lengthened compliance periods, the Commissions and CARB should consider rolling compliance periods in which compliance and end-dates are staggered. Southern California Edison Company (“SCE”) observes: “A single compliance period that ends at one date for all obligated entities will create wild peaks in allowance prices.” SCE at 12. “By contrast, a rolling compliance period, in which compliance and end-dates are staggered, will mitigate the tendency for price spikes at the end of the compliance period.” *Ibid*. WPTF joins SCE and others in supporting rolling compliance periods. WPTF observes that rolling compliance periods would be similar to an approach utilized in the European Union (“EU”) Emissions Trading System (“ETS”):

> Under the EU ETS, allowances do not have an annual vintage but rather a compliance period vintage (e.g., Phase 2, which covers 5 years), and may be used for compliance in any year of the period. Each member state must issue 1/5th of a sector or installation’s overall allowance budget by February 28th of a compliance year. Capped entities must then surrender sufficient allowances to cover emissions from the previous year by April 30th. The fact that allowance surrender for the previous year occurs after allocation of allowances for the subsequent year, means that each entity can avail itself of 2 years worth of allocations for compliance in any given year.

WPTF at 16-17.

F. Compliance Extensions

Even if liberal banking, borrowing, and compliance period regulations were to be adopted, unforeseeable circumstances that arise could cause a regulated entity to need a compliance extension and which would warrant the granting of the extension for good cause shown. A regulatory program which would inflexibly deny compliance extensions regardless of the degree of merit would be unjust and unreasonable. Compliance extensions should be permitted "on a case by case basis." WPTF at 17.

G. Linkage to Other Programs

CUE/CURE opposes linking a California cap-and-trade program to "other regional, national or international programs" because "linking California's programs with outside programs… would lower allowance prices…." CUE/CURE at 7. The potential for linkage to result in lower allowance prices is precisely why linkage should be permitted. Linkage is a cost containment mechanism.

Bilateral linkage of a California market to a broader regional, national, or international market would have the potential to raise California allowance prices. For example, if allowance prices were higher in the broader market, entities in the broader market would be permitted through linkage to buy allowances in California. That could cause an increase in California prices. However, linking a California program with regional, national, or international cap-and-trade programs would make the market for allowances deeper and more liquid. In the long run, increased liquidity should tend to contain allowance prices.

PG&E advises that linking systems "is probably best performed on a case-by-case basis, rather than in the abstract…." SCPPA agrees. *See* SCPPA Opening Comment at 61.

H. Offsets

Although a few commenting parties oppose offsets, nearly all support allowing offsets, provided that the offsets are additional and verifiable. *See* e.g., NRDC/UCS at 24 ("offsets must be real, additional, verifiable, permanent and enforceable"). SCE "strongly endorses the implementation of a robust offsets program to reduce GHG emissions under AB 32." SCE at 26. SCPPA heartily concurs.

SCE notes that while there may be arguments for geographically restricting offsets on the basis that "such a restriction would yield 'green jobs' for the region and provide co-benefits in the form of improvement in air or water quality," SCE observes that "geographic or quantitative restrictions on offsets are more likely to lead to overall increases in the cost of meeting defined GHG reduction targets and timetables." *Ibid.* SCPPA agrees.

California should not impose geographic or quantitative restrictions on offsets. To do so would unjustifiably circumscribe the cost of containment benefits that could be realized from offsets. PG&E observes that the "recently released EPA Analysis of the Lieberman-Warner federal legislation indicates that unlimited access to offsets decreases the cost of compliance 85% compared to a scenario with no access to offsets." PG&E at 57. "The scenario in which no international credits or domestic offsets were allowed produced results that were 85% more expensive than the scenario with unlimited access" and "results in allowance prices in 2020 of approximately $100 per ton." PG&E at 62.

Some parties also proposed discounting of offsets. *See* e.g., NRDC/UCS at 29. However, as PG&E explains: "Discounting is arbitrary and punishes all projects, regardless of quality." PG&E at 64. If an offset is real, additional, verifiable, and enforceable, it should permitted without any discounting. If an offset is not real, additional verifiable, and enforceable, it should be permitted at all.

I. "Price Trigger" Safety Valves

Marketers such as Morgan Stanley oppose "price trigger" safety valves. Morgan Stanley at 6-7. Further, to the extent to which a price-trigger safety valve might be adopted, it "should not be triggered by price volatility." WPTF at 7.

A "price-trigger" safety valve can be important to prevent a market meltdown. The trick is to set the price trigger appropriately. If it is set too low, a price trigger safety valve can effectively transform the cap-and-trade allowance price into a carbon fee which would generate a stream of revenues that could easily be predicted but would fulfill neither the goal of establishing certainty about obtaining a given level of emissions reductions during a compliance period nor the goal of providing an incentive for parties to seek least-cost emission reduction alternatives. As noted above, TURN proposes a "cap-and-auction" program which would set a low cap on allowance prices and transform TURN's proposed cap-and-auction program into a carbon fee program that would generate approximately $3 billion in revenues per year to be used for purposes proposed by TURN. *See* TURN at 20. Alternatively, if the price trigger is set too high, "the safety valve becomes symbolic and has no practical impact…." Morgan Stanley at 7. The focus of attention should not be on whether to adopt a "price-trigger" safety valve. A price-trigger safety valve should be adopted. Instead, attention should be focused on correctly setting the level of the price-trigger.

J. Alternative Compliance Payments

Although some parties oppose use of alternative compliance payments, alternative compliance payments should be allowed to permit a regulated entity to satisfy and extinguish its compliance obligation if the regulated entity fails to have enough allowances to cover its emissions during a compliance period. Requiring defaulting regulated entities to make an alternative compliance payment puts an outer bound on the burden that a cap-and-trade program imposes on entities that are subject to the program.

Instead of focusing on whether alternative compliance payments should be permitted, attention should be directed to the level at which alternative compliance payments should be set. Indexing alternative compliance payments so that they are calculated as a multiple of market-determined allowance prices (e.g., 1.5 times a market price index) would avoid the potential for fixed alternative compliance payments to fall below market prices for allowances.

K. Market Participation Rules

Some commenting parties argue that there should be rules for participating in a cap-and-trade market. CUE/CURE states: "Non-obligated entities should *not* be allowed to buy allowances under any circumstances." CUE/CURE at 5. If entities that are not covered by the cap-and-trade program are permitted to hold allowances, it becomes more important to have rules such as those proposed by NRDC/UCS "to prevent hoarding and market distortions from allowances being kept out of circulation for too long." NRDC/UCS at 23.

Permitting entities that do not have compliance obligations to participate in a California cap-and-trade program would have the potential to add liquidity to the market. However, the participation by entities that do not have compliance obligations may add a level of risk of market manipulation and price volatility. Consistent with SCPPA's Opening Comment, SCPPA suggests that the scope of market participation and extent of anti-hoarding or similar rules should be determined after the CARB determines the scope and, hence, the likely degree of liquidity of a California cap-and-trade program.

L. Market Intervention Agency

Some parties urged that the Commission should consider a market intervention agency that could "act as a market maker and market stabilizer…." *See* e.g., NRDC at 22. As SCPPA explained in its opening comments, SCPPA agrees. SCE observes, however, that creating a market intervention agency "should not reduce the need for other flexible mechanisms." SCPPA also agrees. The

Commissions and CARB should consider establishing *both* a "price trigger" safety valve *and* an independent market intervention agency. They are not mutually exclusive and can operate in tandem. S.3036 provides both for the creation of a "Carbon Market Efficiency Board" which would have authority to intervene in the allowance market and for "Cost-Containment Auctions" in which allowances would be auctioned from time to time at a statutorily prescribed range of prices. S.3036, §§532, 533. *See* SCPPA Opening Comment at 54.

M. Market Oversight Board

Some parties argue for the creation of a market oversight board which would oversee an allowance market without direct intervention authority. There would be merit to creating such a board *in addition to* a market intervention agency. S.3036 would create both a Carbon Market Efficiency Board to intervene in the allowance market if necessary and a Carbon Markets Working Group to oversee regulation of the allowance market without having direct intervention authority. S.3036, §422.

N. Alternative Compliance Option for Retail Providers that are Also Deliverers

In order to avoid the double burden of complying with mandatory energy efficiency and renewable energy mandates while simultaneously paying for allowances to cover emissions associated with deliveries to serve native load, retail providers that are also deliverers should be permitted to elect to be regulated under an alternative compliance mechanism. Specifically, to mitigate the double burden of paying for the programmatic mandates while also paying for allowances to cover emissions associated with deliveries to serve native load, retail providers/deliverers should be permitted to elect to be subject to entity-specific caps and to be relieved of the obligation to acquire allowances to cover emissions associated with deliveries to serve native load up to level of their caps.

To the extent to which a retail provider/deliverer that elects to be regulated under the alternative compliance mechanism has emissions associated with deliveries to serve native load that exceed its cap, the retail provider/deliverer would be required to acquire allowances through an auction or through the cap-and-trade secondary market in order to avoid a penalty. Likewise, if the retail provider/deliverer engages in wholesale sales of electricity, the retail provider/deliverer would be required to obtain allowances to cover the emissions associated with the deliveries for wholesale sales. The entity-specific cap that applies to a retail provider/deliverer that elects to be regulated under the alternative compliance mechanism should be based on emissions associated with deliveries to serve the retail provider/deliverer's native load, not deliveries for wholesale sales.

IV. COMBINED HEAT AND POWER

Various parties argue for preferential treatment for CHP projects. The California Large Energy Consumers Association ("CLECA") argues that CHP should not be subject to a cap-and-trade program at all. CLECA at 6. The California Clean DG Coalition ("CleanDG") as well as the Energy Producers and Users Coalition and the Cogeneration Association of California ("EPUC/CAC") argue for a "double benchmarking" allowance allocation methodology in which allowances would be allocated to CHP "based on the emissions that would have occurred had an equal amount of thermal and electrical energy been produced using a traditional generator and a boiler." In that case the CHP operator would receive more allowances than actually needed to cover emissions. EPUC/CAC at 4-5. The California Cogeneration Council ("CCC") supports the EPUC/CAC "double benchmarking" proposal. CCC at 5.

The bids by the cogenerators for special treatment and subsidiaries should be rejected. As PG&E argues, "CHP should not receive special status. Instead, CHP units should receive regulatory treatment equal to that of electricity generators and industrial facilities regulated under a multi-sector cap and trade system. If CHP truly represents a cost-effective means of GHG abatement, its economic value will increase and no further incentive is necessary." PG&E at 62.

V. CONCLUSION

SCPPA recommends that the Commissions reconsider the March 13, 2008 Interim Opinion in this proceeding and issue a final decision with recommendations being made to the CARB that are consistent with SCPPA's June 2, 2008 opening comments and with the comment set forth above.

Respectfully submitted,

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Dated: June 16, 2008

CERTIFICATE OF SERVICE

I hereby certify that I have this day served a copy of the **SOUTHERN CALIFORNIA PUBLIC POWER AUTHORITY REPLY COMMENT** on the service list for CPUC Docket No. R.06-04-009 and CEC Docket No. 07-OIIP-01 by serving a copy to each party by electronic mail and/or by mailing a properly addressed copy by first-class mail with postage prepaid.

Executed on June 16, 2008, at Los Angeles, California.

/s/ Sylvia Cantos

Sylvia Cantos

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