BEFORE THE PUBLIC UTILITIES COMMISSION
AND THE ENERGY RESOURCES CONSERVATION
AND DEVELOPMENT COMMISSION
OF THE STATE OF CALIFORNIA

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 OPENING COMMENT ON POINT OF REGULATION ISSUES

Norman A. Pedersen, Esq.
HANNA AND MORTON LLP
444 South Flower Street, Suite 1500
Los Angeles, California 90071-2916
Telephone: (213) 430-2510
Facsimile: (213) 623-3379
E-mail: *npedersen@hanmor.com*

Attorney for the **SOUTHERN CALIFORNIA PUBLIC POWER AUTHORITY**

Dated: December 3, 2007

TABLE OF CONTENTS

BEFORE THE PUBLIC UTILITIES COMMISSION
AND THE ENERGY RESOURCES CONSERVATION
AND DEVELOPMENT COMMISSION
OF THE STATE OF CALIFORNIA

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 OPENING COMMENT ON POINT OF REGULATION ISSUES

In accordance with Administrative Law Judge's Ruling Requesting Comments on Type and Point of Regulation Issues ("POR Ruling") issued on November 9, 2007 in the captioned proceedings, and the Administrative Law Judges' Ruling Extending Comment Deadlines and Addressing Procedural Matters issued on November 30. 2007, the Southern California Public Power Authority ("SCPPA") respectfully submits this Opening Comment. In accordance with the POR Ruling, this Opening Comment is being submitted simultaneously to both the California Public Utilities Commission ("CPUC") and the California Energy Commission ("CEC") (jointly, "Commissions").

I. SUMMARY

SCPPA urges the Commissions to recommend to the California Air Resources Board ("CARB") a greenhouse gas ("GHG") emission reduction program for the electric sector that

builds upon the framework originally proposed by the CPUC in Decision ("D") 06-02-032 (February 16, 2006), as modified to accommodate Assembly Bill ("AB") 32 in CPUC President Peevey's Assigned Commissioners' Ruling and Phase II Scoping Memo ("Scoping Memo") (Feb. 2, 2007). As envisioned in D.06-02-032 and the Scoping Memo, the CPUC's program provides for regulation of GHG emissions by retail providers.[1]

SCPPA supports the CPUC's program. Consistent with D.06-02-032 and the Scoping Memo, SCPPA recommends that regulated retail providers be the point of regulation in the electric sector with GHG emission allowances being allocated to the retail providers for the benefit of the retail providers' customers. The allocation of allowances should be based upon recent pre-AB 32 actual experienced emissions, with the amount of allowances that are allocated to each retail provider for each successive compliance period being reduced proportionately over

---

[1] The key features of the CPUC's program as envisioned in D.06-02-032 and the Scoping Memo are as follows:

- Retail providers would the point of regulation in the electric sector. D.06-02-032 at 1, 18; Scoping Memo at 9.
- Current emission levels would be determined for each retail provider on the basis of each retail provider's "recent historical emission" profile. Scoping Memo at 16.
- Allowances would be administratively allocated to the retail providers. D.06-02-032 at 2-3, 42-43. The amount of allowances that are allocated to retail providers would be reduced progressively over time as retail providers move toward their GHG reduction goals. D.06-02-032 at 2-3, 39; Scoping Memo at 4.
- Retail providers would be required to hold an adequate number of allowances to cover the emissions associated with their service to load during any given compliance period. Failure to hold the requisite allowances would result in the assessment of a penalty. D.06-02-032 at 2, 47.
- The allowances would be stated in "tons of carbon-dioxide equivalent" so as to be tradable. A retail provider that achieved greater GHG reductions than required would be permitted to sell excess allowances. D.06-02-032 at 3, 19.

The CPUC's program is consistent with traditional air quality regulation in California under the Clean Air Act. Thus, the CPUC's program would take full advantage of California's extensive experience with Clean Air Act regulaton.

time as necessary to achieve the AB 32 GHG reduction goals as eventually established by the CARB for the electric sector and for each retail provider by 2020.

SCPPA's recommended program would be fair as well as effective in achieving AB 32 GHG reduction goals. Insofar as each retail provider would be required as a point of regulation to reduce emissions associated with its service to load by the same percentage amount, each retail provider would be required to contribute to meeting the goal of reducing California's greenhouse emissions to the statewide 1990 level by 2020. On the other hand, retail providers such as the southern California publicly owned utilities that have a resource mix that is more carbon intensive than the resource mix of other retail providers would need to do more on a per MWh basis than others to accomplish the same percentage reduction.

SCPPA also supports consideration of the "flexible compliance mechanisms" that were envisioned by the CPUC. D.06-02-032 at 43-46. Permitting an opportunity for allowance trading, banking, borrowing, and, to an appropriately limited extent, offsets could provide an opportunity to contain the costs of the GHG regulatory program that would not be otherwise available. However, if trading is to be permitted, SCPPA recommends consideration of a "safety valve" that would act as a check on exorbitant allowance prices. The Commissions should not countenance a reoccurrence of the events of 2000-2001 in California.

II. COMPLIANCE WITH GENERAL INSTRUCTIONS

In accordance with the POR Ruling, SCPPA responds to the questions set forth in the POR Ruling. In various cases, the questions raise issues on which SCPPA previously submitted comments in response to prior rulings in this proceeding. On July 19, 2007, the Commissions issued an Administrative Law Judge's Ruling Requesting Comments and Legal Briefs on Market Advisory Committee Report and Notice of En Banc Hearing ("MAC Report Ruling"). In response, SCPPA filed an opening comment ("SCPPA Opening MAC Report Comment") on

August 6, 2007 and a reply comment ("SCPPA Reply MAC Report Comment") on August 15, 2007.

Subsequently, on August 15, 2007, the Commissions issued an Administrative Law Judge's Ruling Requesting Comments and Noticing Workshop on Allowance Allocations Issues ("Allowance Allocation Ruling"). In response, SCPPA filed an opening comment ("SCPPA Opening Allowance Allocation Comment") on October 31, 2007 and a reply comment ("SCPPA Reply Allowance Allocation Comment") on November 14, 2007.

Consistent with the instructions in the POR Ruling (at 1), SCPPA endeavors not to repeat comments that SCPPA previously submitted in the course of responding to the MAC Report Ruling and the Allowance Allocation Ruling. At the end of the questions, as required by the POR Ruling, SCPPA submits its comprehensive proposal for the general type and point of regulation for the electricity sector.

III. QUESTIONS ADDRESSED IN THIS COMMENT

A. General.

1. Question No. 1: What do you view as the incremental benefits of a market-based system for GHG compliance, in the current California context?

The POR Ruling does not provide a definition of what the Commissions mean by "market-based system for GHG compliance."[2] Assuming that the Commissions mean trading of

---

[2] AB 32 defines "market based compliance mechanism" as meaning either of the following:

> (1) A system of market-based declining annual aggregate emissions limitations for sources or categories of sources that emit greenhouse gases.
>
> (2) Greenhouse gas emissions exchanges, banking, credits, and other transactions, governed by rules and protocols established by the state board, that result in the same greenhouse gas emission reduction, over the same time period, as direct compliance with a greenhouse gas emission limit or emission reduction measure adopted by the state board pursuant to this division.

Cal. H & S §38505(k).

allowances under a cap-and-trade system as discussed by the CPUC in D.06-02-032, a "market-based system for GHG compliance" could provide "incremental benefits" by providing an opportunity to reduce the cost of GHG regulation.

Allowance trading under a cap-and-trade system would be consistent with the regulatory structure for the electric sector as envisioned by the CPUC in D.06-02-032 and as supported by SCPPA. Likewise, permitting allowance trading would be consistent with the GHG regulatory structure that was recently supported by the National Association of Regulatory Utility Commissioners ("NARUC"). A cap-and-trade system would be overlaid on the regulatory structures proposed by the CPUC and NARUC to permit an opportunity to produce cost savings by permitting allowance trading. Furthermore, permitting allowance trading mechanism would be compatible with continuing and expanding programs that require retail providers to achieve specified objectives such as enhanced energy efficiency targets or renewable portfolio goals.

a. **Providing an Opportunity to Trade Allowances by Adopting a Cap-and-Trade System as a Feature of a GHG Regulatory Program Could Result in Cost Savings.**

Adopting a cap-and-trade program as a feature of a comprehensive GHG regulatory scheme would provide an opportunity to produce cost savings by permitting the trading of allowances. As the Market Advisory Committee (MAC") observed: "The ability to trade emissions allowances yield [sic] cost-savings by promoting emissions reductions at those sources that are able to achieve the reductions most cheaply." Recommendations for Designing Greenhouse Gas Cap-and-Trade System for California ("MAC Report") at 5 (Jun. 30, 2007).

Under a cap-and-trade system, there is a mandatory limit or "cap" on the total emissions that are permitted from points of regulation as established under the GHG regulatory program. MAC Report at 6. The total number of allowances that would be issued on a statewide basis would be limited by the level of the cap. *Ibid.* Entities that are points of regulation under the

program would be permitted to buy and sell allowances from other covered entities. *Ibid.* At the end of each compliance period, entities that are points of regulation would be required to hold and submit to the regulatory authority allowances that are equivalent to the level of their GHG emissions. *Ibid.*

The feature of a cap-and-trade structure that results in a cost savings is the ability to trade allowances. An entity that is a point of regulation would have the ability to buy additional allowances if the market price of allowances were less than what it would cost the entity, at the margin, to bring emissions down to the level of its initial allowance holdings. That ability to purchase allowances would enable the entity to emit additional amounts of GHG. Conversely, an entity could sell allowances if the allowance price were higher than what it would cost that entity to achieve the additional GHG reductions that would be made necessary by the sale of allowances. *Ibid.*

b. **The CPUC's Program as Envisioned in D.06-04-032 Would Be Compatible with Establishing a State-Wide Cap-and-Trade System.**

The regulatory structure for the electric sector as envisioned by the CPUC in D.06-02-032 and supported by SCPPA would be compatible with establishing a state-wide cap-and-trade system. The CPUC specifically envisioned that its program would realize the cost savings that could result from adoption of a cap-and-trade structure. The CPUC stated pointedly: "We intend to create a load-based GHG emissions cap that is compatible with any other GHG cap-and-trade regime that may be developed in the future, either in the Western Region, nationally, or internationally." D.06-02-032 at 2. In order to facilitate treating of allowances, the CPUC provided that "the GHG emissions allowances associated with our load-based cap will be in the form of 'tons of carbon-dioxide equivalent.'" *Ibid.* Thus, the regulatory structure proposed by the CPUC and supported by SCPPA would fit within a state-wide, nation-wide, or world-wide

cap-and-trade structure. It would be consistent with realizing the cost savings that could flow from trading under a cap-and-trade system.

c. The GHG Regulatory Structure that Is Supported by the NARUC Is Consistent with the Program Envisioned by the CPUC and Would Be Consistent with Adoption of a Cap-and-Trade Program.

Recently, the NARUC held its annual meeting in Anaheim, California. On November 14, 2007, the NARUC adopted a Resolution on Federal Climate Legislation and Cap-and-Trade Design Principles ("NARUC Resolution"). *See* Attachment ("Att.") A. The NARUC supports a program like the one envisioned by the CPUC and supported by SCPPA for the electric sector. NARUC recommends that allowances be provided to "local distribution companies providing a regulated local distribution function for end-user customers (including vertically-integrated utilities, distribution utilities, rural-electric cooperatives, municipal distribution systems, and all other entities providing distribution service directly to end-user customers subject to State regulation or its equivalent)." Att. 1.

Furthermore, as recommended by SCPPA in its Opening Allowance Allocation Comment and Reply Allowance Allocation Comment, the NARUC proposes that the administrative allocation of allowances to retail providers should be based on emissions rather than retail sales, population, or any other non-emissions related factor: "The assignment of no-cost allocated allowances to local distribution companies as defined above should be based primarily on the level of GHG-emissions from the resources used to provide service to the local distribution company's load during an appropriate baseline period." *Ibid.*

The NARUC's envisioned program would be consistent with having a "market mechanism... including, but not limited to, a cap-and-trade mechanism...." *Ibid.*

d. Trading Under a Cap-and-Trade System Would Be Consistent with Continuing Programmatic Measures to Achieve GHG Reductions.

An advantage of establishing retail providers as points of regulation in the electric sector is that regulatory authorities could exercise their jurisdiction over the retail providers to require them to undertake initiatives that would reduce GHG emissions. These initiatives include energy efficiency and renewable portfolio programs. As explained by CPUC President Peevey in the Scoping Memo, "a load-based approach [under which retail providers are the point of regulation] allows the CPUC and the CEC (among other agencies) to continue to utilize our policy levers for renewables and energy efficiency, because it puts the responsibility for achieving emissions reductions on LSEs." D.06-02-032 at 9.

The MAC agreed that regardless of whether or not a cap-and-trade system were adopted, there would continue to be a need for a programmatic approach to GHG reduction in certain instances. For example, the MAC observed that may be a need for programs that are aimed at the development and deployment of new technologies: "The cap-and-trade program addresses one type of market failure (stemming from the climate-change externality associated with greenhouse gas emissions) but does not address other types of market failures that may impede the development and deployment of new technologies." MAC Report at 19.

The continuation and expansion of targeted energy efficiency, renewable portfolio, technology development, and similar programs aimed at retail providers as the GHG point of regulation would be compatible with instituting a cap-and-trade system. For example, as the MAC explained, "the existence of a trading program does not eliminate the need for direct, technology-oriented policies: rather, these policies are complementary." *Ibid.* The benefits of targeted programs could be realized while simultaneously realizing the cost savings that could result from trading under a cap-and-trade system.

2. Question No. 2: Can a market-based system provide additional emissions reductions beyond existing policies and/or programs? If so, at what level? How much of such additional emission reductions could be achieved through expansion of existing policies and/or programs?

The purpose of a cap-and-trade system is to achieve mandated GHG reductions at a reduced cost. The objective is cost savings, not additional emission reductions. Total emissions reductions during any compliance period would result from the regulatory establishment of the cap on the total number of allowances that would be made available for the compliance period. *Ibid* at 6. A cap-and-trade system would only serve to permit entities that are points of regulation to trade emission allowances so as to realize cost savings "by promoting emission reductions at those sources that are able to achieve the reductions most cheaply." MAC Report at 5. Thus, the cap-and-trade system would not provide additional emissions reductions beyond those that could be achieved by direct regulation, and proponents of cap-and-trade system such as the MAC do not envision additional emission reductions as being the objective of establishing a cap-and-trade system. Cost savings are the objective.

B. Principles or Objectives to be Considered in Evaluating Design Options.

1. Principles or Objectives Proposed by CPUC Staff to Evaluate GHG Program Options.

The CPUC Staff proposes eight "principles or objectives" to be used to evaluate different design options for a GHG program. The objectives as presented in the POR Ruling are as follows:

- **Goal attainment:** Does the approach being considered have any particular advantages in terms of meeting overall emission reduction goals? For example, does the approach have any advantages to promoting energy efficiency, combined heat and power, or renewable energy?

- **Cost minimization:** Is the approach likely to minimize the total cost to end users of achieving a given GHG reduction target?

- **Compatibility with wholesale markets and the Market Redesign and Technology Upgrade:** What are the implications of the approach on efficient functioning of wholesale markets generally and the California Independent System Operator day-ahead and real-time markets?

- **Legal risk:** Is the approach at greater relative risk of being delayed or overturned in court?

- **Environmental Integrity:** Doe the approach mitigate or allow contract shuffling and the leakage of emissions occurring outside of California as a result of efforts to reduce emissions in California?

- **Expandability:** Would the approach integrate easily into a broader regional or national program? A related consideration is the suitability of the approach as a model for a national or regional program.

- **Accuracy:** Does the approach support accuracy in reporting and, therefore, ensure that reported emission reductions are real?

- **Administrative Simplicity:** Does the approach promote greater simplicity for reporting entities, verifiers, and state agency staff? How easy will the program design be to administer?

POR Ruling at 2-3.

2. **Question No. 3: Do you agree with this set of objectives? Are there other objectives or principles that you wish to see included? If so, please include your recommendations and reasoning. Finally, please rank the objectives above, and any additional factors you propose, in order of importance.**

The Staff's list of objectives is incomplete. Furthermore, the objectives should be sequenced differently.

a. **Fairness Should Be a Paramount Principle for a GHG Regulatory Program.**

Fairness should be included in the list of principles and objectives, and it should be placed high on the list. One of the four fundamental objectives for GHG reduction program in the view of the MAC was fairness. MAC Report at 18. The MAC defined "fairness" as "assuring that the program avoids causing environmental harm to particular communities, and

assuring that compliance costs are spread equitably across sectors and regions." *Ibid* (emphasis added).

In SCPPA's view, the objective of fairness dictates that compliance costs should be spread equitably across sectors, regions, and *communities*. It would be unfair to require communities that, due to historical and geographical circumstances, face the greatest challenges and costs in meeting AB 32 goals to simultaneously transfer wealth to other communities that, due to their serendipitous historical and geographical circumstances, are less challenged and consequently face lower costs.

If administratively allocated allowances are distributed inequitably among retail providers as electric sector points of regulation, the allocation of free allowances could result in an unfair transfer of wealth from some communities to others. For example, if free allowances were allocated on the basis of retail sales or population among retail providers rather than on the basis of actually experienced historical emissions, retail providers that are more dependent upon carbon-based resources and, as a consequence, face a greater burden of meeting GHG reduction goals would paradoxically get proportionally fewer allowance than retail providers that are less dependent on carbon-based resources. The retail providers that are more dependent on the carbon-based resources would face the prospect of having to buy auctioned allowance from the retail providers that received more allowances than they need. The result would be an unjust transfer of wealth.

As the MAC explained, any GHG reduction program "must be *fair* and cost effective while bringing about real emissions reductions." MAC Report at 11 (emphasis added). Thus, SCPPA recommends that an additional principle or objective should be included in the list set

forth in the POR Ruling, as follows: "**Fairness: Does the program assure that compliance costs are spread equitably across sectors, regions, and communities?**

b. Avoiding Windfall Profits Should Be an Objective for a GHG Regulatory Program.

The list of objectives and principles as proposed by the CPUC Staff should also be expanded to add **avoidance of windfall profits** as an important objective of a GHG regulatory program. The MAC certainly recognized the importance of avoiding windfall profits. In listing eight principles to guide the distribution of GHG emission allowances, the MAC put "reduces the cost of program to consumers" as the first principle and puts "avoids windfall profits where such profits could occur" as the second principle. MAC Report at 55.

c. The Objectives Should Be Ranked to Put Attaining GHG Reduction Goals, Fairness, and Cost Effectiveness at the Top of the List.

The principles as set forth in the POR Ruling, as expanded to include the objectives of fairness and avoiding windfall profits, should be ranked differently than set forth in the POR Ruling. The MAC proposed that the four top objectives for a GHG program should be as follows:

- Environmental integrity—achieving specified GHG reduction targets
- Cost-effectiveness—achieving emission reduction targets at low cost (where "cost" is broadly understood to include not only the compliance costs of regulated entities and costs to consumers, but also administrative and enforcement costs)
- Fairness—assuring that the program avoids causing environmental harm to particular communities, and assuring that compliance costs are spread equitably across and regions
- Simplicity—offering a program that is easily communicated and administered

MAC Report at 18. Certainly, consistent with the MAC's prioritization, the top three objectives for GHG regulatory program should be achieving statutorily mandated GHG reduction targets, fairness, and cost effectiveness. Placing these objectives at the top of the list would be consistent with the MAC's observation that a GHG reduction program "must be *fair* and *cost effective* while bringing about *real emissions reductions*." MAC Report at 11. (emphasis added).

d. Some of the CPUC Staff's Proposed Objectives Should Be Placed Low on the List or Dropped Altogether.

The CPUC Staff's proposed objective of "expandability" should be low on the list, and the suggestion that "a related consideration is the suitability of the approach as a model for a national or regional program" should be eliminated altogether. If the Commissions and CARB follow sound primary principles with attaining GHG reduction goals, fairness, and cost effectiveness at the top of the list, the result will inevitably be a program that can serve as a model for others. The Commissions and CARB should *not* attempt to guess the type of program that other states or the U.S. Congress might favor and then design a program to match the guess.

SCPPA is concerned about the suggestions by various parties that the Commission should adopt one or another approach because that approach is assumed to be the most attractive to other states or Congress. Instead of basing program design on best guesses about what might appeal to others, the Commissions and CARB should design a California program based upon paramount principles. If the Commissions and CARB hue to sound principles, they need not worry about "expandability".

Another objective that should be lower on the list is compatibility with the California Independent System Operator ("CAISO") Market Redesign and Technology Update ("MRTU"). The CAISO MRTU has a limited scope. Roughly 25 percent of Californians are served outside of the CAISO and are not directly affected by the MRTU. By contrast, "compatibility with

wholesale markets" should be high on the list. If the adopted GHG regulatory program for California fails to be compatible with wholesale markets, the result could be a substantially increased cost of GHG regulation for all Californians.

C. Load-Based Cap-and-Trade System Design.

The POR Ruling explains that under what the CPUC has called a "load-based approach", the points of regulation will be retail providers of electricity to California consumers. POR Ruling at 3. "Retail providers would be required to surrender allowances for the GHG emissions associated with all power sold to end users in California." *Ibid.* The POR Ruling poses several questions regarding the "load-based approach."

1. **Question No. 4: With a load-based cap-and-trade system, should exports from in-state generation sources be included and accounted for under the cap? For example, exports could be captured in a cap-and-trade system by regulating in-state sources that export, or by counting the emissions associated with exported power, without any compliance obligation on the exporter. There may be other options as well.**

Emissions associated with exports of electricity from in-state generation sources should not be "included and accounted for under the cap." The emissions associated with exports should be the responsibility of the state that receives the exports, not California retail providers. According to AB 32, the term "Statewide greenhouse gas emissions" is defined as being "the total annual emissions of greenhouse gases in the state, including all emissions of greenhouse gases from the generation of electricity delivered to and consumed in California, accounting for transmission and distribution line losses, whether the electricity is generated in state or imported." Cal. H & S Code §38505(m). This suggests that the emissions of greenhouse gases associated with the generation of electricity that are covered by AB 32 are emissions associated with "electricity delivered to and consumed in California," *not* emissions associated with the generation of electricity for export.

This interpretation of AB 32 in reinforced by the section of AB 32 that provides for mandatory reporting of greenhouse gas emissions. AB 32 requires the CARB to adopt regulations that shall "account for greenhouse gas emissions from all electricity consumed in the state, including transmission and distribution of line losses from electricity generated within the state or imported from outside the state." Cal. H & S Code §38530(b)(2). The limitation on reporting to "greenhouse gas emissions from all electricity consumed in the state" specifically excludes reporting of emissions from exports. This supports the interpretation of "statewide greenhouse emissions" as defined in AB 32 as *excluding* emissions associated with the export of electricity.

2. **Question No. 5: How extensive do you view the threat of contract shuffling under a load-based program, given the accessibility of clean resources within the western interconnect? What mechanisms do you propose to combat this possibility? On what basis do you support your position?**

Contract shuffling has been addressed in the mandatory reporting rules that are in the process of being approved by the CARB which will be considered at the CARB's December 6, 2007 business meeting. *See* D.07-09-017, Interim Opinion on Reporting and Verification of Greenhouse Gas Emissions in the Electricity Sector (September 6, 2007); *see also* CARB Staff Report: Initial Statement of Reasons for Rulemaking, (October 19, 2007). No further mechanisms or procedures should be or need be considered. *See* SCPPA Comment on Joint California Public Utilities Commission and California Energy Commission Staff Proposal for Electricity Retail Provider GHG Reporting Protocol, R.06-04-079 (July 2, 2007); SCPPA Comment on Proposed Decision on Reporting and Tracking of Greenhouse Gas Emissions in the Electric Sector; SCPPA Comment on Proposed Decision on Reporting and Tracking of Greenhouse Gas Emissions in the Electric Sector, R.06-04-009 (August 24, 2007); SCPPA Reply

Comment on Proposed Decision on Reporting and Tracking of Greenhouse Gas Emissions in the Electric Sector, R.06-04-009 (August 30, 2007).

3. **Question No. 6: Under a load-based system, three basic options may be used to match a retail provider's load to the sources of electricity used to serve the load: (1) the use of contracts and settlements data, (2) the development of a tracking system to facilitate matching sources to loads, with unclaimed sources pooled and assigned to all retail providers for any electricity that cannot be accounted for on a specified basis, and (3) the use of a tracking system and tradable emission attribute certificates (TEAC) to ensure that all electricity is assigned. Which of these systems best accounts for all imports? What are the advantages and disadvantages of each potential tracking system in terms of accuracy, cost of development and administration of tracking systems, costs of administration to the parties, and overall costs to ratepayers? Are there alternative tracking approaches that you would recommend, and for what reasons?**

a. **Matching a Retail Provider's Service to Load with the Retail Provider's Owned or Controlled Generation Resources.**

To the extent to which a retail provider utilizes its owned or controlled generation resources to serve load, either fuel-based calculations or Continuing Emissions Monitoring Systems ("CEMS") data should be available through the retail provider to identify emissions associated with service to load. That should be true regardless of whether the resource is physically located in California or outside the state.

b. **Matching a Retail Provider's Service to Load with Sources Through Contracts and Settlements Data.**

For energy received by the retail provider from a third party, contracts and settlements data should be available to identify the sources of energy that is supplied to a retail provider by third parties. In the event that a retail provider's contracts and settlements data fail to specify the source so that related GHG emissions can be calculated, default emission factors can be applied in accordance with the CARB's mandatory reporting protocol.

The ability to use contracts and settlements data of a retail provider to identify the sources of energy derived from a third party is a factor that makes a "load-based approach" to point of regulation superior to the "first-seller" approach. "Given the diversity of first seller entities and first seller transactions, it may be more challenging to assess the carbon content of import transactions by reviewing contracts under a first seller approach that would be the case under a load-based approach." POR Ruling, Att. A, Resero at 11. As Resero explains:

> For example, for non-LSE First Sellers (marketers for example), types of contracts would range widely from very long term with specified sources to very short term with no specific sources. Using contract data to determine whether imports are from specified or unspecified sources would likely create an unfair cost disparity across importers. For example, permitting the presence of a long-term contract or an ownership stake to define clean out-of-state sources without providing a similar mechanism for shorter-term deals to be considered clean would create a disparity between LSE and non-LSE First Sellers (the marketers, for example).

Ibid.

The ability to use the contracts and settlements data of a retail provider to identify sources that are associated with service to load gives both a clear cost advantage and a clear accuracy advantage to the load-based approach over the first-seller approach to point of regulation. Using contract and settlements data would minimize the imposition of up-front infrastructure development costs on market participants, thereby minimizing the costs of introducing GHG regulation.

Using contracts and settlement data would also minimize disruption of the existing bilateral market for electricity. While using contracts and settlements data might, in some instances, result in lower accuracy than could be obtained if there were a universal tracking of emissions from source to sink, the accuracy of source-to-sink tracking of emissions would come at the potentially considerable cost of forcing buyers and sellers to have a strict accounting of

emissions from sources to sinks.[3] Not only is a mechanism for universal source-to-sink tracking of emissions unavailable at this time. Requiring universal source-to-sink accounting would have the potential to impede energy market trading and to reduce market liquidity.

c. Matching a Retail Provider's Service to Load with Sources Through a Tracking Mechanism.

Although a tracking system may offer more accurate accounting of the emissions from imports, a tracking mechanism would not be essential under a load-based approach. It is quite likely that any reductions in accuracy that might result from using to contracts and settlements data to identify sources of electricity that is purchased from third parties would have an insignificant impact on achieving reductions in the carbon intensity of the purchased electricity. Furthermore, if untracked resources are assigned default emission levels, over time, the percentage of deliveries from unspecified resources will probably diminish and the use of default factors will decline.

Instituting a tracking system could be costly for market participants. Instituting a tracking system could result in substantially greater implementation costs and ongoing administrative costs in comparison to relying on contracts and settlements data. Additionally, a tracking system may quite likely adversely impact the liquidity in the energy market by overburdening trades and, as a result, may increase the energy costs to serve load.

d. Matching a Retail Provider's Service to Load with Sources Through TEACs.

The POR Ruling does not define or explain what is meant by "tradable emission attribute certificates" ("TEACs"). As a result, SCPPA cannot fully comment on the usefulness of

[3] The tracking approach would by definition require *strict* tracking. The TEAC approach would likely require this in order to limit the supply of TEACs to being only from sources of energy outside of California that are actually shown to be imported.

"tradable emission attribute certificates" at this time, and SCPPA reserves the right to reply to comments that might be offered by other parties.

Assuming that a TEAC mechanism would be similar to the GEAC mechanism described in a paper by Gillenwater and Breidenich,[4] the mechanism has several potential disadvantages. It necessarily relies upon the ability of out-of-state sellers to demonstrate that their power was scheduled into the state in order to balance the supply of GEAC certificates with the demand for certificates. In satisfying this requirement, the need to track the power that is generated and delivered to retail providers in California would, itself, require implementing a contracts/settlements or tracking approach.[5] Therefore, it is unclear what would be gained by implementing a TEAC method.

Furthermore, instituting TEACs would require the establishment of a standardized, centralized, formal platform and TEAC product design. The start-up of TEACs, while possibly aided by existing platforms such as REGIS and trading RECs, could be very expensive.

4. Question No. 7: If a load-based approach is pursued, would the potential benefits of a full TEAC system be great enough to warrant the start-up and administrative costs?

Insofar as the POR Ruling does not define or explain what is meant by TEACs, SCPPA reserves the right to reply to comments that might be offered by other parties in response to this question.

As indicated in SCPPA's response to Question No. 6, it is not clear that a TEAC system as SCPPA has attempted to understand it would offer any benefits beyond either a tracking or a

---

[4] M. Gillenwater and C. Breidenich, "Internalizing Carbon Costs in Electricity Markets: Using Certificates in a Load- Based Emissions Trading Scheme," Unpublished manuscript, Science Technology and Environmental Policy Program, Princeton University, Princeton, NJ).

[5] While the Gillenwater and Breidneich paper talks about demonstrating this through E-tags, E-tags do not consistently contain scheduling data down to the generator level. An E-tag may only track power to a control area. POR Ruling, Att. A, Resero at 8.

contracts/settlement approach, particularly insofar as a TEAC system would require something like a contracts/settlements or tracking approach in addition to the TEAC system itself.

D. Source-Based Cap-and-Trade System Design Options.

1. Pure source-based (GHG regulation of in-state generation only).

a. **Question No. 8: Under an in-state-only source-based approach, the regulated entities would be the power plants located in California that generate electricity and emit GHGs. Under such a system, electricity use associated with imports would not be directly regulated under the cap-and-trade system. Instead, other policies and programs such as energy efficiency and the Renewable Portfolio Standard (RPS) would be utilized to decrease reliance on imported GHG-intensive power sources. Do you view this approach as compliant with Assembly Bill (AB) 32? Please support your answer.**

An in-state-only approach would not comply with AB 32 and should not be given further consideration. *See* SCPPA Opening Allowance Allocation Comment at 7-8 (October 31, 2007.)

b. **Question No. 9: The threat of leakage can be viewed over two time horizons: short-term and long-term. In light of the relatively high capacity factors of carbon-intensive facilities outside the state, how extensive do you expect the short-term threat of substituting higher-carbon imports for in-state generation to be? Might this possibility be dealt with through specific program design (e.g., allocations, limiting conditions, etc.)?**

See Response to Question No. 8 above.

c. **Question No. 10: Given existing procurement oversight and the prospect for a regional or federal GHG program in the foreseeable future, how extensive do you expect the threat to be of a longer-term shift of production to regions beyond the reach of a California source-based cap-and-trade regime?**

Implementation of a California-only source-based program while awaiting a regional or federal program is not a lawful alternative, given the requirements of AB 32. *See* Response to Question No. 8 above.

d. **Question No. 11: If emissions associated with imported power are excluded from a cap-and-trade program, what policies beyond the existing suite of program including energy efficiency, California Solar Initiative, RPS, and Emission Performance Standard (EPS) do you recommend that California employ to achieve the necessary reductions from the electricity sector?**

See Response to Question No. 8 above.

e. **Question No. 12: As the Public Utilities Commission does not currently have authority to oversee all energy efficiency and renewable procurement programs for all kinds of retail providers (investor owned utilities (IOUs), community choice aggregators (CCAs), electric service providers (ESPs), and publicly owned utilities (POUs), which agency(ies) should fill in any gaps? Which agency should be responsible for overseeing energy efficiency and renewable procurement for POUs? Would the California Air Resource Board (ARB) have the authority to require certain energy efficiency and renewable targets be met by POUs?**

See Response to Question No. 8 above. If a source-based system were to be considered, the agencies responsible for overseeing energy and efficiency and renewable procurement for publicly-owned utilities are the city councils and elected boards of directors that govern the publicly-owned utilities.

f. **Question No. 13: What sources would a source-based system cover? Could it cover California utility-owned facilities located outside of California?**

See Response to Question No. 8 above. As for California utility-owned facilities located outside of California, those are not sources of emissions within California and, self-evidently, would not be covered.

g. **Question No. 14: Would a strengthened EPS assist in reducing emissions due to California imports? What recommended changes would you make to the EPS?**

See Response to Question No. 8 above.

2. **Deliverer/First-Seller.**

a. **Question No. 15: Please comment on the "First Seller Design Description" paper, which is Attachment A to this ruling. Does the paper accurately describe the deliverer/first seller program? If not, describe your concerns and include an accurate description from your perspective.**

The first-seller approach to establishing points of regulation for a California GHG regulatory scheme should be categorically rejected. The first seller approach suffers from a fatal flaw: it is unlawful. *See* SCPPA Opening MAC Report Comment at 50-54; SCPPA Reply MAC Report Comment at 20-30; SCPPA Opening Allowance Allocation Comment at 7-8.

In addition to suffering from the fatal flaw of illegality, the first-seller approach is unworkable. For example, no GHG emissions tracking device is available to permit identification of GHG emissions associated with imported electricity. Also, the first-seller approach has a potential for exposing California to grave adverse and unintended consequences. For example, by imposing GHG regulation of importers, the first-seller approach could discourage importers from selling into the California market, thereby reducing California electricity market liquidity, increasing wholesale electricity prices, and decreasing reliability. *See* SCPPA Opening MAC Report Comment; SCPPA Reply MAC Report Comment.

In Attachment A to the POR Ruling, the Commissions present an analysis of the first-seller approach by the Commissions' own consultant, Resero Consulting ("Resero"). Resero identifies a myriad of issues that arise with the first-seller approach. In each case, either the first-seller approach gives rise to problems that would be avoided if retail providers were the point of regulation, or the first-seller approach shares problems with the "load-based" approach without offering any advantage under the "load-based" approach. For example:

- There are first sellers for whom no E-Tag is available. For these first sellers, there will need to be some method to determine "carbon impacts", and the first seller approach will most likely "resemble a load-based

approach," in which case the first-seller approach will offer no advantage over the load-based approach. Resero at 2.

- Averaging of carbon content for electricity deliveries will still be required if the E-Tag or scheduling information is for sources that are not specified, in which case the first seller approach provides no advantage over the load-based approach. Resero at 2.

- Using contract information to assign carbon content to imported energy is "more challenging under a first-seller approach" insofar as the points of regulation for imports constitute a much larger set of entities with much more diverse business interests. Resero at 2.

- A contract approach cannot be mixed with E-Tag information to identify first-seller sources insofar as mixing will create the potential for discriminatory treatment of some first sellers against others. Resero at 2.

- The number of entities that would be regulated under the first-seller approach would be "significantly larger" than the number of entities that would be regulated under the load-based approach. Resero at 4.

- The first-seller approach would require tracking wholesale power transactions to identify a constantly changing set of first sellers whereas a load-based approach would have a "smaller and fairly stable" set of entities as the points of regulation. Resero at 5.

- A "wide range" of market participants would be regulated as in-state sources under the first-seller approach, and "many types of companies" would be regulated as importers. Resero at 5.

- Under the first seller approach, regulations would be needed to establish "carve-outs" for wheel-through transactions. However, these regulations would "tend to limit liquidity in wholesale power markets throughout the WECC." This problem would not arise under the load-based approach. Resero at 6.

- There are "legal/regulatory" problems associated with obtaining E-Tag information that would be necessary to implement the first-seller approach. Resero at 6.

- E-Tag information is not available for energy that does not cross a balancing authority area boundary. In that case, "regulators would have to impose mandatory tracking of import sources," but that may move the "monitoring boundary upstream...beyond California's geographic borders," thereby creating a jurisdictional issue. Resero at 7.

- For imported power under the first-seller approach, "identifying the source or carbon content... may be at least as challenging as doing so under a load-based approach." E-Tags rarely identify a specific generating plant, but, instead, identify an upstream control area. Furthermore, the physical source of imported energy may lie within another control area beyond the E-Tag identified control area. Resero at 8.

- Source-based information for imported energy cannot be reliably obtained through E-Tags. Furthermore, "trying to do so would adversely affect energy markets in the WECC." Resero at 9.

- Adding information about emissions associated with generating sources to E-Tags "would likely impose a significant burden on the power scheduling process." Resero at 10.

- Assigning carbon content to imports on the basis of control area averages would not only be inaccurate. "This design would encourage parties to shuffle transactions and misrepresent originating control areas." Resero at 10.

- If "generic carbon levels" were assigned to imports under the first seller approach, then the first seller approach would have "the same policy implications that have been debated in conjunction with the load-based" approach, and the first-seller approach would not have an advantage over the load-based approach. Resero at 10-11.

- If contracts were used to identify carbon content, "it may be more challenging to assess the carbon content of important transactions" under the first seller approach than under the load-based approach. Resero at 11.

- For unspecified sources, "assignment under a first seller approach" may not be significantly less "cumbersome" than under a load-based approach, in which case there would be no advantage to adopting the first-seller approach. Resero at 11.

- Using contract data from first sellers to determine whether imports are from specified or unspecified sources would "likely create an unfair cost disparity among importers." Resero at 11.

- Any proposals for assigning emissions that are more specific than those being considered for load-based regulation "should consider the level of burden on various first-seller entities." Resero at 11.

- Identifying emissions associated with imports on a contractual basis for some transactions while identifying emissions associated with imports on

the basis of E-Tag source specification may lead to preferential treatment for some parties and discrimination against others. Resero at 12.

- If the source of power involved in a sale into the CAISO DA or RT market is not known when offers are submitted to the DA and RT auctions, the bidders would not be able to include carbon costs in their energy offers. Resero at 12.

- If first seller bidders into the CAISO energy markets are required to reflect carbon content costs on "a more granular basis" than regional average carbon assignments to unspecified sources, "first seller bids cannot accurately reflect the carbon costs" and "CAISO energy market liquidity will be adversely affected." Resero at 13.

- To the extent to which the Commissions propose to administratively allocate allowances, an administrative allocation would be "less feasible" under a first seller approach "because it would have to include a number of regulated entities for which there is no clear, unambiguous basis for making the allocation." Resero at 13.

- There seems to be "no reliable basis for allocating allowances to first seller importers." Resero at 13.

- There are "several potential pitfalls of first seller regulation, including the lack of ability to trace specific sources using E-Tag information." Resero at 14.

- "Allocating carbon allowances directly is essentially unfeasible under a first seller approach." Resero at 14.

These numerous examples from the Resero paper appended as Attachment A to the POR Ruling demonstrate the plethora of problems that arise under the first-seller approach, aside from the fact that the approach is unlawful. The Commissions should not give further consideration to the first-seller approach.

3. Source-Based for In-State Generation, Load-Based for Imports.

a. **Question No. 16: Please describe in detail your view of how this option would work.**

The Commissions should avoid a hybrid approach in which the point of regulation would be electricity generators for in-state generation and retail providers for imported power. The

obvious attraction of the hybrid approach for the Commissions is that, by limiting the reach of California GHG regulation in the electricity sector to in-state electricity generators and retail providers, the program would avoid preemption under the Federal Power Act and avoid suffering from the fatal flaw that afflicts the first-seller approach.

However, the hybrid approach is flawed. Among other frailties, it would result in discrimination between generation that is owned and operated by retail providers and generation that is owned and operated by independent power producers ("IPPS"). Further, the hybrid approach would result in a more costly regulatory scheme due to the impact on wholesale market clearing prices. Additionally, the hybrid approach would be more complex and involve more entities as points of regulation than if retail providers were the sole point of regulation in the electricity sector. Instead of resorting to the hybrid approach to avoid the unlawfulness of the firs seller scheme, the Commissions should stick with the load-based approach as originally proposed by the CPUC and as supported by SCPPA.

(1) The Load-Based Approach Would Result in Discriminatory Treatment of IPPs.

Under the hybrid approach, both the in-state generation of IPPs and the in-state generation of retail providers would be points of regulation. As proposed by the CPUC in D.06-02-032 and in the Scoping Memo and as explained at length by SCPPA in its Opening Allowance Allocation Comment and its Reply Allowance Allocation Comments, allowances should be administratively allocated to retail providers on the basis of recent pre-AB 32 emissions for the benefit of the retail providers' consumers. However, allowances should not be administratively allocated to IPPs.

The administrative allocation of allowances as proposed by the CPUC and supported by SCPPA is absolutely vital to assure that California electricity consumers will not be subjected to

the double burden of bearing the cost of reconfiguring the resource mix of their regulated retail providers plus the burden of bearing the cost of buying allowances through an auction. To avoid the double burden, it would be necessary to administratively allocate allowances to regulated retail providers under the hybrid approach as well as under the load-based approach. Insofar as the regulated retail providers are subjected to regulation, the Commissions, the CARB, and Californians could be assured that the benefit of the allowances will be passed through the consumers.

While it is imperative that there be an administrative allocation of allowances to regulated retail providers, it is equally imperative that allowance *not* be administratively allocated to IPPs. Insofar as the IPPs are unregulated, the benefit of administratively allocated allowances that are received by IPPs would flow to the IPPs' shareholders. As observed by the MAC:

> The free distribution of allowances can result in a substantial transfer of wealth from consumers to those entities that receive allowances. Under the EU ETS, the electric sector in the UK received free allowances and enjoyed windfall profits of £500 million in the first year of the programs along.[6]

MAC Report at 56. To avoid windfalls to IPPs, there should not be an administrative allocation of allowances to IPPs.[7]

---

[6] Such windfalls can occur if generators receive more than their share of allowances (and therefore sell allowances to other covered entities) or if they are able to pass the opportunity cost of the freely allocated allowances onto ratepayers. In the latter case, ratepayers end up paying for allowances that were given freely to the generator, creating windfall gains. MAC Report at 56.

[7] If, contrary to the vision of the CPUC in D.06-02-032 and SCPPA's recommendation, the hybrid approach were to be adopted, some consideration should be considered to whether some uniquely situated IPPs should receive administratively allocated allowances. Some IPPs may not be able to pass on the cost or opportunity cost associated with administratively allocated allowances, as observed by the MAC:

> Some independent power producers may operate under long term fixed price contracts and thereby not be able to pass through costs until those contracts expire. Whether these producers should receive a free allocation in the interim should be evaluated carefully.

However, if regulated retail providers were provided with an administrative allocation of allowances but IPPs were denied an administrative allocation of allowances, the inevitable result would be cries from IPPs about how they are being subjected to discriminatory treatment. Insofar as there would be due cause for the discriminatory treatment, it is questionable that there would be any sound legal basis for the IPPs' complaint. Nevertheless, the entire problem of discrimination could be easily avoided by the Commissions by adopting the load-based approach to establishing electric sector points of regulation. If regulated retail providers are the sole point of regulation in the electric sector, allowances may be administratively allocated to the regulated retail providers without any discrimination against IPPs. The IPPs would not be points of regulation and, thus, would not need an administrative allocation of allowances.

(2) The Hybrid Approach Would Result in Higher Costs Which Could Be Avoided Under a Pure Load-Based Approach.

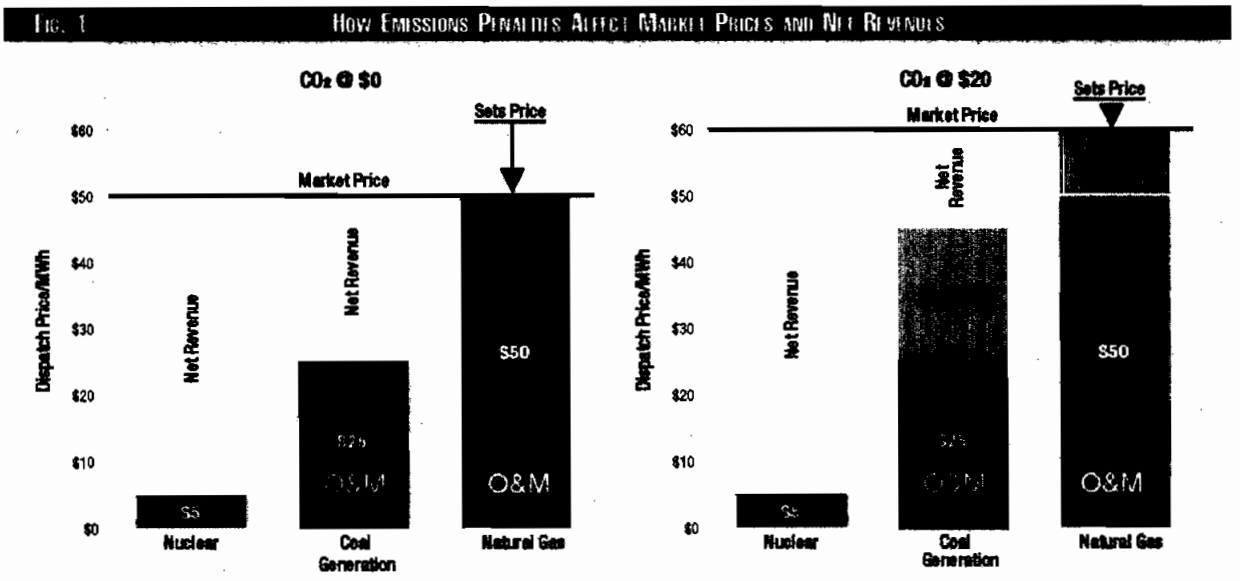
As discussed above, it would be necessary to require in-state CO_2-emitting IPPs to buy allowances under the hybrid approach to avoid having the IPPs reap windfall profits. However, if the in-state CO_2-emitting IPPs were required to buy allowances, they would charge higher

---

> Independent power producers under long-term fixed price contracts cannot necessarily pass through changes in their costs to their customers. Some contracts allow for adjustment of price in response to changes in cost, but they are unlikely to designate allowance cost explicitly. Under an upstream program (Program 4) allowance cost would be embedded in fuel price and this would be passed through automatically. Under a downstream program the interpretation of cost will be important for parties to these contracts. It is unclear what are the terms of existing contracts. The PUC could investigate this issue by issuing a data request to investor owned utilities to determine the incidence of changes in cost under these contracts, and policy makers could consider an explicit compensation for harmed parties if deemed appropriate. The Committee notes that even when contracts are silent on an issue such as changes in environmental policy, they may be silent intentionally and thereby describe a conscious assignment of risk. In the long run these contracts will be renegotiated and climate policy risks are likely to be an explicit consideration.

MAC Report at 56.

prices for electricity in the real time and forward markets for electricity. That would result in an increase in wholesale real time and forward electricity prices. "Climate policy that puts a price on CO_2 significantly increases the dispatch cost of fossil generation. [These] cost increases largely are passed on to the wholesale market in the short run." "The Change in Profit Climate," Victor Niemeyer (EPRI), Public Utilities Fortnightly at 26 (May, 2007) ("Niemeyer"). Niemeyer demonstrates how imposing "emissions penalties" affects wholesale market prices:



Ibid at 20. To the extent to which retail providers would need to buy electricity on the wholesale market in order to serve their retail customers, they would incur an increased cost that would be passed on to the customers.

This adverse impact on real time and forward market wholesale electricity prices and, ultimately, the costs of GHG regulation that are imposed on consumers could be mitigated or even eliminated by adopting the load-based approach. Substantial reductions in emissions could be achieved directly without adversely affecting the wholesale market.

For example, emission reductions could be achieved through the imposition of renewable portfolio standards without increasing wholesale market prices. The Energy Information Administration ("EIA") recently did an analysis finding that imposing a 25 percent renewable portfolio standard on retail providers could reduce carbon emissions *22 percent* while raising consumers' cumulative expenditures for electricity by *less than one percent.* EIA, "Energy and Economic Impacts of Implementing Both a 25-Percent Renewable Portfolio Standard and a 25-percent Renewable Fuel Standard by 2025" at xi, xiv (Aug. 2007).

By contrast, an Electric Power Research Institute ("EPRI") study found that imposing an emission allowance cost of $50 per ton on generators could more than double the wholesale price of electricity while reducing emissions by only four percent. Niemeyer at 24. The EPRI study focused on the wholesale market in the coal-heavy upper Midwest, but the study illustrates the impact that imposing a carbon content price on marginal generators can have on wholesale prices and, ultimately, on the cost of electricity to consumers.

b. **Question No. 17: Do you support such an approach? Why or why not?**

As discussed in the response to Question No. 16, SCPPA opposes the hybrid approach. It is clearly inferior to the load-based approach as proposed by the CPUC and supported by SCPPA.

c. **Question No. 18: Does this approach have legal issues associated with it? Provide a detailed analysis and legal citations.**

The hybrid approach may have legal issues associated with it. For example, as discussed in response to Question No. 16 above, it may result in an allocation of allowances that some parties may claim to be discriminatory and, hence, unlawful. However, the hybrid approach would not be afflicted by the same legal issues that are fatal to the first seller approach. Insofar

as regulations would be aimed only at in-state entities that are within the clear jurisdiction of California regulatory agencies, the hybrid approach would not give rise to the same preemption indirect and ancillary. By contrast, the effect on the wholesale market under the first-seller approach would be issues that are raised by the first-seller approach.[8]

d. **Question No. 19: If retail providers are responsible for internalizing the cost of carbon for imported power, all power generated in-state may need to be tracked to load to avoid double regulation of in-state power. Do you agree?**

The POR Ruling fails to provide sufficient information about how the supposed "double regulation" would occur for SCPPA to respond to Question No. 19. SCPPA reserves its right to respond in reply comments to observations that might be made by other parties.

e. **Question No. 20: If that is the case, does a mixed source-based/load-based approach offer any advantages compared to a load-based approach in terms of simplifying reporting and tracking? What if the load-based system used TEACs? How could imports be differentiated from in-state generation in a way that reduces the complexity of reporting and tracking compared to a load-based approach?**

See responses to Question Nos. 8 and 19.

E. Deferral of a Market-Based Cap-and-Trade System.

1. Question No. 21: How important is it that a cap-and-trade system be included in the near-term as a part of the electricity sector's AB 32 compliance strategy?

It is not necessary to have a cap-and-trade system in place in order to implement a GHG regulatory scheme as envisioned by the CPUC and supported by SCPPA. The CPUC was explicit in D.06-02-032 that the regulatory scheme that it proposed to develop would be compatible with any "GHG cap-and-trade regime that *may be developed in the future*, either in

[8] The hybrid approach may, as noted in the response to Question No. 16, have an adverse effect on wholesale prices insofar as the cost of operation for an in-state generator might be raised, but that effect would be indirect and ancillary. By contrast, the effect on the wholesale market under the first-seller approach would be direct as the intended instrument by which to accomplish GHG reductions from out-of-state resources.

the Western Region, nationally, or internationally." D.06-02-032 at 2 (emphasis added). Of course, a prerequisite for having a regulatory structure that would be compatible with a future cap-and-trade system was that the allowances that would be made available under the pre-cap-and-trade regulatory scheme be designed so as to be compatible with trading once a cap-and-trade system were established. The CPUC provided for that compatibility: "[T]he GHG emission allowances associated with out load-based cap will be in the form of 'tons of carbon-dioxide equivalent.'" *Ibid.*

The CPUC specifically left for subsequent development what it calls "flexible compliance options," including trading. Other "flexible compliance options" were offsets, banking, and borrowing. The Commission stated: "[W]e leave to the implementation phase the determination of flexible compliance options, including the scope of offsets, trading, banking and borrowing of allowance." *Ibid* at 3.

Trading of allowances as well as offsets, banking, and borrowing can, as correctly observed by the CPUC, add flexibility to a GHG regulatory scheme for the electric sector. Each of the mechanisms has the potential to decrease program costs. However, at least some of the mechanisms should be examined, as was intended by the CPUC, for potential downsides. For example, the MAC was concerned that any provision for offsets should be carefully bounded so as to avoid the potential for abuse. MAC Report at 61-65. Likewise, while the MAC supported banking allowances, the MAC opposed borrowing. MAC Report at 66.

As correctly determined by the CPUC in D.06-02-032, flexible compliance mechanisms including trading, banking, borrowing, and offsets are features that can be added to the fundamental structure of a GHG regulatory scheme as an overlay or supplemental feature but are *not* necessary conditions for implementing GHG regulation.

2. Question No. 22: Would your answer to Q12 be different if there were no market-based cap-and-trade system? If so, please explain.

No. Energy efficiency and renewable procurement programs can be imposed on retail providers regardless of whether there is a cap-and-trade system. *See* SCPPA response to Question No. 1 above. Accordingly, SCPPA's response to Question No: 12 regarding oversight of energy efficiency and renewable procurement programs would be unaffected by whether there is a cap-and-trade system.

3. Question No. 23: Address the following:

a. **How emission reduction obligations could be met if there is no cap-and-trade system for the electricity sector.**

Emission reduction obligations under AB 32 could be met without a cap-and-trade system by direct regulation of retail providers. Such a foundational program for direct regulation of GHG emissions was envisioned by the CPUC in D.06-02-032. The CPUC proposed to quantify the GHG emissions "baseline" for each load serving entity ("LSE"), with the "baseline" being the level of reduced emissions that would be required of each LSE. D.06-02-032 at 4. The CPUC would establish "GHG emission reduction requirements over time, relative to the baseline" so as to progressively reduce the GHG emissions levels that were allowed to each LSE as each LSE progressed towards achieving its "baseline" target for reduced GHG emissions. *Ibid.* The CPUC would "cap the emissions of each LSE at 1990 levels by 2020 and 80% below 1990 levels by 2050...." and "adopt emissions reduction requirements (and associated caps) for the years between now and 2020." *Ibid* at 39. The CPUC would have "a process for allocating emissions allowances" to the LSEs with the allocated allowances being reduced over time. D.06-02-032 at 4. Lastly, the Commission would impose "appropriate performance penalties." Penalties were "necessary or else the program will only be a voluntary one." *Ibid* at 47. This

foundational program would achieve GHG reductions through direct regulation of regulated retail providers.

The direct regulatory program as envisioned by the CPUC could be adopted without any flexible compliance mechanisms being in place. The flexible compliance mechanisms were not necessary conditions for adopting the program. However, the CPUC clearly intended to pursue flexible compliance mechanisms such as trading, banking, borrowing, and offsets so as to reduce the cost of the GHG regulatory program for the consumer.

The direct regulatory program envisioned by the CPUC was fully consistent with the structure of regulation under the Clean Air Act. For example, the South Coast Air Quality Management District ("SCAQMD") grants facilities under its jurisdiction an annual emissions allocation or "cap" based upon historical emissions between 1999 and 1992. *See* SCAQMD Rule 2002. The facilities are required to reduce emissions progressively between 1994 and 2010 pursuant to a formula set forth in the SCAQMD regulations. *Ibid.*

Under the SCAQMD Regional Clean Air Act Incentives Market ("RCAAIM") program that is available to approximately 400 southern California sources, trading is allowed as a mechanism to reduce the costs of SCAQMD program. SCAQMD Regulation XX. RECLAIM is a "flexible compliance mechanism" that is not a necessary condition for regulation of emissions of NOx and SOx under the Clean Air Act. Instead, RECLAIM is an additional feature that is intended to add flexibility to Clean Air Act regulation so as to reduce total program costs.

b. **How increased programmatic goals would impact rates.**

By "increased programmatic goals," it appears the Commissions have in mind the costs of increasing the goals for energy efficiency or renewable portfolio programs. SCPPA has not modeled the impact of increasing various programmatic goals on rates. SCPPA understands that

such modeling would be one of the tasks performed by the Commissions' modeling consultant, Energy and Environmental Economics, Inc. ("E3").

c. How deferral of a cap-and-trade program for the electricity sector would facilitate or hinder California's integration into a subsequent regional or federal program.

The POR Ruling does not define what would be a "subsequent regional or federal program." Thus, it is difficult to determine how "deferral of a cap-and-trade program for the electricity sector would facilitate or hinder California's integration into a subsequent regional or federal program."

However, given that a cap-and-trade program appears to have the potential to result in adding flexibility to a GHG regulatory structure by facilitating trading of allowances, and given that flexibility has the potential to reduce program costs, it appears to be reasonable to speculate that a federal program would include a cap-and-trade feature.

If a federal program were to include such a cap-and-trade feature, it would be helpful to for the California program to include tradable allowances so as to fit into a national cap-and trade program. This was envisioned by the CPUC in D.06-02-032. The CPUC defined allowances in "tons of carbon-dioxide equivalent" and planned to institute allowance trading in the interest of having a California program that would fit with a subsequent national program as well as in the interest of reducing the cost of the California program.

4. Question No. 24: How deferral of a cap-and-trade program for the electricity sector would facilitate or hinder California's integration into a subsequent regional or federal program.

This question appears to be word-as-word the same as Question 23.c immediately above. See SCPPA's response to Question No. 23.c.

5. **Question No. 25: If neither a regional system nor a national system is implemented within a reasonable timeframe, should California proceed with implementing its own cap-and-trade system for the electricity sector? If so, how long should California wait for other systems to develop before acting alone?**

The CARB is required to adopt greenhouse gas emissions limits and emission reduction measures by regulation on or before January 1, 2011. Cal. H & S Code §38562(a). Such greenhouse gas emissions limits and emission reduction measures are required to become operative on January 1, 2012. *Ibid.* Although implementation of flexible compliance mechanisms generally and trading under a cap-and-trade program specifically are not necessary conditions for making greenhouse gas emissions limits and emission reduction measures operative by January 1, 2012, SCPPA concurs with the CPUC that trading as well as other flexible compliance mechanisms have the potential to reduce total cost of the GHG regulatory program. Accordingly, SCPPA urges the Commissions and CARB to proceed with implementing a California cap-and-trade system concurrently with the development of other program features.

6. **Question No. 26: What flexible compliance mechanisms could be integrated into a non-market based GHG emission reduction approach?**

Even if trading were not permitted under GHG regulatory schemes, banking, borrowing, and offsets could still be integrated into a GHG reduction program. Banking would allow entities to over-comply in an early phase of program implementation and save allowances for surrendering future compliance periods. MAC Report at 66. MAC supported banking:

> [Banking] improves environmental performance by achieving reductions earlier; it also reduces cumulative compliance costs by creating an incentive for early over-compliance by entities that have low near-term marginal abatement costs. By providing flexibility, banking reduces price volatility and thereby promotes investments that provide deeper reductions in the near term. The Committee acknowledges these favorable properties of banking

> and supports a program with unlimited banking. That is, the Committee believes that allowances that are not submitted in a given period should qualify for use in any future period.

MAC Report at 66.

Borrowing is similar to banking, except that it permits entities to apply allowances taken from a future compliance period rather than a past period:

> Borrowing allows entities to apply allowances from a future compliance period I the current compliance period. Borrowing may involve a penalty such as a requirement to surrender extra allowances or pay a fee.

Ibid. Given that the demand for electric generation service can fluctuate substantially due to unforeseeable changes in weather conditions, SCPPA urges the Commissions to consider borrowing as an additional flexible compliance mechanism regardless of whether or not trading of allowances is permitted.

A third flexible compliance option that was specifically referenced by the CPUC in D.06-12-032 was offsets: "An offset is a credit for emissions reductions achieved by an entity in a sector that is not covered by a given cap-and-trade system. By encouraging emissions reductions in areas or sectors outside the cap-and-trade program, offsets brought within reach of the program help promote the achievement of overall emissions-reduction goals at lower cost." MAC Report 61-62. The MAC observed, however, that the "potential of offsets to lower the costs of achieving emissions reduction targets unfortunately is matched by significant challenges and risks in the practical implementation of an offsets provision." MAC Report at 62. SCPPA joins the MAC in recognizing that there are "significant challenges and risks in the practical implementation" of an offset program. Nevertheless, SCPPA joins the CPUC in supporting investigation of an offsets program to add flexibility to a California GHG regulatory program for the electric sector regardless of whether or not trading is permitted.

7. Question No. 27: If a market-based cap-and-trade system is not implemented for the electricity sector in 2012, how would you recommend addressing early actions that entities may have undertaken in anticipation of a market?

Instituting a "market-based cap-and-trade system" for the electric sector is *not* a necessary condition for fully recognizing "early actions that entities may have undertaken" prior to AB 32 regulations becoming operative on January 1, 2012. "Early actions" that entities might undertake after enactment of AB 32 but prior to 2012 would be automatically recognized under the program that SCPPA supports.

Under SCPPA's proposal in this proceeding, GHG emissions allowances would be administratively allocated to regulated retail providers as the points of regulation in the electric sector for the benefit of retail providers' customers. The administrative allocation of allowance should be based upon *recent pre-AB 32 actual experienced emissions*, with the amount of allowances that are allocated to each retail provider for each successive compliance period being reduced proportionately over time as necessary to achieve the AB 32 GHG reduction goals for the electric sector and for each regulated retail provider by 2020. *See* SCPPA Opening Allowance Allocation Comment at 51; SCPPA Reply Allowance Allocation Comment at 9.

By basing allowances upon a "recent pre-AB 32 period such as, for example, the three year period 2004-2006, allowances would be allocated to regulated retail providers without any reduction to reflect emissions reduction measures that the retail providers might undertake between the enactment of AB 32 on January 1, 2007 and January 1, 2012 when AB 32 regulations become operative. Thus, under SCPPA's proposal in this proceeding "early actions" undertaken prior to 2012 would *automatically* be fully recognized. To the extent to which a retail provider undertook "early action" prior to 2012, that entity would have excess allowances

that could be banked for a future use (if banking were permitted, as recommended by SCPPA) or traded (if trading were permitted, as also recommended by SCPPA).

F. Recommendation and Comparison of Alternatives.

1. Question No. 29: Submit your comprehensive proposal for the approach California should utilize regarding the point of regulation and whether California should implement a cap-and-trade program at this time for the electricity sector. If you recommend that another approach be considered besides those detailed above, propose it here. If you recommend one of the above options, give as detailed a discussion as possible of how the approach would work.

SCPPA recommends a program that achieves the objectives discussed above in response to Question No. 3. Thus, SCPPA supports a program that would attain the AB 32 GHG reduction goal with the burden of attaining the AB 32 goal being fairly allocated among regions and communities and with the costs of the program being minimized.

Consistent with those objectives, SCPPA supports having the Commissions build upon the foundation laid by the CPUC in D.06-02-032 and the Scoping Memo. Accordingly, SCPPA supports a GHG emissions reduction program in which regulated retail providers would be the points of regulation in the electric sector. GHG emission allowances should be administratively allocated to the regulated retail provider as the points of regulation for the benefit of the retail providers' customers. The allocation of allowances should be based upon pre-AB 32 actual experienced emissions, with the amount of allowances that are allocated to each retail provider for each successive compliance period being reduced proportionately over time as necessary to achieve the AB 32 GHG reduction goals for the electric sector and each retail provider by 2020. *See* SCPPA Opening Allowance Allocation Comment at 51; SCPPA Reply Allowance Allocation Comment at 9.

In addition to being consistent with the overarching objectives and principles discussed above and consistent with the program envisioned by the CPUC in D.06-02-032 and the Scoping

Memo, SCPPA's recommended program would be entirely consistent with the GHG regulatory program envisioned by NARUC, and it would be consistent with regulation of criteria pollutants under the Clean Air Act.

SCPPA also supports the adoption of "flexible compliance mechanisms" to provide an opportunity for reducing the cost of the GHG regulatory program. Accordingly, as discussed in response to Question No. 1 above, SCPPA supports permitting allowance trading under a cap-and-trade system. SCPPA also supports banking of allowances and borrowing of allowances, particularly given the potential for adverse weather conditions to cause unforeseen spikes in demand for electricity generation. Additionally, although SCPPA fully recognizes that an offsets program may give rise to concerns about equity or the potential for abuse, SCPPA fully supports an appropriately limited offsets program as an additional measure to permit minimizing the cost of the California GHG emissions reduction program.

Further, if allowance trading is permitted, consideration should be given to establishing a safety valve in addition to the provisions of California Health and Safety Code § 38599[9] to prevent allowance prices from going too high. Although a trading mechanism is intended as a cost minimization measure, there is also a potential for prices to rise to unforeseen levels as

---

[9] California Health and Safety Code § 38599 provides:

> 38599. (a) In the event of extraordinary circumstances, catastrophic events, or threat of significant economic harm, the Governor may adjust the applicable deadlines for individual regulations, or for the state in the aggregate, to the earliest feasible date after that deadline.
> (b) The adjustment period may not exceed one year unless the Governor makes an additional adjustment pursuant to subdivision (a).
> (c) Nothing in this section affects the powers and duties established in the California Emergency Services Act (Chapter 7 (commencing with Section 8550) of Division 1 of Title 2 of the Government Code).
> (d) The Governor shall, within 10 days of invoking subdivision(a), provide written notification to the Legislature of the action undertaken.

occurred under the SCAQMD RECLAIM program in 2000-2001. Accordingly, if the Commission adopts a trading program as recommended by the CPUC and supported by SCPPA, SCPPA recommends that the safety valve be adopted as an adjunct to any program that permits trading of allowances.

> A safety valve places a ceiling price on emission allowances in order to provide price certainty and limit the cost of a cap and trade program. When the allowance price reaches this predetermined level the program administrator may sell additional allowances at the ceiling price. Equivalently, regulated entities could pay the amount of the safety valve for every ton of emissions over the number of allowances held. Thus a safety valve brings assurances that the price of allowances will not exceed a certain level.

MAC Report at 67.

The MAC objected to having a safety valve because "it removes what many consider to be a major potential attraction of a cap-and-trade program: the certainty that total emissions from entities within the program would be kept within a given cap." *Ibid.* However, a safety valve is a necessary adjunct if the CARB is to adopt trading as a flexible compliance mechanism. The California electric sector lived through the experience of 2000-2001. California should be careful to guard against a sequel. A repeat of 2000-2001 as a result of adopting a GHG regulatory program could disastrously reduce public support for the program as well as otherwise damage California and the California economy. The most ardent supporters of GHG emissions reduction should support a safety valve as insurance against an event that could severely diminish political support for emissions reduction.

2. **Question No. 30: Address and compare how each of the alternatives identified in the above questions, and the proposal you submit ion response to the preceding question, would perform relative to each of the principles or objectives listed above and any other principles or objectives you propose. For each alternative, address important tradeoffs among the principles.**

The program outlined in response to Question No. 29 above would be consistent with the paramount objectives of fully attaining the AB 32 goal fairly and cost effectively. Insofar as points of regulation in the electric sector would be regulated retail providers, the number of regulated entities would be minimized in contrast to either the first seller or the hybrid approach, leading to administrative simplicity. Additionally, legal risk would be reduced. Insofar as the program would contain a feature to minimize cost though permitting trading, the program would have available features that would enable the program to mesh with other programs in which allowances are traded. Lastly, the load-based approach under which retail providers would be the point of regulation would avoid the direct interference in the real time or forward markets that would occur under the first-seller or hybrid approaches, thereby preventing the unnecessary increase in the cost of the GHG reduction program as would occur under either the first-seller or hybrid approaches.

IV. CONCLUSION.

For the reasons set forth above, SCPPA urges that the Commissions recommend to CARB a program as outlined in response to Question No. 29 above.

Respectfully submitted,

/s/ Norman A. Pedersen

Norman A. Pedersen, Esq.
HANNA AND MORTON LLP
444 South Flower Street, Suite 1500
Los Angeles, California 90071-2916
Telephone: (213) 430-2510
Facsimile: (213) 623-3379
E-mail: *npedersen@hanmor.com*

Attorney for the **SOUTHERN CALIFORNIA PUBLIC POWER AUTHORITY**

Dated: December 3, 2007

ATTACHMENT A

National Association of Regulatory Utility Commissioners

EL-1 Resolution on Federal Climate Legislation and Cap-and-Trade Design Principles

ELECTRICITY

EL-1 Resolution on Federal Climate Legislation and Cap-and-Trade Design Principles

WHEREAS, The National Association of Regulatory Utility Commissioners (NARUC) formed a Task Force on Climate Policy in March 2007 in order to educate NARUC members concerning climate policy issues and to develop policy proposals for consideration by the NARUC membership; *and*

WHEREAS, The NARUC Board of Directors adopted a resolution sponsored by the Task Force on Climate Policy at the 2007 NARUC Summer Meetings held in New York, New York, on July 18, 2007, that enunciated ten policy principles that NARUC believes should inform federal climate policy;
and

WHEREAS, The relative merits of a market mechanism proposed for inclusion in any federal climate change legislation, including, but not limited to, a cap-and-trade mechanism, a carbon tax, and a load-side cap, should be carefully evaluated in determining how to achieve the desired emissions reductions consistent with the ten principles previously adopted by NARUC; *and*

WHEREAS, Congress has continued to debate various policy proposals for addressing the environmental and economic consequences of alternative climate change policies since the 2007 NARUC Summer Meetings; *and*

WHEREAS, Since the 2007 NARUC Summer Meetings, the Task Force on Climate Policy has also continued to examine various policy proposals relating to climate change issues; *and*

WHEREAS, The momentum for enactment of federal legislation regulating the emission of greenhouse gases (GHG) appears to have further increased, making the enactment of such legislation within the foreseeable future likely; *and*

WHEREAS, The existence of uncertainty about the nature and extent to which GHG emissions will be subject to future federal regulation makes it difficult for State regulators, regulated utilities, and others to appropriately plan for needed investments in electric transmission and generation infrastructure; *and*

WHEREAS, Despite a diversity of opinion within NARUC's membership regarding the need for national limitations on the emission of GHGs for the purpose of addressing concerns over warming of the Earth's climate, NARUC's members are in general agreement that the enactment of federal legislation limiting such emissions in would be appropriate in order to remove existing uncertainties that are hampering the making of transmission and generation investment decisions; *and*

WHEREAS, NARUC's members are also in general agreement that appropriate federal climate change legislation should be enacted in order to enhance the likelihood that appropriate technologies will be developed and other solutions implemented so as to achieve desired reductions in GHG emissions in the most economical manner possible; *now, therefore, be it*

RESOLVED, That the National Association of Regulatory Utility Commissioners, convened in its November 2007 Annual Convention in Anaheim, California, supports the enactment of federal legislation intended to reduce GHG emissions so long as such legislation relies, to the extent practicable, on an appropriate market mechanism or mechanisms as part of an economy-wide approach to GHG regulation; provides for an appropriate transition period prior to the implementation of full regulation of GHG emissions; creates sufficient certainty to ensure the financing of needed energy infrastructure consistent with the achievement of the environmental objectives intended to be accomplished by such legislation; and is otherwise consistent with the policy principles developed by the Task Force on Climate Policy and approved by the NARUC Board of Directors at the 2007 NARUC Summer Meetings held in New York, New York, on July 18, 2007; *and be it further*

RESOLVED, That the Task Force on Climate Policy should consider and develop, as appropriate, proposed resolutions for NARUC's consideration addressing additional market mechanisms including, but not limited to, a carbon tax and a load-side cap; *and be it further*

RESOLVED, That, in the event that Congress chooses to implement a cap and trade mechanism for the purpose of limiting electric sector GHG emissions, any such federal climate change legislation should rest upon the following cap-and-trade design principles in order to appropriately balance competing criteria, including, but not limited to, equity, economic efficiency, and ease of administration:

1. Auctioning of all allowances is ultimately the most economically efficient mechanism for achieving emission reduction goals from electric generation. However, the allocation of emission allowances within the electricity sector at no cost is an appropriate transitional measure in order to ensure continued reliability, minimize economic dislocation resulting from the carbon intensity of the existing electricity generation infrastructure, and allow for the development of appropriate new technology.

2 Any emissions allowance allocation program, consistent with an economy-wide approach, should involve a reduction in the number of allowances allocated within the electricity sector over time to ensure that needed reductions in GHG emissions are encouraged through a gradual increase in the cost of carbon-intensive generation sources as compared to the cost of other generation sources.

3. The primary purpose of any transitional emissions allowance allocation process applicable to the electricity sector should be to minimize the initial economic impact of GHG-emissions regulation to end-user customers by phasing in the impact of such regulation over a reasonable period of time.

4. Any emissions allowance allocation program should produce reasonable outcomes, consistent with these cap-and-trade design principles, regardless of applicable electricity market or regulatory structures.

5. Any emissions allowance allocation program should assign all allocated allowances available to the electricity sector to local distribution companies providing a regulated local distribution function for end-user customers (including vertically-integrated

utilities, distribution utilities, rural-electric cooperatives, municipal distribution systems, and all other entities providing distribution service directly to end-user customers subject to State regulation or its equivalent). This approach will allow State PUCs or other authorities to ensure that the value of these no-cost allowances will inure to the benefit of end-use consumers. Alternatively, States should be able to adopt other methods for distributing benefits to end-use consumers.

6. The assignment of no-cost allocated allowances to local distribution companies as defined above should be based primarily on the level of GHG-emissions from the resources used to provide service to the local distribution company's load during an appropriate baseline period.

7. Any emissions allowance allocation program should not inappropriately advantage or disadvantage particular regions, local distribution companies (as defined above), or generators, and should ensure that end-user customers receive the benefit of allocated emissions allowances for the purpose of offsetting the increased costs resulting from the institution of GHG-emissions regulation.

8. Any assignment of allocated emissions allowances should seek to accommodate any efforts made in particular regions or States to reduce GHG-emissions in anticipation of the enactment of federal legislation regulating GHG-emissions.

9. In defining the baseline period, proper precautions should be taken to ensure that counterproductive behavior by any allowance market participants is discouraged and that gaming does not occur.

10. Cost-containment measures should be included in any cap-and-trade mechanism in order to minimize abrupt changes in the cost of compliance, including during the initial phases of implementation, which could adversely affect electricity consumers or allowance markets. Such measures should be designed to achieve effective and appropriate environmental benefits while ensuring price stability and predictability, promoting investment in appropriate technologies, and minimizing adverse consumer impacts, including price volatility*; and be it further*

RESOLVED, That any federal climate change legislation should be consistent with existing NARUC policies regarding non-discriminatory wholesale competition; demand response; energy efficiency; renewable generation; generation resource adequacy; fuel diversity; the development of clean coal and improved nuclear technologies; and the development of a comprehensive solution for the existing nuclear waste disposal problem.

Sponsored by the Committees on Electricity, Energy Resources and the Environment, and Gas Recommended by the NARUC Board of Directors, November13, 2007 Adopted by the Committee of the Whole, November 14, 2007.

CERTIFICATE OF SERVICE

I hereby certify that I have this day served a copy of the **SOUTHERN CALIFORNIA PUBLIC POWER AUTHORITY OPENING COMMENT ON POINT OF REGULATION ISSUES** 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 December 3, 2007, at Los Angeles, California.

/s/ Sylvia Cantos

Sylvia Cantos

R.06-04-009 SERVICE LIST
DOCKET 07-OIIP-01 SERVICE LIST

abb@eslawfirm.com
abonds@thelen.com
achang@nrdc.org
adamb@greenlining.org
aeg@cpuc.ca.gov
agc@cpuc.ca.gov
agrimaldi@mckennalong.com
aimee.barnes@ecosecurities.com
ajkatz@mwe.com
akbar.jazayeri@sce.com
akelly@climatetrust.org
alan.comnes@nrgenergy.com
aldyn.hoekstra@paceglobal.com
alho@pge.com
amber@ethree.com
amsmith@sempra.com
andrew.bradford@constellation.com
andrew.mcallister@energycenter.org
andy.vanhorn@vhcenergy.com
anita.hart@swgas.com
annabelle.malins@fco.gov.uk
annette.gilliam@sce.com
apak@sempraglobal.com
arno@recurrentenergy.com
atrial@sempra.com
atrowbridge@daycartermurphy.com
Audra.Hartmann@Dynegy.com
aweller@sel.com
bbaker@summitblue.com
bbeebe@smud.org
bblevins@energy.state.ca.us
bcragg@goodinmacbride.com
bdicapo@caiso.com
bernardo@braunlegal.com
beth@beth411.com
Betty.Seto@kema.com
bill.chen@constellation.com
bill.schrand@swgas.com
bjeider@ci.burbank.ca.us
bjl@bry.com
bjones@mjbradley.com
bkc7@pge.com
blm@cpuc.ca.gov
bmcc@mccarthylaw.com
bmcquown@reliant.com
Bob.lucas@calobby.com
bpotts@foley.com
bpurewal@water.ca.gov
brabe@umich.edu
brbarkovich@earthlink.net
BRBc@pge.com
brenda.lemay@horizonwind.com
burtraw@rff.org
bushinskyj@pewclimate.org
C_Marnay@1b1.gov
cadams@covantaenergy.com
californiadockets@pacificorp.com
carla.peterman@gmail.com
carter@ieta.org
case.admin@sce.com
cathy.karlstad@sce.com
cbaskette@enernoc.com
cbreidenich@yahoo.com
cchen@ucsusa.org
cem@newsdata.com
cf1@cpuc.ca.gov
cft@cpuc.ca.gov
charlie.blair@delta-ee.com
chilen@sppc.com
cjw5@pge.com
ckmitchell1@sbcglobal.net
ckrupka@mwe.com
clarence.binninger@doj.ca.gov
clark.bernier@rlw.com
clyde.murley@comcast.net
cmkehrein@ems-ca.com
colin.petheram@att.com
cpe@cpuc.ca.gov
cpechman@powereconomics.com
cswoollums@midamerican.com
curt.barry@iwpnews.com
curtis.kebler@gs.com
Cynthia.A.Fonner@constellation.com
cynthia.schultz@pacificorp.com
daking@sempra.com
Dan.adler@calcef.org
danskopec@gmail.com
dansvec@hdo.net
dave@ppallc.com
david.zonana@doj.ca.gov
david@branchcomb.com
david@nemtzow.com

davidreynolds@ncpa.com
dbrooks@nevp.com
deb@a-klaw.com
deborah.slon@doj.ca.gov
dehling@klng.com
Denise_Hill@transalta.com
derek@climateregistry.org
dhecht@sempratrading.com
dhuard@manatt.com
diane_fellman@fpl.com
dietrichlaw2@earthlink.net
dil@cpuc.ca.gov
dkk@eslawfirm.com
dks@cpuc.ca.gov
dmacmil@water.ca.gov
dmetz@energy.state.ca.us
dniehaus@semprautilities.com
douglass@energyattorney.com
dseperas@calpine.com
dsh@cpuc.ca.gov
dsoyars@sppc.com
dtibbs@aes4u.com
dwang@nrdc.org
dwood8@cox.net
dws@r-c-s-inc.com
echiang@elementmarkets.com
edm@cpuc.ca.gov
egw@a-klaw.com
ehadley@reupower.com
ej_wright@oxy.com
ek@a-klaw.com
ekgrubaugh@iid.com
ELL5@pge.com
elvine@lbl.gov
emahlon@ecoact.org
emello@sppc.com
epoole@adplaw.com
epowers@arb.ca.gov
e-recipient@caiso.com
etiedemann@kmtg.com
ewolfe@resero.com
ez@pointcarbon.com
farrokh.albuyeh@oati.net
fiji.george@elpaso.com
filings@a-klaw.com
fjs@cpuc.ca.gov
fluchetti@ndep.nv.gov
fstern@summitblue.com
fwmonier@tid.org
gbarch@knowledgeinenergy.com
gblue@enxco.com
george.hopley@barcap.com
ghinners@reliant.com
GloriaB@anzaelectric.org
glw@eslawfirm.com
gmorris@emf.net
gpickering@navigantconsulting.com
gregory.koiser@constellation.com
grosenblum@caiso.com
gsmith@adamsbroadwell.com
gxl2@pge.com
harveyederpspc.org@hotmail.com
hayley@turn.org
hcronin@water.ca.gov
hgolub@nixonpeabody.com
hoerner@redefiningprogress.org
hs1@cpuc.ca.gov
hurlock@water.ca.gov
HYao@SempraUtilities.com
hym@cpuc.ca.gov
info@calseia.org
jack.burke@energycenter.org
james.keating@bp.com
janill.richards@doj.ca.gov
jarmstrong@goodinmacbride.com
jason.dubchak@niskags.com
jbf@cpuc.ca.gov
jbw@slwplc.com
jchamberlin@strategicenergy.com
jci@cpuc.ca.gov
JDF1@PGE.COM
jdh@eslawfirm.com
jdoll@arb.ca.gov
jeanne.sole@sfgov.org
jeffgray@dwt.com
jen@cnt.org
jenine.schenk@apses.com
jennifer.porter@energycenter.org
JerryL@abag.ca.gov
jesus.arredondo@nrgenergy.com
jf2@cpuc.ca.gov
jgill@caiso.com
jgreco@calthnessenergy.com
jhahn@covantaenergy.com
jimross@r-c-s-inc.com
jj.prucnal@swgas.com
jjensen@kirkwood.com
jk1@cpuc.ca.gov
jkarp@winston.com
jkloberdanz@semprautilities.com

jlaun@apogee.net
jleslie@luce.com
jluckhardt@downeybrand.com
jm3@cpuc.ca.gov
jnm@cpuc.ca.gov
jody_london_consulting@earthlink.net
Joe.paul@dynegy.com
john.hughes@sce.com
johnrredding@earthlink.net
jol@cpuc.ca.gov
josephhenri@hotmail.com
joyw@mid.org
jsanders@caiso.com
jscancarelli@flk.com
jsqueri@gmssr.com
jst@cpuc.ca.gov
jtp@cpuc.ca.gov
julie.martin@bp.com
jwiedman@goodinmacbride.com
jwmctarnaghan@duanemorris.com
jxa2@pge.com
karen@klindh.com
karla.dailey@cityofpaloalto.org
Kathryn.Wig@nrgenergy.com
kbowen@winston.com
kcolburn@symbioticstrategies.com
kdusel@navigantconsulting.com
kdw@woodruff-expert-services.com
keith.mccrea@sablaw.com
kellie.smith@sen.ca.gov
kelly.barr@srpnet.com
ken.alex@doj.ca.gov
ken.alex@doj.ca.gov
kenneth.swain@navigantconsulting.com
kerry.hattevik@mirant.com
kevin.boudreaux@calpine.com
kfox@wsgr.com
kgough@calpine.com
kgrenfell@nrdc.org
kgriffin@energy.state.ca.us
kjinnovation@earthlink.net
kjsimonsen@ems-ca.com
kkhoja@thelenreid.com
klatt@energyattorney.com
kmills@cfbf.com
kmkiener@fox.net
kowalewskia@calpine.com
krd@cpuc.ca.gov
kyle.l.davis@pacificorp.com
kyle.silon@ecosecurities.com
kyle_boudreaux@fpl.com
lars@resource-solutions.org
Laura.Genao@sce.com
lcottle@winston.com
ldecarlo@energy.state.ca.us
leilani.johnson@ladwp.com
liddell@energyattorney.com
lisa.c.schwartz@state.or.us
lisa_weinzimer@platts.com
llorenz@semprautilities.com
llund@commerceenergy.com
lmh@eslawfirm.com
Lorraine.Paskett@ladwp.com
lpark@navigantconsulting.com
lrdevanna-rf@cleanenergysystems.com
lrm@cpuc.ca.gov
lschavrien@semprautilities.com
ltenhope@energy.state.ca.us
ltt@cpuc.ca.gov
marcel@turn.org
marcie.milner@shell.com
mary.lynch@constellation.com
mclaughlin@braunlegal.com
mdjoseph@adamsbroadwell.com
mflorio@turn.org
mgarcia@arb.ca.gov
mhyams@sfwater.org
Mike@alpinenaturalgas.com
mjd@cpuc.ca.gov
mmattes@nossaman.com
mmazur@3phasesRenewables.com
monica.schwebs@bingham.com
mpa@a-klaw.com
mpryor@energy.state.ca.us
mrw@mrwassoc.com
mscheibl@arb.ca.gov
mwaugh@arb.ca.gov
nenbar@energy-insights.com
ner@cpuc.ca.gov
nes@a-klaw.com
nlenssen@energy-insights.com
norman.furuta@navy.mil
notice@psrec.coop
npedersen@hanmor.com
nsuetake@turn.org
nwhang@manatt.com
obartho@smud.org
obystrom@cera.com
ofoote@hkcf-law.com
pbarthol@energy.state.ca.us

pburmich@arb.ca.gov
pduvair@energy.state.ca.us
pepper@cleanpowermarkets.com
phanschen@mofo.com
Philip.H.Carver@state.or.us
philm@scdenergy.com
pjazayeri@stroock.com
ppettingill@caiso.com
pseby@mckennalong.com
psp@cpuc.ca.gov
pssed@adelphia.net
pstoner@lgc.org
pthompson@summitblue.com
pvallen@thelen.com
pw1@cpuc.ca.gov
pzs@cpuc.ca.gov
rachel@ceert.org
ralph.dennis@constellation.com
ram@cpuc.ca.gov
randy.howard@ladwp.com
randy.sable@swgas.com
rapcowart@aol.com
rhelgeson@scppa.org
RHHJ@pge.com
rhwiser@lbl.gov
richards@mid.org
rick_noger@praxair.com
rita@ritanortonconsulting.com
rkeen@manatt.com
rkmoore@gswater.com
rmccann@umich.edu
rmiller@energy.state.ca.us
rmm@cpuc.ca.gov
rmorillo@ci.burbank.ca.us
robert.pettinato@ladwp.com
Robert.Rozanski@ladwp.com
roger.montgomery@swgas.com
roger.pelote@williams.com
rogerv@mid.org
ron.deaton@ladwp.com
rprince@semprautilities.com
rreinhard@mofo.com
rrtaylor@srpnet.com
rsa@a-klaw.com
rschmidt@bartlewells.com
rsmutny-jones@caiso.com
rwinthrop@pilotpowergroup.com
ryan.flynn@pacificorp.com
S1L7@pge.com
saeed.farrokhpay@ferc.gov
samuel.r.sadler@state.or.us
sandra.carolina@swgas.com
Sandra.ely@state.nm.us
sas@a-klaw.com
sasteriadis@apx.com
sbeatty@cwclaw.com
sberlin@mccarthylaw.com
sbeserra@sbcglobal.net
scarter@nrdc.org
scohn@smud.org
scott.tomashefsky@ncpa.com
scottanders@sandiego.edu
scr@cpuc.ca.gov
sdhilton@stoel.com
sellis@fypower.org
sendo@ci.pasadena.ca.us
sephra.ninow@energycenter.org
sgm@cpuc.ca.gov
slins@ci.glendale.ca.us
sls@a-klaw.com
smichel@westernresources.org
smindel@knowledgeinenergy.com
smk@cpuc.ca.gov
snewsom@semprautilities.com
spauker@wsgr.com
sscb@pge.com
ssmyers@att.net
steve.koerner@elpaso.com
steve@schiller.com
stevek@kromer.com
steven.huhman@morganstanley.com
steven.schleimer@barclayscapital.com
steven@iepa.com
steven@lipmanconsulting.com
steven@moss.net
svn@cpuc.ca.gov
svongdeuane@semprasolutions.com
svs6@pge.com
tam@cpuc.ca.gov
tburke@sfwater.org
tcarlson@reliant.com
tcx@cpuc.ca.gov
tdarton@pilotpowergroup.com
tdillard@sierrapacific.com
THAMILTON5@CHARTER.NET
thunt@cecmail.org
tiffany.rau@bp.com
tim.hemig@nrgenergy.com
todil@mckennalong.com
Tom.Elgie@powerex.com

tomb@crossborderenergy.com
tomk@mid.org
trdill@westernhubs.com
troberts@sempra.com
UHelman@caiso.com
vb@pointcarbon.com
vitaly.lee@aes.com
vjw3@pge.com
vprabhakaran@goodinmacbride.com
vwelch@environmentaldefense.org
wbooth@booth-law.com
westgas@aol.com
william.tomlinson@elpaso.com
wsm@cpuc.ca.gov
wtasat@arb.ca.gov
www@eslawfirm.com
wynne@braunlegal.com
ygross@sempraglobal.com
zaiontj@bp.com