**BEFORE THE PUBLIC UTILITIES COMMISSION OF THE**

**STATE OF CALIFORNIA**

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| Order Instituting Rulemaking to Implement the Commission's Procurement Incentive Framework and to Examine the Integration of Greenhouse Gas Emissions Standards Into Procurement Policies. | ) ) ) ) ) | R.06-04-009 (Filed April 13, 2006) |

**BEFORE THE CALIFORNIA ENERGY COMMISSION**

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| In The Matter Of, AB 32 Implementation – Greenhouse Gas Emissions. | ) ) ) ) | Docket 07-OIIP-01 |

# REPLY COMMENTS OF SOUTHERN CALIFORNIA EDISON COMPANY (U 338-E) ON ADMINISTRATIVE LAW JUDGES' RULING UPDATING PROCEEDING AND REQUESTING COMMENTS ON EMISSION ALLOWANCE POLICIES AND OTHER ISSUES

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## I.

## INTRODUCTION

Pursuant to the Administrative Law Judges' Ruling Modifying Schedule and Correcting Suggested Outline for Comments and Reply Comments, issued May 20, 2008, Southern California Edison Company ("SCE") submits the following reply comments on the "Deliverer" point of regulation, cap-and-trade, allowance allocation, flexible compliance, combined heat and power ("CHP"), generator recovery of greenhouse gas ("GHG") compliance costs, and the model created by Energy and Environmental Economics, Inc. ("E3") to the California Public Utilities Commission ("CPUC") and the California Energy Commission ("CEC").

## II.

## THE CPUC AND CEC SHOULD NOT REVISIT THEIR RECOMMENDATION OF A DELIVERER POINT OF REGULATION FOR THE ELECTRICITY SECTOR

In their opening comments, the Los Angeles Department of Water and Power ("LADWP") and the Southern California Public Power Authority ("SCPPA") argue that the CPUC and CEC should revisit their recent recommendation of a "Deliverer" point of regulation for the electricity sector.[1] The CPUC and CEC should reject LADWP's and SCPPA's arguments both because the point of regulation has already been decided and is therefore outside the scope of these comments, and because LADWP and SCPPA do not offer any basis to reverse the decision to recommend a Deliverer point of regulation.

### A. The CPUC and CEC Selected the Deliverer Approach After a Full and Fair Evaluation of the Policy and Legal Issues Associated With Determining a Point of Regulation for the Electricity Sector

In D.08-03-018, issued just three months ago, the CPUC and CEC recommended that the California Air Resources Board ("CARB") designate Deliverers of electricity to the California grid as the entities responsible for compliance with the requirements of Assembly Bill ("AB") 32.[2] This decision was made after multiple rounds of comments on the policy and legal implications of the Deliverer point of regulation, the load-based or retail provider point of regulation, and other alternatives, as well an en banc hearing on the issue. After a detailed and thorough review of the point of regulation options, the CPUC and CEC concluded that a Deliverer point of regulation for the electricity sector best meets the criteria of environmental integrity, compatibility and expandability to potential regional and national markets, accuracy and ease of reporting, tracking and verifying GHG emission reductions, compatibility with

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[1] LADWP Opening Comments at 3-4; SCPPA Opening Comments at 23-24.
[2] D.08-03-018 at 6.

ongoing reforms in wholesale and retail energy markets, and legal support.[3] The CPUC and CEC found that the Deliverer approach "provides for obtaining real GHG emissions reductions by covering imported power as well as in-state generation."[4] Additionally, the CPUC and CEC held that the Deliverer method "can be supported on legal grounds."[5] In particular, the CPUC and CEC rejected LADWP's and SCPPA's arguments that the Deliverer approach is inconsistent with the Federal Power Act, the dormant Commerce Clause, and AB 32.[6] Neither LADWP, SCPPA, nor any other party filed an application for rehearing of D.08-03-018.

Now LADWP and SCPPA repeat the same arguments the CPUC and CEC have already rejected, and argue that the CPUC and CEC should reverse their recommendation of a Deliverer point of regulation. These arguments should not be considered here because the CPUC and CEC decided on a point of regulation in D.08-03-018, and the point of regulation is not a subject of these comments. LADWP and SCCPA did not file an application for rehearing of D.08-03-018 and they should not be allowed to circumvent normal process by arguing that the decision should be reversed here. Furthermore, LADWP and SCPPA offer no change in the facts or the law that would merit revisiting the CPUC's and CEC's prior decision.

## B. LADWP's and SCPPA's Arguments Against the Deliverer Point of Regulation Are Without Merit

LADWP's and SCPPA's arguments against the Deliverer point of regulation should be rejected not only because they are not appropriately considered in this forum, but also because there is no merit to their assertions that the CPUC and CEC erred when they recommended a Deliverer approach to the point of regulation in the electricity sector.

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[3] *Id.* at 6-7.
[4] *Id.* at 7.
[5] *Id.*
[6] *Id.* at 81-91.

### 1. **<u>The Deliverer Approach Tracks Emissions From Imports and In-State Transactions as Accurately, or More Accurately, Than a Load-Based or Retail Provider Approach</u>**

LADWP's primary contention is that the Deliverer point of regulation is "fundamentally flawed" because of the alleged difficulty of tracking imports under the Deliverer approach.[7] LADWP expresses concern that the process for tracking import transactions back to their generation source through the use of NERC E-tags will not be successful.[8] LADWP also argues that the integrity of the AB 32 emissions cap may be compromised by the fact that not all sources (i.e., generating facilities) are within California.[9]

In making the decision to recommend a Deliverer point of regulation, the CPUC and CEC concluded that the Deliverer approach "is the preferable alternative regarding the ability to ensure that reported GHG emission reductions are real,"[10] and that a Deliverer point of regulation "would provide for the environmental integrity of the cap-and-trade system by covering imported power as well as in-state generation."[11] Thus, the CPUC and CEC have already rejected LADWP's argument that the Deliverer approach does not adequately account for imports.

Even assuming that tracking imported emissions will be difficult, however, the alternative to the Deliverer approach supported by LADWP – a load-based or retail provider point of regulation – suffers from at least as great or greater tracking problems than the Deliverer approach.

Under either a load-based or Deliverer point of regulation, there will be parties importing power into California. In an attempt to accurately determine the emissions associated with these imports, it has been proposed that NERC E-tag information can be used to identify the source

[7] LADWP Opening Comments at 3-4.
[8] *Id.* at 3.
[9] *Id.*
[10] D.08-03-018 at 63.
[11] *Id.* at 72.

entity associated with the imported power. This may or may not lead to the original generation source. If it does, then GHG emissions associated with the imported power will be tracked accurately. If it does not, some less accurate assumed emission rate must be applied. However, if it is not possible to identify the original generation source through NERC E-tags, there is no difference between the information that will be available to make an estimate of the emission rate of the imported power under the load-based and Deliverer approaches. There is no basis to criticize the Deliverer point of regulation because NERC E-tags may not always provide the source of imported power when a load-based point of regulation suffers from the same problem.

While the Deliverer approach may sometimes require the same emissions estimation as would be required under a load-based approach, other problems under a load-based approach are substantially worse than under a Deliverer approach. First, there is uncertainty regarding the emissions of a significantly larger set of transactions under a load-based point of regulation than under a Deliverer point of regulation. In a regulatory structure with a load-based or retail provider-based point of regulation, uncertainty will exist regarding the actual generation source (and thus the actual emissions) for many load-serving entity ("LSE") purchases that derive from marketers or markets (such as the California Independent System Operator ("CAISO") markets), even if they take place inside California. In these instances, there may be no way to track the purchase to any specific generator and apply an accurate emission rate to the transaction. A marketer may receive power from multiple sources and the ability to review a marketer's book to determine which source is associated with which sale is severely limited. For purchases from the CAISO markets, the ability to assign specific sources to transactions is non-existent so assumed emission rates will need to be applied to such purchases. Under the Deliverer approach, there will be no uncertainty surrounding the actual emissions of in-state purchases from marketers and markets because these transactions are regulated upstream when the Deliverer delivers the power to the California grid. Accordingly, while default emission rates may be required for some imports under both the load-based and Deliverer approaches, default emission rates are also required for a substantial number of in-state transactions under the load-based approach, resulting in less accurate tracking of emissions.

Second, a load-based or retail provider alternative falls well short of the Deliverer approach in its ability to provide accuracy and integrity to the emissions reporting and responsibility for imports. Under a Deliverer approach, responsibility for emissions is assigned for every import. In other words, for every import for which the transactions can be traced to a generation source, accurate emissions responsibility will be assigned (though for those transactions that cannot be traced effectively, an assumed emission rate will apply). Under a load-based system, some of the import transactions will be bilateral sales to LSEs, and the identical ability to track actual emissions will apply. However, to the extent that some imports will be sold to a marketer or through a market (e.g., the CAISO), the ability to track and assign specific emissions responsibility to the ultimate purchasing LSE will be lost, and an assigned emission rate will need to be used. Again, the transactions that can be tracked under a load-based approach can also be tracked under a Deliverer approach, but many import transactions that can be tracked under a Deliverer approach will lose their emissions source under a load-based approach (through sales to a marketer or a market prior to the ultimate sales to an LSE) before responsibility for the GHG has been assigned.

In summary, no situations have been identified in which the emissions information will be inaccurate under a Deliverer approach but accurate under a load-based approach, while numerous examples of the converse situation are described above. If potential gaming of the system is considered, the situation gets even worse for the load-based approach. Recognizing that higher-emitting resources that will impose a greater GHG cost are the same resources that will have an incentive to deliver to California LSEs in such a manner that their higher emissions cannot be accurately determined, there will likely be an even greater fraction of resources whose accurate emissions tracking will be compromised under a load-based system.

## 2. A Deliverer Point of Regulation Does Not Require a Specific Allowance Allocation Method

SCPPA argues that "[t]here is interaction between the point-of-regulation issue and the allowance allocation issue."[12] According to SCPPA, a decision to designate Deliverers as the point of regulation in the electricity sector "effectively precludes an allocation of allowances to the regulated entities on the basis of historical emissions."[13] SCPPA appears to suggest that under a Deliverer approach allowances may only be allocated to Deliverers, and that such allocation to Deliverers will provide them with a "windfall."[14] SCPPA's arguments are flawed for the following reasons.

First, there is no reason that a decision on the point of regulation must or even should determine the method for allocating allowances. They are independent determinations. The CPUC and CEC recognized this fact in D.08-03-018, stating that "[f]undamentally, determining the point of regulation is independent from determining the method of obtaining allowances or the method of distributing any benefits which might come from allocation."[15] The Western Climate Initiative ("WCI") has also recognized that the point of regulation and allocation methodology are independent.[16] Therefore, the Deliverer approach does not preclude allocating allowances to retail providers. Indeed, in D.08-03-018, the CPUC and CEC expressly recognized that, despite the choice of a Deliverer point of regulation, allowances could be allocated through auction or administrative allocation, "either to deliverers or potentially to other entities such as retail providers."[17]

Second, free allocation of allowances to Deliverers does not necessarily result in a "windfall" to such Deliverers. As explained in SCE's opening comments, an equitable allocation

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[12] SCPPA Opening Comments at 24.
[13] *Id.*
[14] *Id.*
[15] D.08-03-018 at 7.
[16] WCI Draft Design Recommendations on Elements of the Cap-and-Trade Program at 11 (May 16, 2008).
[17] D.08-03-018 at 94.

scheme recognizes the ability of Deliverers to capture some emissions value via higher market prices. An efficient allocation mechanism, such as SCE's harm-based proposal, only allocates allowances to compensate Deliverers for the economic burden they are not compensated for in the market. Allocating allowances to cover this unmet economic harm is not a windfall.

### 3. GHG Emissions Costs Should Be Incorporated Into the Operating Costs of Generating Facilities and Wholesale Electricity Prices

Finally, LADWP argues that while the Deliverer point of regulation "will result in a dramatic increase in wholesale electricity prices equivalent to the cost of carbon emission allowances," if the point of regulation were the retail provider, "the wholesale market would not experience this increase in the market clearing price, because first deliverers would not need to pass on the cost of carbon allowances in their wholesale bid prices."[18]

Incorporating GHG emissions costs into the operating costs of generating facilities is a cost-effective and efficient way to reduce such emissions. Internalizing emissions costs allows the market to find the lowest cost options to reduce GHG emissions. When emissions costs are internalized into the operating costs of generating facilities, and thus into wholesale electricity prices, there is a price signal to the market which creates an economic incentive to reduce GHG emissions. Sending this price signal to the market encourages energy efficiency, conservation, development of clean resources, and innovation in new clean technology without the need for complex and difficult to administer regulations. Regulators do not have the burden to administratively determine the most effective means to reduce GHG emissions. The price signal to the market incentivizes the most cost-effective GHG reduction options.

In addition, retail electricity prices will increase under either a load-based or Deliverer regulatory scheme. Indeed, because of the market inefficiencies created under a load-based system, prices under a load-based system may even be higher than in a Deliverer system.

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[18] LADWP Opening Comments at 13.

According to the Market Surveillance Committee of the CAISO, a load-based system may actually result in "higher, *not* lower, energy cost to consumers."[19]

## III.

## CALIFORNIA SHOULD ADOPT A BROAD, MULTI-SECTOR CAP-AND-TRADE SYSTEM

In D.08-03-018, the CPUC and CEC recommended that a "multi-sector cap-and-trade program be developed for California that includes the electricity sector."[20] A broad, economy-wide cap-and-trade program is particularly well suited to GHG emissions reductions. A reduction in GHG emissions is equally beneficial no matter where that reduction takes place. A ton of GHG reduced in the cement industry has the same influence on climate change as a ton reduced in the transportation industry or the electricity industry. A broad, economy-wide cap-and-trade program will therefore allow obligated entities to find the lowest cost emission reduction opportunities regardless of the economic sector or geographic location. Entities that can provide emission reductions at a lower cost than other market participants will realize an incentive to directly reduce emissions and sell allowances to other participants that do not have the ability to readily and directly reduce emissions at a low cost.

### A. The Cap-and-Trade Program Should Be Broader Than the Electricity Sector

Some stakeholders' opening comments argue that the E3 modeling results demonstrate that an electricity sector cap-and-trade program will not immediately create emission reductions, and may increase compliance costs relative to direct emission reductions.[21] However, the E3 model does not address the benefits of a broad, economy-wide cap-and-trade system. It only analyzes the electricity sector. Credible estimates show that comprehensive market-based

[19] Market Surveillance Committee to the CAISO, Opinion on "Load-Based and Source-Based Trading of Carbon Dioxide in California" at 5 (Nov. 27, 2007).

[20] D.08-03-018 at 5 (emphasis added).

[21] LADWP Opening Comments at 6-9; SCPPA Opening Comments at 2-3.

approaches can meet AB 32's GHG reduction requirements at a significantly lower cost than direct, programmatic regulations.[22]

SCE agrees that a cap-and-trade program limited solely to the electricity sector is not an advisable approach for California. A cap-and-trade program limited solely to the electricity sector would exclude potential emission reductions from the rest of the economy and limit the extent to which obligated entities could implement the lowest cost emission reduction opportunities. However, a broad, multi-sector cap-and-trade program will facilitate lower cost emission reductions than reliance on additional direct regulations. A broad-based, economy-wide cap-and-trade program will create the incentives needed to find the lowest cost emission reductions available. Allowance trading within the cap-and-trade sector will also reward those entities with lower cost abatement opportunities, and reduce the cost burden for those entities with higher direct abatement costs. The result will be lower overall costs to achieve the statewide emissions cap established in AB 32.

## B. Early Reductions in the Emissions Cap Should be Gradual

Although the E3 modeling results do not provide a complete evaluation of the merits of a broad, multi-sector cap-and-trade program, results from EPRI indicate that selecting more gradual emission reduction targets can minimize costs.[23] The CPUC, CEC, and CARB should keep this observation in mind in developing an appropriate slope for the AB 32 emissions cap from 2012 through 2020. The early emission reduction ramp rate should be very shallow, increasing as the program progresses toward the 2020 deadline. AB 32's goal is to reduce California GHG emissions to 1990 levels by 2020. The focus should remain on the 2020 goal.

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[22] *See* Electric Power Research Institute ("EPRI"), Program on Technology Innovation: Economic Analysis of California Climate Initiatives: An Integrated Approach, Volume 1: Summary for Policymakers at 1-7 (June 2007) ("As an indication of the stakes involved, specific regulatory approaches analyzed could increase costs by over 60% compared to comprehensive market-based approaches that preserve environmental gains and allow flexible choices to reduce costs.") (available at www.epriweb.com/public/000000000001014641.pdf). *See also id.* at 3-6 (noting that command-and-control would diminish economic welfare 30% more than a comprehensive cap-and-trade system).

[23] *See id.* at 3-1 ("Selecting more gradual emission reduction targets and more cost-effective policy tools, however, can minimize the costs that are borne for any particular choice of cap stringency.").

Moreover, the long-term support for emission reductions in California is dependent on the costs of the program. Steep early reduction paths will needlessly increase the costs of compliance just as obligated entities are beginning compliance under AB 32's regulatory requirements; thus, risking eroding public support for additional GHG reduction activity and the State's ability to achieve 1990 level emissions by 2020.

### C. Obligated Entities Should Not Be Allowed to Opt Out of the Cap-and-Trade System

In its opening comments, SCPPA again argues that if its preferred method of GHG regulation is not adopted, there should be an "alternative compliance option" that would allow retail providers who are also Deliverers to opt out of the cap-and-trade system.[24] As SCPPA's comments state, SCPPA made this same argument in its comments on D.08-03-018 and it was rejected by the CPUC and CEC.[25] There is no basis for revisiting SCPPA's proposal here.

The effectiveness of a cap-and-trade system is dependent on a broad and liquid market where there are many GHG emission reduction options that can be evaluated and ranked to identify the most cost-effective emission reduction measures. The "alternative compliance option," which is a carve-out for some retail providers, will allow the large majority of retail providers, measured by load, to opt out of the cap-and-trade system, thus compromising the breadth and liquidity of the market. The "alternative compliance option" will also significantly complicate GHG regulation of the electricity sector. Maintaining a Deliverer-based cap-and-trade program and a retail provider-based "alternative compliance option" will substantially increase administrative costs and burdens. It will also significantly complicate the reporting and tracking of emissions by including both the complexities of retail provider-based reporting that are avoided by Deliverer-based regulation and the additional complications inherent in having some entities under a Deliverer system and some entities under a retail provider system. Moreover, it is unclear how the entities under the Deliverer approach would interact with the

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24 SCPPA Opening Comments at 73-74.
25 *Id.*

entities under the "alternative compliance option" for purposes of reporting, trading of allowances, and purchasing and selling into the wholesale energy markets. There is significant risk of double counting or under-counting of emissions. The complexities of the structure SCPPA advocates could also undermine the environmental integrity of the program, and make it much more difficult to integrate California's program into a regional or national system.

# IV.

# ALLOWANCE ALLOCATION

## A. The CPUC and CEC Should Recommend an Allowance Allocation Approach Based on Economic Harm

As discussed in detail in SCE's opening comments, SCE supports allocating allowances to those entities that experience economic harm due to the implementation of an AB 32 GHG reduction program.[26] In its opening comments, the Independent Energy Producers Association ("IEP") argues that SCE's economic harm proposal transfers wealth from relatively low-emitting generation to higher-emitting generation and LSEs.[27] SCE disagrees. The benefits of an economic harm-based approach are that it distributes allowances in a fair and equitable manner, as required by AB 32,[28] while reducing wealth-transfer and minimizing any unearned windfalls. In California, the entities that will suffer the majority of the economic harm from AB 32 regulation are consumers, retail providers with fossil generation, and coal fired electricity generators whose output is delivered to California.[29] IEP claims that allocating allowances to these entities "excludes all other participants in California who may be facing 'economic harm' due to the implementation of the AB 32 program."[30] But IEP fails to identify these alleged

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26 SCE Opening Comments at 2-5.
27 IEP Opening Comments at 12.
28 Cal. Health & Safety Code § 38562(b)(1).
29 Generators with existing contracts that do not provide for recovery of GHG compliance costs will also suffer economic harm.
30 IEP Opening Comments at 12.

entities that will face economic harm but will not receive allowances. Under SCE's economic harm proposal, all harmed entities should receive allowance allocations.

IEP appears to imply that low-emitting generators will suffer economic harm but not receive allowances under SCE's proposal. However, generators with emissions at or below the marginal unit will not suffer economic harm. As shown in the E3 GHG Calculator, the GHG compliance costs of low-emitting generators selling to the market are more than offset by the market clearing price ("MCP") effect.[31] Market prices will increase to reflect the GHG compliance costs of the marginal unit, creating the MCP effect. This MCP effect provides additional revenues to low-emitting generators because they recover their costs related to AB 32 compliance in the higher market price (or even more than their compliance costs if their emissions are lower than the marginal unit), and therefore do not suffer economic harm. Low-emitting generators that do not sell into a market may suffer economic harm in some circumstances. If those cases where such generators do suffer economic harm, SCE agrees that they should be allocated allowances.

Pacific Gas and Electric Company's ("PG&E") opening comments argue that while SCE's proposal auctions a significant share of allowances, it would retain a portion of allowance for free allocation to generators.[32] PG&E asserts that because the amount of allowances provided for free under SCE's proposal does not decline, SCE's methodology results in an ongoing inefficiency and unfairness.[33] These comments demonstrate a significant misunderstanding of SCE's allocation proposal.

SCE's economic harm-based allocation proposal describes the means of allocating the economic value of allowances. However, the mechanical means of distributing allowances, either via direct allocation or auction, is independent of the method of allocating the allowance value. SCE's proposal can be implemented using either means of distributing allowances. The

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[31] E3 Presentation, Electricity & Natural Gas GHG Modeling, Revised Results and Sensitivities at 25 (May 13, 2008).

[32] PG&E Opening Comments at 30.

[33] *Id.*

State could directly allocate allowances to entities that suffer economic harm, and then those entities could be required to sell the allowances at an auction. Alternatively, the State could allocate auction revenue rights ("ARRs") to entities that suffer economic harm and then auction allowances with the revenues going to the entities that received ARRs. PG&E's preferred allowance allocation approach provides for free allocation of allowances to LSEs, with the LSEs then selling the allowances through an auction.[34] Therefore, there is no difference between SCE's and PG&E's approaches with respect to the use of an auction.

Furthermore, PG&E's sales-based allocation to LSEs would provide PG&E with an economic windfall. AB 32 requires that the CARB distribute allowances in a manner that is "equitable."[35] In addition, in D.08-03-018, the CPUC and CEC stated that:

> Our intent in developing additional allocation policy recommendations is to ensure that GHG emissions reductions are accomplished equitably and effectively, at the lowest cost to consumers. While we may wish to reward early actions to reduce GHG emissions in advance of 2012 when the AB 32 compliance period begins, it is not our intent to treat any market participants unfairly based on their past investments or decisions made prior to the passage of AB 32.[36]

The Joint Staff Paper also states that "any recommended allocation method should not result in large redistributions of funds from one set of retail consumers to another as a result of actions taken prior to AB 32."[37] SCE agrees that equity should be a primary objective of any allowance allocation methodology and believes that equitable allocation can be best accomplished by allocating allowances based on economic harm.

Finally, PG&E and San Diego Gas & Electric Company ("SDG&E")/Southern California Gas Company ("SoCalGas") suggest that considering economic harm or historical emissions in allocating allowances may not be consistent with AB 32 because the statute requires credit for early actions to reduce emissions.[38] AB 32 provides that in adopting regulations the CARB

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34 *Id.* at 8.

35 Cal. Health & Safety Code § 38562(b)(1).

36 D.08-03-018 at 8.

37 Joint CPUC and CEC Staff Paper on Options for Allocation of GHG Allowances in the Electricity Sector ("Joint Staff Paper") at 11.

38 PG&E Opening Comments at 35-36; SDG&E/SoCalGas Opening Comments at 5.

should "[e]nsure that entities that have voluntarily reduced their greenhouse gas emissions prior to the implementation of this section receive appropriate credit for early voluntary reductions."[39] SCE agrees that the CARB must provide appropriate credit for voluntary early action. However, the early voluntary reductions and early action referred to in the statute is action taken after the enactment of AB 32 and action taken specifically to reduce GHG rather than for some other purpose. The CARB adopted a policy to provide for confirmation of the emission quantification methods used by voluntary early actors and for potential awarding of credits for such voluntary early actions.[40] Accordingly, entities will receive credit for their voluntary early reductions under the CARB voluntary early action policy as implemented in the final AB 32 implementation rules.

AB 32 does not provide that entities with lower pre-AB 32 emissions should receive economic windfalls as a reward. These entities will benefit through lower compliance costs because their emissions are lower and, in the case of generators, will also benefit from the higher market clearing prices. It is neither necessary nor appropriate to provide them with a windfall through additional allowances for their low emissions. Additionally, the reductions in GHG afforded from programs undertaken in the past (e.g., energy efficiency programs or RPS) may not necessarily be "additional" as required by AB 32. Furthermore, as discussed above, AB 32 provides that allowances must be distributed equitably, and the CPUC and CEC have held that market participants should not be treated unfairly based on their pre-AB 32 investments. SCE's economic harm approach satisfies these goals, and, combined with the CARB's policies regarding voluntary early actions, will appropriately encourage and credit voluntary early reductions.

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[39] Cal. Health & Safety Code § 38562(b)(3). AB 32 also provides that AB 32 regulations, including the distribution of allowances, should be designed in a way that "encourages early action to reduce greenhouse gas emissions." *Id.* § 38562(b)(1).

[40] CARB Policy Statement on Voluntary Early Actions to Reduce Greenhouse Gas Emissions.

## B. The Economic Harm Approach Combines Aspects of the Sales-Based and Emissions-Based Approaches

SCE believes that the sales-based and emissions-based approaches to allocating allowances both have merits. However, allocating all allowances using a single approach (defined as "pure" allocation schemes in the Joint Staff Paper) will result in over-allocation of allowances to certain groups and the possibility of windfall profits. For example, the 100% sales-based allocation to LSEs advocated by PG&E and SDG&E/SoCalGas is flawed because it would over-allocate allowances to LSEs with "clean" portfolios at the expense of higher-emitting generators and LSEs. Similarly, if allowances were allocated solely based on historical emissions, then low-emitting independent generators would receive more allowances than they need to cover their costs to meet GHG rules.

The ideal allowance allocation methodology should use a combination of the sales-based and emissions-based approaches to mitigate economic harm. This compromise will allocate allowances in a way that is fair and equitable while minimizing windfall profits. To mitigate economic harm in an equitable manner, the following adjustments should be made to the pure allowance allocation approaches.

### 1. Sales-Based

Allowances to LSEs under a sales-based approach should only be allocated for load served from market purchases. This is to compensate customers for the market clearing price or MCP effect under a cap-and-trade program, as discussed above. Customers will suffer economic harm because of the increase in the market clearing price to cover GHG compliance costs. This allocation should be updated annually to adjust for load changes and grossed up for energy efficiency.

Load served by LSE-owned generation should be evaluated using a different criteria (i.e., historical emissions). Allowances for LSE-owned generation should be allocated based on the emissions profile of the generation resource, not output, because consumers will not suffer any economic harm for load served using LSE-owned zero-emission generation such as hydro and nuclear power. Because such generation has no GHG emissions, no allowances will be required to cover its emissions. Allocating allowances to an LSE for load served using LSE-owned zero-emission generation would create a windfall profit and wealth transfer from other LSEs with higher-emitting generation. For load served using LSE-owned fossil-based generation, allowances should be allocated based on the historical emissions of the unit.

### 2. Emissions-Based

Allocation of allowances to generators should be based upon whether or not the generator sells to the market. Generators that sell to the market should only receive allowances for economic harm that is not compensated by the MCP effect as explained above. As discussed above, generators with emission rates at or below the marginal unit do not need allowances because the MCP effect compensates them for their GHG compliance costs and any allowance allocation would result in a windfall profit. Generators with emissions rates above the marginal unit will need allowances. Generators that are LSE-owned should be treated differently as explained above because there is no MCP effect.

## C. If California Auctions Allowances, Auction Proceeds Should be Distributed to Mitigate Economic Harm

Certain stakeholders supported various levels of allowance auctioning and have different proposals for the disposition of auction proceeds.[41] As SCE stated in its opening comments, if California uses an auction to distribute allowances, auction proceeds should be distributed via an auction revenue rights or ARR mechanism. In this way, the auction is the mechanism used to distribute the allowances, while the initial allowance allocation metric is used to determine the disposition of allowance value. If an auction is used, California should allocate ARRs according

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[41] *See, e.g.*, National Resources Defense Council ("NRDC")/Union of Concerned Scientists ("UCS") Opening Comments at 6-7; The Utility Reform Network ("TURN") Opening Comments at 9-13; FPL Energy Project Management, Inc. ("FPLE") Opening Comments at 4-5; Division of Ratepayer Advocates ("DRA") Opening Comments at 7-9.

to SCE's economic harm allocation proposal and then conduct an allowance auction with the auction proceeds distributed according to the ARR allocation metric.

## D. The State Must Not Retain Any Share of Auction Proceeds

Some stakeholders express concern that if California uses an auction to distribute allowances, there is a significant risk that the auction proceeds may be siphoned off for other purposes before being distributed.[42] Under such a circumstance, the ARR allocation would be meaningless because harmed entities would not receive their full ARR allocation. SCE supports a full allocation of allowance value, either through direct allocation or the allocation of ARRs. Anything short of a full allocation will needlessly increase the cost of compliance with AB 32. If the State chooses to support additional emission reduction projects, it must do so in the initial allocation process. The State should not shave off any amount of auction proceeds to support a special program. Additionally, an allowance auction must not be seen as a means to supplement the State's general revenue fund. This would be tantamount to imposing a tax on utility ratepayers without legislative approval.

## E. The State Must Not "Carve-Out" Part of the Emissions Cap to Support the Voluntary Market

The opening comments of the Renewable Energy Marketers Association ("REMA") and the Solar Alliance suggest that California provide a set-aside for the voluntary renewable energy market by either allocating allowances to new renewable generators or retiring emission allowances on behalf of the voluntary demand for renewable energy.[43] This proposal violates the very concept of voluntary emissions reductions. A voluntary emissions reduction is supported, not as a result of legislation, but rather as an effort freely taken by an individual or firm. As such, voluntary emissions reductions are those taken <u>in addition to</u> reductions that are mandated by laws such as AB 32. If an emission reduction is mandated by law, then it is, by definition, not

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[42] SCPPA Opening Comments at 35-36; LADWP Opening Comments at 17-18.
[43] REMA Opening Comments at 9-14; Solar Alliance Opening Comments at 11-14.

voluntary. As a result, any set-aside or special retirement of allowances would not be a voluntary reduction. Further, any certification of such a reduction as being a voluntary reduction would be inaccurate. If California were to set-aside or retire allowances under AB 32 for the voluntary renewable energy market, any reductions from that market would no longer be voluntary. Such reductions would simply act to further reduce the mandated GHG emissions cap under AB 32.

Moreover, the voluntary renewable energy market does not need a free hand-out. According to REMA's and the Solar Alliance's opening comments, there is a vibrant voluntary renewable energy market in the United States.[44] Through voluntary actions, individuals and firms have increasingly indicated their interest in supporting emission reductions and renewable generation beyond the levels mandated by various regulatory protocols.[45] A carve-out or special allowance retirement is nothing more than a free hand-out to the voluntary market. According to REMA's and the Solar Alliance's own comments, however, the voluntary market is thriving and does not need any special dispensation from the State. Parties looking to market voluntary emission reductions can and do purchase emission offsets, fund direct emission reductions, and purchase allowances from regulated markets. Stakeholders that ask California to carve-out a share of allowances do so in an effort to avoid the economic burden of purchasing allowances to create voluntary certificates. If a voluntary early actor desires to receive reward for actions taken to reduce GHG emissions after the enactment of AB 32 and prior to the adoption of the rules implementing the statute, that entity should apply to the CARB for review of its method of quantifying proposed emissions reductions as provided in the CARB's voluntary early action policy.

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44 REMA Opening Comments at 3-5; Solar Alliance Opening Comments at 11.

45 *See, e.g.*, Green-e program by the Center for Resource Solutions at http://www.green-e.org/.

## V.

## FLEXIBLE COMPLIANCE

Cost containment is a critical requirement of AB 32. The Legislature expressly stated that: "It is the intent of the Legislature that the State Air Resources Board design emissions reduction measures to meet the statewide emissions limits for greenhouse gases established pursuant to [AB 32] in a manner that minimizes costs and maximizes benefits for California's economy. . . ."[46] Moreover, AB 32 requires the CARB to adopt a scoping plan and rules and regulations to achieve "the maximum technologically feasible and cost-effective reductions in greenhouse gas emissions from sources or categories of sources of greenhouse gases by 2020";[47] and defines "cost-effective" or "cost-effectiveness" to mean "the cost per unit of reduced emissions of greenhouse gases adjusted for its global warming potential."[48] Cost-effectiveness and cost minimization are also mentioned in several other parts of the legislation.[49] Additionally, the long-term success of any emission reduction program relies on the public acceptance of such efforts. Implementing such program at the lowest possible cost is a critical part of this acceptance.

In order to ensure that the cost containment requirements of AB 32 are achieved, SCE advocates a number of flexible compliance or cost containment mechanisms, including allowance banking and borrowing, multi-year compliance periods, rolling and flexible compliance periods, safety valve, offsets, and alternative compliance payments.[50] There is also broad support for flexible compliance and cost containment measures from many other

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[46] Cal. Health & Safety Code § 38501(h) (emphasis added).

[47] *Id.* § 38561(a) (emphasis added). *See also id.* §§ 38560, 38561(b), 38562(a).

[48] *Id.* § 38505(d).

[49] *See id.* §§ 38562(b)(1) (stating that CARB shall design the regulations, including distribution of allowances where appropriate, in a manner that "seeks to minimize costs"); 38562(b)(5) (requiring that CARB "[c]onsider [the] cost-effectiveness of these regulations"); 38562(c) (providing that CARB may establish a system of market-based declining annual aggregate emission limits that CARB determines "will achieve the maximum technologically feasible and cost-effective reductions in greenhouse gas emissions"); 38564 (requiring CARB to consult with other states, the federal government, and other nations "to facilitate the development of integrated and cost-effective regional, national, and international greenhouse gas reduction programs").

[50] SCE Opening Comments at 11-30.

stakeholders.[51] Most of the opposition to flexible compliance mechanisms in the parties' opening comments focuses on the areas of borrowing and offsets. SCE addresses those areas, as well as alternative compliance payments, below.

## A. <u>Borrowing Should Be Permitted as a Flexible Compliance Option</u>

As discussed above, AB 32 provides that the CARB should design emissions reduction measures to meet the emissions cap in a manner that "minimizes costs."[52] Flexible compliance options are mechanisms to allow individual obligated entities to manage the cost of complying with AB 32. If such measures are properly designed, they will not interfere with California's ability to reach its AB 32 emissions reduction goals. Managing compliance costs across compliance periods in a manner that minimizes the economic impact of compliance over the long-term, while also allowing California to achieve the AB 32 cap, is consistent with AB 32's requirement that the CARB design measures to minimize costs.

Borrowing allowances is one flexible compliance mechanism that will give obligated entities the flexibility needed to meet long-term emissions reduction goals at the lowest possible cost. Stakeholders such as DRA and NRDC/UCS oppose allowance borrowing.[53] They argue that borrowing will discourage early emission reductions and may risk violating the AB 32 cap. DRA and NRDC/UCS offer no evidence that borrowing will discourage early emissions reductions. Moreover, the AB 32 emission reduction goal is a 2020 goal. If improving technology makes it more cost-effective to achieve GHG reductions in the later years between 2012 and 2020 than the earlier years, the AB 32 goal is still satisfied. Borrowing may allow the time necessary to develop and implement improved technologies that result in lower GHG emissions. A properly implemented system of allowance borrowing will also preserve the

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[51] *See, e.g.*, SCPPA Opening Comments at 51-54; PG&E Opening Comments at 36-41; SDG&E/SoCalGas Opening Comments at 23-26; PacifiCorp Opening Comments at 25-34.

[52] Cal. Health & Safety Code § 38501(h).

[53] DRA Opening Comments at 34; NRDC/UCS Opening Comments at 23.

environmental integrity of AB 32 compliance. Any allowances borrowed would not be available for allocation in future periods, thus there would be no opportunity to violate the 2020 cap.

## B. A Robust Offset Policy Must Be Part of California's AB 32 Compliance Program

SCE believes that a strong offset policy is a critical ingredient in any viable global warming policy whether at the state, regional, national, or international level. A reduction in GHG emissions is equally beneficial no matter where that reduction takes place because GHG emissions disperse rapidly around the globe. This scientific fact makes offsets based on reductions in GHG emissions wherever they can be found equally beneficial to reductions in emissions at the individual, state, or regional level in terms of serving the fundamental purpose of any GHG reduction program, i.e., real GHG emissions reductions that lessen the risk of global warming. Global warming is a global problem with global causes. Offsets are a practical necessity if California is to effectively combat global warming.

Currently, about 6% of global GHG emissions are under a "cap" regime. Taking the governments of many developing nations (particularly, China and India) at their word that they will not commit to GHG reductions,[54] it is unlikely that more than 50% of the total global anthropogenic emissions of GHG will be capped even if all developed nations, including the United States, commit to such an approach. Addressing only 50% of the global GHG emissions inventory will not successfully reduce global warming. Offsets, which allow the entry into the market of those not under a GHG cap, offer a practical means of addressing the 50% of global emissions that is not likely to be capped in the foreseeable future.

Many stakeholders' opening comments support a robust offset policy.[55] In particular, EcoSecurities supports the use of offsets from a broad range of activities, project types, and

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[54] Keith Bradsher, *China to Pass U.S. in 2009 in Emissions*, N.Y. Times, Nov. 7, 2006 ("'You cannot tell people who are struggling to earn enough to eat that they need to reduce their emissions,' said Lu Xuedu, the deputy director general of Chinese Office of Global Environmental Affairs. . . .").

[55] *See, e.g.*, EcoSecurities Opening Comments; SCPPA Opening Comments at 53; PG&E Opening Comments at 56-64; SDG&E/SoCalGas Opening Comments at 23-26; Western Power Trading Forum ("WPTF") Opening Comments at 14.

geographies under AB 32 for compliance purposes.[56] EcoSecurities argues that a robust offset policy can provide a number of benefits to California, including reducing compliance costs while achieving the same environmental benefits, generating broader emission reductions than would otherwise occur in capped sectors alone; and providing for immediate and near-term reductions of emissions and possibly accelerating the rate of GHG reduction by targeting the least cost options.[57] SCE strongly agrees. Without substantial reductions in GHG in the rest of the United States and worldwide, and especially in developing countries that are resisting committing to reductions, the Intergovernmental Panel on Climate Change forecast path of significant climate damage is inevitable. Inclusion of a strong offset program under AB 32, without geographic restrictions or quantity limits, gives California the opportunity to achieve significant cost savings and to transfer GHG reduction technology and practices to other parts of the country and world.

Several parties either argue against the use of offsets for compliance purposes or assert that offsets should be limited. For example, TURN argues that the use of offsets should be "extremely limited."[58] The Coalition of California Utility Employees/California Unions for Reliable Energy ("CUE/CURE") contend that there be should be no use of offsets in AB 32 compliance, stating that "the entire concept of using offsets to enable flexible compliance is based upon the false assumption that there are measures that are surplus where no surplus actually exists."[59] NRDC/UCS assert that if offsets are allowed they should be limited to a small percentage, possibly 10%, and that they should be discounted.[60] SCE strongly disagrees and addresses NRDC/UCS's comments in more detail below.

NRDC/UCS caution against the use of an offsets program for compliance purposes and imply that a cap-and-trade program, without flexible compliance mechanisms such as offsets, is

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[56] EcoSecurities Opening Comments at 1-2.
[57] *Id.* at 2.
[58] TURN Opening Comments at 21.
[59] CUE/CURE Opening Comments at 8.
[60] NRDC/UCS Opening Comments at 29.

sufficient to minimize the costs of implementing AB 32.[61] SCE disagrees with the implication that flexible compliance mechanisms are not necessary.

AB 32 aims to achieve GHG reductions in a cost-effective manner. NRDC/UCS recognize the benefit of a cap-and-trade system is that it allows capped entities the flexibility to lower their emissions or find another entity with a lower cost of reduction.[62] The benefits of a broad, multi-sector, economy-wide cap-and-trade program is that it maximizes the number of low cost emission reduction opportunities by covering all sectors. However, there is a risk that the cap-and-trade program implemented in California will be more limited. The current design of the cap-and-trade program being contemplated by the CARB and the Climate Action Team is limited in scope. Under the proposed program, the cap-and-trade program may only include the electric, manufacturing, and refining sectors. Transportation, the largest emitting sector, may not be included. As a result, the benefits of a cap-and-trade program in achieving the lower cost emission reduction measures may not be fully realized because of the limited number of capped entities. If the cap-and-trade system is not economy-wide, offsets may offer one of the few mechanisms by which such low cost emission reductions can be achieved in non-capped sectors.

NRDC/UCS also argue that "[o]ffsets do not achieve any additional global GHG emissions reductions over those that would be achieved directly via a cap and trade program."[63] Only about 6% of global GHG emissions are currently under a "cap" regime. To suggest, as NRDC/UCS does, that allowing valid offsets does not support emissions reductions in those areas of the world that are uncapped ignores the likely reality that offsets offer one of the few ways of engaging uncapped sectors and regions in the challenge of reducing global GHG emissions. California's GHG emissions, even if eliminated entirely, are not large enough in proportion to global GHG emissions to protect against global warming. A sound offset policy

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[61] *Id.* at 21.
[62] *Id.*
[63] *Id.* at 24.

that encourages transference of proven cost-effective methods employed within the State to the rest of the world will demonstrate California's leadership in reducing global GHG.

In addition, NRDC/UCS suggest that if offsets outside the State do not provide co-benefits for Californians, then the CARB must disallow or strictly limit those offsets.[64] Co-benefits are not a requirement of AB 32 offsets. AB 32 requires that the GHG reductions achieved are "real, permanent, quantifiable, verifiable, and enforceable by the state board," that "the reduction is in addition to any greenhouse gas emission reduction otherwise required by law or regulation, and any other greenhouse gas emission reduction that would otherwise occur," and if applicable, that "the greenhouse gas reduction occurs over the same time period and is equivalent in amount to any direct emission reduction required pursuant to this division."[65] There is no requirement that a GHG emission reduction have co-benefits.

While several provisions in AB 32 identify certain co-benefits as some of the many benefits of AB 32 GHG reductions and provide that the CARB should seek out such co-benefits "to the extent feasible,"[66] neither direct emission reductions in California nor offset projects located inside or outside of California are required to have co-benefits. Co-benefits are a beneficial indirect effect of GHG reduction efforts, but they must be secondary to the primary goal of reducing GHG emissions in a timely and cost-effective manner. If the Legislature had intended to require that any reduction in GHG emissions under AB 32 be accompanied by specific co-benefits, it could have done so. It did not.

If the AB 32 GHG reduction program aims at co-benefits, rather than maximizing cost-effective GHG reductions, it will inevitably reduce the program's ability to achieve efficient

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64 *Id.* at 28.

65 Cal. Health & Safety Code §§ 38562(d)(1)-(3).

66 *See, e.g.*, *id.* §§ 38501(h) ("It is the intent of the Legislature that the State Air Resources Board design emissions reduction measures to meet the statewide emissions limits for greenhouse gases established pursuant to this division in a manner that minimizes costs and maximizes benefits for California's economy, improves and modernizes California's energy infrastructure and maintains electric system reliability, maximizes additional environmental and economic co-benefits for California, and complements the state's efforts to improve air quality."); 38562(b)(2) ("[T]o the extent feasible and in furtherance of achieving the statewide greenhouse gas emissions, the state board shall . . . [e]nsure that activities undertaken to comply with the regulations do not disproportionately impact low-income communities.").

emissions reductions and drive up costs (a result specifically discouraged in AB 32). Restricting an offsets program to projects that provide co-benefits is contrary to the fundamental aim of California's program - achieving GHG reductions that materially improve the chances of avoiding the significant adverse effects of global warming at the lowest cost. 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. When such increased costs are taken into account, the economic well-being of California's citizens suffers.

In addition, SCE's experience in crafting voluntary early action ("VEA") GHG reduction proposals for submission to the CARB leads it to conclude that seekers of offsets will look first to reasonable projects nearby. A majority of SCE's VEA portfolio projects are within California, along with some out-of-state projects that are of extremely high quality (additional, measurable and enforceable). While SCE understands the preference for co-benefits, it urges the CPUC, CEC, and CARB to not place geographic, quantitative, or co-benefits restrictions on offsets.

Another risk that NRDC/UCS identifies is that offsets could undermine innovation.[67] SCE believes that this position is not supportable and that offsets will actually encourage innovative GHG reduction technology and practices and transfer these to areas of the country and world that have not yet embraced such technology and practices. SCE's VEA program shows that incentives that encourage GHG reductions do spur innovation. The programs in SCE's VEA application demonstrate that offsets can be found, even inside the State where much has already been invested in GHG reduction, that are cost-effective and innovative.

For the reasons stated above, the CPUC and CEC should reject NRDC/UCS and other parties' proposals to limit the use of offsets. SCE encourages the CPUC and CEC to recommend that CARB incorporate a robust offset program into its approach to reducing GHG emissions.

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[67] NRDC/UCS Opening Comments at 26.

## C. California Should Implement Alternative Compliance Payments for AB 32 Compliance

Some stakeholders support compliance penalties and/or oppose alternative compliance payments.[68] As provided in SCE's opening comments, SCE supports alternative compliance payments as the last resort compliance mechanism in the AB 32 compliance scheme.[69] Given the long-term nature of the GHG emissions reduction program, a situation may arise where no additional, real reductions may reasonably be found. For example, there may be a time when constraints beyond an obligated entity's control, such as delay in the creation of new technologies or delay in changes to legislation regarding zero-emissions technologies, may make it difficult for the obligated entity to both serve load and meet its GHG reductions targets. While penalties may be designed to send a strong signal to obligated entities, they should not be applied to entities that take all possible actions to reduce emissions and comply with AB 32. Penalties are ineffective in such scenarios where insufficient real reductions can be reasonably found during the compliance period. This is particularly important in the electricity sector, recognizing that the alternative in the electricity sector is the inability to serve firm electric load. In such a situation, an alternative compliance payment would provide a relief valve for the obligated entity and avoid the only other alternative for obtaining emissions reductions – curtailing of firm electric load.

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[68] WPTF Opening Comments at 19; Calpine Corporation ("Calpine") Opening Comments at 17; Morgan Stanley Capital Group Inc. ("Morgan Stanley") Opening Comments at 13-14.

[69] SCE Opening Comments at 25-26.

# VI.

# CHP

## A. Policies That Provide Set-Asides or Other Special Treatment for CHP Are Unwarranted and Unnecessary

SCE agrees with PG&E that CHP resources should not be granted special status or subsidies.[70] No further incentives are necessary if CHP resources are truly efficient and cost-effective contributors to GHG emissions abatement. Any program that would create special pricing or market advantages for CHP projects would place financial burdens on consumers who would be forced to bear the higher prices that would result if LSEs were forced to purchase energy from CHP projects as replacements for lower-emitting technologies that serve the same purpose.

Contrary to the assertions by the Energy Producers and Users Coalition ("EPUC")/Cogeneration Association of California ("CAC"),[71] any lack of power purchase agreements for CHP projects is driven by CHP economics and the need for thermal energy, and not by LSE or State policies. Significant opportunities exist for CHP generators to contract with LSEs and participate in the market. For example, SCE has made significant efforts to accommodate CHP facilities within its procurement practices and has made modifications to its solicitation protocols with the specific intention of making it easier for CHP facilities to participate. However, in all of SCE's procurement, resources that receive contracts are selected because customers benefit in some way through reduced cost, improved reliability, or increased environmental protection. To the extent they choose to participate in SCE's solicitations, CHP projects receive the same scrutiny and review as other projects. Their bids are reviewed under the same evaluation approach, and are subjected to the same criteria and requirements as all other bids.

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[70] PG&E Opening Comments at 67, 82-83.
[71] EPUC/CAC Opening Comments at 56.

Additionally, CHP generators may obtain contracts through bilateral negotiations, meaning they can present opportunities to SCE at any time for consideration. If an economic analysis determines that procurement is reasonable, and contractual guarantees for heat rates can be met, a contract can result.

CHP is an important part of SCE's portfolio and is expected to meet customer needs in the future to the extent that it is efficient, environmentally friendly, and economically attractive. Offering such generators special treatment, however, places unnecessary financial burdens on the customers that bear program costs and also undermines the integrity of the GHG reductions program to the extent such incentives displace other generators' more efficient resources.

## B. CHP Should Not Broadly Be Considered an Emissions Reduction Measure

SCE also agrees with PG&E and SDG&E/SoCalGas that CHP resources should not be deemed an emissions reduction measure.[72] SCE supports the use of low-carbon, efficient CHP resources. As Calpine notes in its opening comments, however, "[n]ot all CHP is created equally."[73] CHP applications vary greatly in size, application, operation, and efficiency. Not all CHP results in GHG emissions reduction.

With this fact in mind, the CPUC and CEC should be very wary of the data presented by EPUC/CAC. Specifically, the CPUC and CEC should not rely on EPUC/CAC's characterization of SCE's 2003 Qualifying Facility Efficiency Monitoring ("QFEM") program data for gas-fueled topping-cycle cogeneration facilities.[74] EPUC/CAC fails to use SCE's information in the correct context. Accordingly, most of the purported savings identified in EPUC/CAC's opening comments are from a few large facilities. The information provided by EPUC/CAC does not accurately represent the operating characteristics of SCE's cogeneration portfolio in the particular data year, and should not be used to broadly state that all CHP offers substantial benefits. If presented in the appropriate context, the data would show a range of efficiencies

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72 PG&E Opening Comments at 81-82; SDG&E/SoCalGas Opening Comments at 20.
73 Calpine Opening Comments at 20.
74 EPUC/CAC Opening Comments at 37.

from 24% to 88%. If all the 59 CHP projects presented in SCE's 2003 data operated at the same efficiency as the selected projects highlighted in EPUC/CAC's example, SCE agrees the fuel savings verses other fossil-fired resources would be real. The data in its entirety, however, illustrates a broad range of efficiencies and, most importantly, demonstrates that not all CHP projects have the fuel use and GHG reduction benefits claimed by EPUC/CAC.

## C. Performance and Efficiency Standard Should Be Imposed on CHP Resources in Order to Maximize GHG Benefits

The CPUC, CEC, and CARB should focus their efforts on adopting emissions regulations that support the furtherance of the lowest-carbon, most efficient technologies. To manage and ensure reduced emissions, as well as to reap the intended societal benefits of emissions reductions policies, CHP generators should be required to meet performance, emission, and efficiency standards.

AB 1613, signed into law in October 2007, will require CHP generators under 20 MW that sell excess electricity to electrical corporations to meet an overall efficiency of 60%. It is reasonable to expect performance that ensures customers receive the true benefits of CHP throughout the life of the project and not encourage inappropriate or inefficient applications that fail to provide the intended economic or environmental benefits. The alternative – not enforcing efficiency standards – is counterproductive to the State's goals. Inefficient CHP will burn gas unnecessarily and produce more emissions than if heat and electricity were generated separately. This outcome is not in the State's interest.

## VII.

## GENERATOR RECOVERY OF GHG COMPLIANCE COSTS SHOULD BE HANDLED CONTRACTUALLY BETWEEN THE PARTIES

EPUC/CAC and IEP address generators' ability to recover their GHG compliance costs.[75] For generators with existing contracts that do not provide a cost recovery mechanism for GHG compliance costs, SCE agrees that this is an issue that must be accounted for in the GHG regulatory structure. SCE's economic harm-based allocation proposal provides allowances to generators with existing contracts that do not provide for recovery of GHG compliance costs because such generators will face economic harm.

In contrast, an allowance allocation is not needed for generators with new contracts. Moreover, the CPUC and CEC should reject any suggestion of standard terms requiring LSEs to pay for GHG compliance costs in all contracts.[76] In a new contract, the compliance cost of GHG allowances should be negotiated just like any other variable cost. This cost is no different to the generator than the cost of any other input, such as natural gas. The generator can include GHG compliance costs into its bid price and the LSE will determine if the generator's price is competitive when compared with the LSE's other options. Alternatively, the generator can include the requirement that the LSE provide its GHG allowances, similar to a tolling agreement currently used by many generators. The contractual terms regarding GHG compliance costs in LSE agreements with generators should be left to the parties.

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[75] EPUC/CAC Opening Comments at 7-12; IEP Opening Comments at 4.
[76] EPUC/CAC Opening Comments at 10.

## VIII.

## E3 MODELING

### A. Parties' Opening Comments Properly Question Use of the High Energy Efficiency Scenario in the E3 Model

As the nation's leader in saving energy and reducing GHG emissions through successful electric energy efficiency programs, SCE is fully committed to meeting or exceeding the CPUC's adopted goals for energy efficiency. Consistent with its strong commitment to energy efficiency, SCE continues to aggressively pursue all cost-effective energy efficiency. Even with its long history as a strong advocate for aggressive energy achievements, SCE agrees with other parties that question the use of the High energy efficiency scenario in the E3 model as an appropriate planning case.

#### 1. TURN and PG&E Properly Recognize the Cost Implications of the High Energy Efficiency Scenario

In its opening comments, TURN acknowledges the cost impacts of increasing energy efficiency savings to the levels proposed in the E3 High energy efficiency scenario: "Going from the low-EE to the high-EE scenarios results in smaller incremental energy savings at much higher incremental costs in utility program spending."[77] Specifically, TURN points out that "[g]oing from the low-EE to the high-EE case results in an additional reduction of 3 MMt, while utility annual program costs increase from $887 million to $2.1 billion."[78]

Similarly, PG&E's opening comments describe the High energy efficiency scenario as "unprecedented and uncertain, both in the quantity achievable and the cost."[79] PG&E also states that energy efficiency costs seem orders of magnitude too low, given that energy efficiency used in the E3 model reflects a very significant increase in funding for programs, where utilities

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[77] TURN Opening Comments at 25.
[78] *Id.*
[79] PG&E Opening Comments at 111.

provide the full incremental cost of incentives.[80] PG&E describes several additional cost categories that are not incorporated in the current energy efficiency modeling and that would cause costs to be even greater than those incorporated into current modeling efforts, including costs related to decay rates, incentives for early retirement, opportunity costs for businesses, and contingency costs.[81]

While energy efficiency represents a preferred strategy for GHG reduction, SCE agrees with TURN and PG&E that the CPUC and CEC should recognize the significant increase in costs associated with moving to very high levels of energy efficiency savings, and consider the ratemaking implications of these increased energy efficiency levels.

### 2. PG&E Appropriately Highlights the Uncertainty of the High Energy Efficiency Scenario

In addition to recognizing the high costs of the High energy efficiency scenario used in the E3 model, PG&E's opening comments highlight numerous areas of uncertainty, in addition to costs, that create uncertainty in the estimates of energy efficiency potential. These uncertainties include introduction and widespread deployment of new technology, changes in end user preferences, measure costs, adoption of untested technologies, introduction of more energy efficient codes and standards and the degree of non-compliance associated with codes and standards, and customer participation rates.[82]

To reflect this uncertainty inherent in the aggressive estimates of energy efficiency used in the E3 GHG modeling, PG&E recommends that E3 and all other analyses incorporate the 20% uncertainty bands recommended by Itron, Inc. ("Itron") in analytic work and policy recommendations.[83] PG&E also suggests using the energy efficiency savings levels from Itron's Low Case goals as a proxy for the High energy efficiency scenario due to recent revisions in the

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80 *Id.* at 113.
81 *Id.* at 114.
82 *Id.* at 111-113.
83 *Id.* at 112.

Database of Energy Efficiency Resources ("DEER"), and to allow for the significant uncertainty in meeting the energy efficiency goals.[84]

PG&E's recommendation is consistent with SCE's recommendation that Itron's Low Case be used until the viability of the incentive strategy underlying the Mid and High Cases can be empirically proven. The Itron Mid and High Cases rely on an incentive strategy that no utility has ever employed for an entire portfolio of energy efficiency programs, let alone attempted to maintain for a 12 year timeframe. To support effective planning for AB 32 compliance, the levels of energy efficiency used in the CARB scoping plan should be attainable with a high degree certainty. Strategies based on overly aggressive, highly uncertain estimates of energy efficiency potential could ultimately cause California to fall short of its AB 32 goals.

### B. IEP's Changes to the Generator Assignments Should Not Be Adopted

SCE has reviewed IEP's suggested changes to the generator assignment in the E3 model.[85] Given the tremendous uncertainties regarding, at a minimum, retail competition and reopening of direct access, IEP's proposed modifications regarding generator assignment to particular LSEs are premature and likely to lead to inaccurate conclusions.

Assignment of generator ownership for the year 2020 within the E3 model should, as suggested by E3, reflect generator assignments "as accurate as possible," and "only projected contracts and ownership data" should be reflected in 2020.[86] Accordingly, data should be based on currently available information and not based on any speculation. Contrary to IEP's proposed changes, any generators that do not already have long-term contracts that extend to 2020 or beyond should not be assigned to any particular LSE.

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[84] *Id.* at 113.

[85] IEP Opening Comments at 45-50 and attached spreadsheet.

[86] April 24, 2008 E-mail from E3 GHG Modeling Team to R06-04-009 service list asking for corrections to E3's Updated Assignment of Generators to LSEs.

## C. Other Modeling Issues

In addition to the comments above, SCE offers the following brief comments on other modeling issues.

- **Percentage Change in Annual Costs for Retail Providers**

In its opening comments, SCPPA suggests that in order to evaluate the impact of various allowance allocation proposals on the consumers of each California retail provider, E3 should look at the percentage change in annual costs for each retail provider, rather then the change in net costs.[87] SCE agrees with SCPPA that the percentage change in annual costs is a useful measure, but it should not be used in place of looking at the change in net costs or rates.

- **33% RPS and Aggressive Energy Efficiency ("EE") Case**

LADWP states that "[i]f the E3 model is to be taken at face value, then it means that the State will actually save $6.9 billion for California overall, if it implements a 33% RPS and adopts aggressive EE programs."[88] It appears that LADWP is mistaken in its interpretation of the E3 GHG Calculator. According to LADWP's opening comments, the State will save $6.9 billion under the Aggressive Case (33% RPS, High EE) relative to the Reference Case.[89] This statement is wrong on two counts. First, the stated cost reduction in the E3 model under the Aggressive Case is only in utility costs, not total costs to the State. The cost to California consumers does not decrease in the Aggressive Case, but in fact increases by $2.6 billion in 2020 (an increase of 5.3%). Second, the correct cost savings to utilities using the E3 model is $1.3 billion. It is not clear to SCE how LADWP calculated a savings of $6.9 billion.

- **Cost of Reducing GHG From Solar PV**

The Solar Alliance asserts that although the E3 model projects the cost of reducing $CO_2$ from customer-sited solar PV systems as $900 per tonne, if the E3 model data inputs were

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[87] SCPPA Opening Comments at 76-77.
[88] LADWP Opening Comments at 8.
[89] *Id.*

corrected, the cost would produce a negative $40 per tonne impact.[90] The Solar Alliance is incorrect. Natural gas prices would need to drastically increase for abatement costs to drop 95% as the Solar Alliance asserts. This is not realistic.

- **Natural Gas Prices**

NRDC/UCS states that the E3 model fails to take account for the effect of increased levels of clean energy on natural gas prices.[91] Although there may be downward pressure on natural gas prices due to increased levels of renewable energy, this suppression will only happen when the price of $CO_2$ reaches a certain breaking point. Additionally, SCE believes the model is slightly underestimating future natural gas prices under the Reference Case, so even with downward pressure on natural gas prices, the result will likely be close to or above the current natural gas prices in the E3 model.

[90] Solar Alliance Opening Comments at 3.
[91] NRDC/UCS Opening Comments at 46.

## IX.

## CONCLUSION

SCE thanks the CPUC and CEC for their diligent efforts in attempting to address the various issues raised by AB 32 implementation. SCE urges both Commissions to recommend regulations which are in line with the principles SCE set forth herein.

Respectfully submitted,

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June 16, 2008

## CERTIFICATE OF SERVICE

I hereby certify that, pursuant to the Commission's Rules of Practice and Procedure, I have this day served a true copy of REPLY COMMENTS OF SOUTHERN CALIFORNIA EDISON COMPANY (U 338-E) ON ADMINISTRATIVE LAW JUDGES' RULING UPDATING PROCEEDING AND REQUESTING COMMENTS ON EMISSION ALLOWANCE POLICIES AND OTHER ISSUES on all parties identified on the attached service list(s). Service was effected by one or more means indicated below:

> Transmitting the copies via e-mail to all parties who have provided an e-mail address. First class mail will be used if electronic service cannot be effectuated.

Executed this **16th day of June 2008**, at Rosemead, California.

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California Public Utilities Commission

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# CALIFORNIA PUBLIC UTILITIES COMMISSION
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**PROCEEDING: R0604009 - CPUC - PG&E, SDG&E,**
**FILER: CPUC - PG&E, SDG&E, SOCALGAS, EDISON**
**LIST NAME: LIST**
**LAST CHANGED: JUNE 13, 2008**

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**TOP OF PAGE**
**BACK TO INDEX OF SERVICE LISTS**