

DOCKET	
07-011P-1	
DATE	DEC 03 2007
RECD.	DEC 03 2007

**BEFORE THE PUBLIC UTILITIES 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 Emissions
Standards into Procurement Policies.

Rulemaking 06-04-009
(Filed April 13, 2006)

California Energy Commission Docket #07-OIIP-01

**OPENING COMMENTS OF THE NATURAL RESOURCES DEFENSE
COUNCIL (NRDC) AND UNION OF CONCERNED SCIENTISTS (UCS)
ON TYPE AND POINT OF REGULATION ISSUES**

December 3, 2007

Audrey Chang
Kristin Grenfell
Devra Wang
Natural Resources Defense Council
111 Sutter St., 20th Floor
San Francisco, CA 94104
415-875-6100
achang@nrdc.org

Cliff Chen
Union of Concerned Scientists
2397 Shattuck Avenue, Suite 203
Berkeley, CA 94704
510-843-1872
cchen@ucsusa.org

TABLE OF CONTENTS

I.	Introduction and Summary	1
II.	General.....	2
III.	Principles or Objectives to be Considered in Evaluating Design Options.....	5
IV.	Load-Based Cap-and-Trade System Design.....	8
V.	Source-based Cap-and-trade System Design Options	10
A.	Pure Source-based (GHG Regulation of In-state Generation Only).....	10
B.	Deliverer/First Seller.....	16
C.	Source-based for In-state Generation, Load-based for Imports.....	17
VI.	Deferral of a Market-based Cap-and-Trade System	19
VII.	Recommendation and Comparison of Alternatives	22
VIII.	Conclusion	32

**BEFORE THE PUBLIC UTILITIES 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 Emissions
Standards into Procurement Policies.

Rulemaking 06-04-009
(Filed April 13, 2006)

California Energy Commission Docket #07-OIIP-01

**OPENING COMMENTS OF THE NATURAL RESOURCES DEFENSE
COUNCIL (NRDC) AND UNION OF CONCERNED SCIENTISTS (UCS)
ON TYPE AND POINT OF REGULATION ISSUES**

I. Introduction and Summary

The Natural Resources Defense Council (NRDC) and Union of Concerned Scientists (UCS) respectfully submit these opening comments in accordance with the "Administrative Law Judges' Ruling Requesting Comments on Type and Point of Regulation Issues" (ALJ Ruling), dated July 19, 2007; the "Administrative Law Judges' Ruling Extending Comment Deadlines and Addressing Procedural Matters," dated November 30, 2007, extending the due date of opening comments; and pursuant to Rules 1.9 and 1.10 of the California Public Utilities Commission's (CPUC) Rules of Practice and Procedure. NRDC/UCS also concurrently submit these comments to the California Energy Commission (CEC) in Docket #07-OIIP-01, the CEC's sister proceeding to this CPUC proceeding.

NRDC is a non-profit membership organization with a long-standing interest in minimizing the societal costs of the reliable energy services that a healthy California economy needs. In this proceeding, NRDC represents its more than 124,000 California members' interest in receiving affordable energy services and reducing the environmental impact of California's energy consumption. UCS is a leading science-based non-profit working for a healthy environment and a safer world. Its Clean Energy Program

examines the benefits and costs of the country's energy use and promotes energy solutions that are sustainable both environmentally and economically.

NRDC and UCS appreciate the two Commissions' leadership in addressing global warming and reducing greenhouse gas (GHG) emissions through their decisions and actions over the past several years. The ALJ Ruling requested responses to a list of questions on and proposals for the general type and point of GHG regulation for the electricity sector to inform the Commissions' recommendation to the California Air Resources Board (CARB). Among the options for type and point of regulation posed by the ALJ Ruling are: load-based cap-and-trade; three source-based cap-and-trade alternatives (pure source-based, first-seller, and a hybrid in-state source-based/imports load-based system); and three options for deferral of a broader market-based approach (load-based cap-and-trade with trading only allowed within the electricity sector, load-based entity caps with no trading, and ramp up of mandatory levels of existing programs without individual entity caps or trading).

NRDC/UCS continue to believe that California could successfully implement a cap-and-trade program in the electricity sector using either a load-based, first seller, or "hybrid" approach, and recommend against adopting a pure source-based approach or deferring to act to develop a market-based approach. We urge policymakers to prioritize the relevant criteria, as the appropriate choice for the point of regulation will fall from this prioritization. We provide our assessment of the relative performance of each of the regulation approaches within each criteria, as well as a summary table, in our response to question 29. Further, we urge the CPUC/CEC and CARB to settle on a point of regulation and proceed to developing the more important components of the program – including establishing a tight cap that achieves real emission reductions, distributing allowances in the public interest, and providing strong enforcement.

II. General

Q1. What do you view as the incremental benefits of a market-based system for GHG compliance, in the current California context?

There are several types of market mechanisms that should be considered in California's implementation of AB 32, among which "cap-and-trade" is just one type of

market policy tool. Other market mechanisms that should also be considered include incentives, fees, rebates, and taxes (although a tax would need to be established by the Legislature or the voters). We expect that the package of policies to meet AB 32's 2020 emission limit will include multiple types of mechanisms. This proceeding focuses on design of a "cap-and-trade" program, so we focus our comments on this type of market-based system.

Any cap-and-trade program should be part of an integrated package of policies to meet the AB 32 statewide limit. We would expect a cap-and-trade program to provide a relatively small portion of the overall emission reductions needed to meet the 2020 limit, and certainly fewer than half of the reductions. The state has worked for many years on a full range of policies that should continue to be part of the entire AB 32 implementation package for the electricity and natural gas sectors, including energy efficiency programs, building and appliance efficiency standards, the renewable portfolio standard (RPS), generation emissions performance standard (SB 1368), etc. A cap-and-trade program should complement these regulatory programs by reducing emissions even lower than can be achieved through regulatory programs alone.

The benefits of *well-designed* cap-and-trade system in this context, are as follows:

- ***Enforceable cap on emitters.*** AB 32 establishes a 2020 *statewide emission limit* that the state *itself* commits to achieve through a combination of implementing policies; whereas, a *cap-and-trade program* creates a limit on sectors that is enforceable against individual *emitters*.
- ***Complements regulatory programs to reduce emissions even further.*** The enforceable cap should push emissions lower than can be efficiently achieved through regulatory programs alone. It is important to note that most performance standards, such as the renewable portfolio standard, are intensity based, so that absolute emission levels may continue to rise even while the program reduces emissions relative to business as usual levels. California must reduce absolute emissions to meet the AB 32 limit.
- ***Reduces costs and allows state to lower emissions even further.*** A cap-and-trade program can lower the cost of reducing emissions, thereby enabling the state to "get more for its money" by lowering emissions further and more effectively than regulatory programs alone.
- ***Creates a price signal.*** This ensures that businesses in the electric sector incorporate GHG emission considerations into everyday decision-making. Without a cap-and-trade program, businesses can meet the minimum requirements of other regulatory programs and continue to emit GHGs

without limit or cost; a cap-and-trade program creates a price signal so that businesses attribute a cost (whether an out-of-pocket cost or an opportunity cost) to every ton of GHGs emitted, and adjust their business practices accordingly. As economists would say, it “internalizes an externality.”

- ***Spurs innovation by providing an economic incentive to exceed regulation.*** A cap-and-trade program with a sufficiently strong price signal provides companies with an incentive to exceed minimum requirements under other regulatory programs (because there is a cost or opportunity cost to every ton of GHGs emitted), and can thereby generally stimulate innovation to develop and deploy a variety of new or better ways to reduce GHGs.
- ***Regulator can focus on desired outcome.*** In any regulatory system, the regulated entities have more information than their regulators. A cap-and-trade program can help address this information asymmetry by enabling the regulator to focus on the desired outcome (a limit on emissions) without needing to know everything about how to achieve that outcome, and can thereby reduce the administrative burden on the regulator.

Of course, as stressed above, cap-and-trade should be only one tool among many to accomplish the goals of AB 32, and regulatory and targeted policies have strengths that are needed to complement a cap-and-trade program. For example, complementary policies are needed to address the numerous “market barriers” to deployment faced by many solutions to global warming, most notably energy efficiency. In addition, since cap-and-trade provides only a generic innovation signal to reduce GHG emissions, targeted policies are more useful for spurring innovation for specific technologies. A cap-and-trade system must be well designed to ensure it furthers the goals of AB 32.

Q2. 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?

Yes, as explained above, one of the advantages of a cap-and-trade market-based system is that it can provide additional emissions reductions beyond existing policies and programs, if the cap is set tightly enough. Moreover, a cap-and-trade program can provide a “backstop” for intensity-based programs to ensure that emission reductions are achieved. NRDC/UCS expect the majority of reductions to be achieved through traditional regulatory policies and performance standards (such as the energy efficiency

programs and standards, RPS, etc), and that the remaining reductions needed to meet the electric sector's obligation under AB 32 can be provided through a cap-and-trade program. We urge the Commissions to *both* expand regulatory policies and performance standards, *and* utilize a cap-and-trade program to reduce emissions. We are still conducting our own analysis of the extent to which emissions reductions can be achieved through cap-and-trade and expansion of existing programs, and we will be closely evaluating the Commission's modeling (conducted by Energy and Environmental Economics) as we address this issue.

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

Q3. *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.*

- **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 (MRTU):** *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:** *Does 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?*

NRDC/UCS commend the Commissions for framing this ALJ Ruling's request for comments around key criteria, as many parties are implicitly prioritizing certain criteria over others in advocating for one approach or another. NRDC/UCS support this list of principles and overriding policy objectives to be used to evaluate GHG program design options. As described in our August 6, 2007 comments, NRDC/UCS believe that there are four primary criteria, along with consideration of legal issues as a threshold issue, that highlight the *differences* between approaches. These criteria are provided below, along with the corresponding ALJ Ruling's principles in brackets:¹

- ◆ Threshold legal issues [Legal risk]
- ◆ Precision of emissions accounting [Accuracy];
- ◆ Cost to consumers [Cost minimization];
- ◆ Ability to serve as a model for other cap-and-trade programs and integrate into a federal program [Expandability]; and
- ◆ Ability to promote long-term emission reduction strategies [Goal attainment and Cost minimization].

NRDC/UCS strongly urge the Commissions to prioritize these criteria in order to select the best approach, and we offer our own ranking of these criteria (grouped into high, medium, and lowest priority, but otherwise the order the criteria are listed within each group do not indicate degree of ranking). We urge the Commissions to quickly select a point of regulation approach and proceed to developing the more important components of the program – including ensuring a tight cap that achieves real emission reductions, distributing allowances in the public interest, and strong enforcement.

1. Highest priority

- *Legal risk* (threshold issue) – This is a threshold issue, since if the state determines that one approach has significantly high legal risk, that approach may not be prudent to pursue. However, NRDC/UCS believe that various approaches can be designed to be legally defensible.
- *Goal attainment* – This is core to the statewide GHG emissions limit mandated by AB 32, Health and Safety Code Section 38550.

¹ NRDC/UCS, "Opening Comments of the Natural Resources Defense Council (NRDC) and Union of Concerned Scientists (UCS) on the 'First Seller' Approach and Other Recommendations of the Market Advisory Committee Report," August 6, 2007, p. 5.

- *Environmental integrity* – This is required by AB 32, Health and Safety Code Section 38562(b)(8).
 - *Cost minimization* – This is required by AB 32, Health and Safety Code Section 38562(b)(1).
 - *Expandability* – It important for California to ultimately transition into a broader system (in particular, a future federal system into which it will be in California’s best interest to integrate) that is equally effective, and also to serve as a model for these systems. California’s role as a model for broader systems can either be through the point of regulation, or, perhaps more importantly, the other design aspects of a system (irrespective of the point of regulation) – i.e., a tight cap that provides real emission reductions, distributing allowances in the public interest, limiting offsets, and strong enforcement provisions.
2. Medium priority
- *Accuracy* – Though important, each approach has its own challenges in accuracy, and there are ways to improve the accuracy of each approach.
 - *Administrative simplicity* – Any approach will require some change from the status quo.
3. Lowest priority
- *Compatibility with wholesale markets and the MRTU* – This should be the lowest priority, as each approach is compatible with wholesale markets, so this is the lowest priority since in our minds, this does not reflect a significant difference among the approaches. In addition, provision of reliable, affordable, and environmentally sensitive electricity are key state goals, and wholesale markets are a means to an end, not an end in and of itself.

NRDC/UCS continue to believe that California could successfully implement a cap-and-trade program in the electricity sector using either a load-based, first seller, or “hybrid” approach that will meet the highest priority criteria.

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

Q4. With a load-based cap-and-trade system, should exports from in-state generation sources be included and accounted for under the cap? Why or why not? If so, how? 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.

If exports from in-state generators are included in the cap, there could be some risk of legal challenge under preemption grounds and Dormant Commerce Clause (DCC) grounds. A preemption challenge under the Federal Power Act would be possible if in-state generators' wholesale power sales are subject to the cap. As explained in NRDC's August 6, 2007 legal brief,² it is possible to design a program that includes wholesale power sales without improperly impinging on the Federal Power Act's realm, so it is likely that California could overcome a possible legal challenge on these grounds.

A DCC challenge would most likely be based on the theory that California is improperly burdening interstate commerce by raising the price of electricity sold in other states. The main thrust of the DCC is to guard against state economic protectionism. *See Wyoming v. Oklahoma*, 502 U.S. 437, 454-55 (1992). Provided a state "does not needlessly obstruct interstate trade or attempt to place itself in a position of economic isolation, it retains broad regulatory authority to protect the health and safety of its citizens, and integrity of its natural resources." *Maine v. Taylor*, 477 U.S. 131, 151 (1986). California's system would clearly not have an economic protection motivation or effect, and would in fact have the reverse effect because California generators would be at a disadvantage in interstate commerce if they were subject to carbon costs to which their out-of-state competitors were not. Given the minimal or even reverse burden on out-of-state economic interests compared to in-state economic interests, and the state's compelling interest in protecting the health and safety of its citizens and integrity of its natural resources from the devastating effects of climate change, California should not have a problem passing the *Pike* balancing test if it chooses to include exported electricity under its cap. *See Pike v. Bruce Church*, 397 U.S. 137 (1970).

² NRDC and Environmental Defense, "Legal Brief of the Natural Resources Defense Council (NRDC) and Environmental Defense (ED) on the 'First Seller' Approach," August 6, 2007.

Q5. 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 is a concern that is not only limited to a load-based program; it is equally a concern under a first-seller or in-state source-based/import load-based system. Contract shuffling will be possible under any point of regulation that assigns specific emissions to imports instead of pool averages. It is essential that the Commissions design the regulations for the electric sector to minimize and discourage contract shuffling. Since contract shuffling could allow existing clean resources to be claimed for California but dirty resources that continue operating to be “claimed” for other states, total GHG emissions could remain unchanged, undermining AB 32’s purpose of reducing the state’s contribution to global warming. However, contract shuffling will become less of a concern over time; as indicated by the Western Climate Initiative (WCI), other states in the west also are considering GHG regulations and have RPS regulations, so other states will want to claim clean resources for themselves. In addition, contract shuffling is a relatively short-term issue, as new infrastructure investments require long-term financial commitments that lend themselves to easier emissions tracking. Such long-term commitments for new generation are less prone to contract shuffling concerns.

Q6. 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?

- (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.***

The Commissions should first decide upon the best point of regulation for the electricity sector based on their prioritization of the policy criteria, and then further

examine the details of the most appropriate tracking and reporting system to use for that approach.

Q7. 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?

Any tracking or reporting system will have start-up and administrative costs. As our response to Q3 notes, NRDC/UCS do not believe administrative simplicity should be a top priority among the different policy criteria to be used in selecting and designing the appropriate type of GHG regulations. Again, the Commissions should first decide upon the best point of regulation before examining the details of designing the specific implementation of that approach.

V. Source-based Cap-and-trade System Design Options

A. Pure Source-based (GHG Regulation of In-state Generation Only)

Q8. Do you view this approach as compliant with Assembly Bill (AB) 32? Please support your answer.

There are two reasons that a pure source-based cap-and-trade system may not be compliant with AB 32: 1) it does not include emissions associated with all electricity consumed in California, and 2) it does not minimize leakage. It is possible that a source-based cap-and-trade approach *could* be compliant with AB 32, even though it would not account for emissions from imports. However, a source-based system would likely fail to comply with the AB 32 requirement to minimize leakage. In any case, a source-based cap is not the most effective approach to reduce the emissions of the electric sector in California.

AB 32 limits statewide greenhouse gas emissions, “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.” (Health and Safety Code Section 38505(m)) In addition, Section 38530(b)(2) of the Health and Safety Code requires mandatory reporting and verification to account for greenhouse gas emissions “from all electricity

consumed in the state, including transmission and distribution line losses from electricity generated within the state or imported from outside the state.”) Thus, emissions associated with imports must be included in the overall statewide GHG emissions limit and must also be reported.

However, AB 32 does not require that every source of greenhouse gas emissions that is subject to the statewide limit be included in a cap-and-trade program. The state could potentially choose to include only California sources in a cap-and-trade program and use other policy tools to achieve reductions in emissions associated with electricity that is generated out of state but imported for California consumption. Thus, a pure source-based approach could be viewed as compliant with AB 32, if the emissions associated with imports are targeted through other regulations targeted at retail providers.

On the other hand, AB 32 also requires ARB to “[m]inimize leakage” while achieving the statewide greenhouse gas emissions limit. Health and Safety Code Section 38562(b)(8). Contrary to this requirement, a pure source-based cap-and-trade program would raise the specter of significant leakage of emissions in the electricity sector. More than half of the GHG emissions associated with California’s electricity consumption is sourced from out of state. Ineffective or insufficient efforts to reduce emissions associated with imports would seriously compromise the environmental integrity of the cap and open the door to vast amounts of emissions leakage. Analysis performed for the Regional Greenhouse Gas Initiative (RGGI), in which participating states are, like California, significant net importers of electricity, indicates that cumulative emissions leakage could comprise 27% of net CO₂ reductions through 2015.³ The GHG emissions burden of California’s imports is even greater than those of the RGGI region on a percentage basis, which underscores the importance of including imports in a California cap-and-trade regime for GHGs. Including imports in a cap-and-trade program would create appropriate signals for retail providers to manage the GHG content of their entire electricity portfolio and provide those retail providers that rely on GHG-intensive imports with some “lead time” to better cope with the costs of regional or federal GHG regulations if and when such regulations take effect.

³ Regional Greenhouse Gas Initiative. *Potential Emissions Leakage and the Regional Greenhouse Gas Initiative: Evaluating Market Dynamics, Monitoring Options, and Possible Mitigation Options*. March 2007, p. 8.

Even if an argument could be made that ARB is attempting to minimize leakage “to the extent feasible,” as required by Health and Safety Code Section 38562, through other regulations aimed at reducing the emissions contributions of imported electricity, NRDC/UCS believe that it would be much more effective to include electricity imports in a cap-and-trade program.

Q9. 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.)?

Failing to include out-of-state sources in California’s cap-and-trade system will increase the short-term threat of substituting higher-carbon imports for in-state generation. If California adopts a system in which in-state sources face emissions costs that out-of-state sources do not, the state will create perverse incentives for increased imports whose GHG emissions are not regulated. There exist 33,249 MW of coal-fired generation in WECC.⁴ If a source-based California-only system creates a market with sufficiently attractive wholesale prices, the generation from some of these plants could be diverted to displace cleaner generators located in California.

Due to the difficulties inherent in identifying the resources behind unspecified imports, NRDC/UCS do not believe that specific program design is capable of adequately addressing emissions leakage from increased imports in a California-only source-based cap-and-trade program.

Q10. 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?

Neither existing procurement oversight nor the mere possibility of an imminent regional or federal GHG program is sufficient to prevent significant emissions leakage under a California-only source-based cap-and-trade regime. Although SB 1368 prohibits

⁴ 2004 data from US EPA, Emissions & Generation Resource Integrated Database (eGRID), <http://www.epa.gov/cleanenergy/egrid/index.htm>. The 33,249 MW of coal in WECC have an average capacity factor (CF) of 74.7%; of these total coal MW, 1853.4 MW (5.6%) have CFs of greater than 90%, and 11,381.1 MW (34.2%) have CFs of greater than 80%.

California retail providers from new long-term financial commitments with carbon-intensive generators for terms of five years or more, it does not prevent retail providers from (i) signing short-term contracts with carbon-intensive generators, (ii) increasing their unspecified imports either in the near term or in the long term, or (iii) making long-term financial commitments to less carbon-intensive but still GHG-emitting resources. Out-of-state generation will inevitably be attracted to the higher wholesale electricity prices resulting from a California source-based cap-and-trade program, which will increase the state's electricity imports and the associated GHG emissions. While transmission capacity constraints would limit a very large shift of generation to outside the state, California's regulators have limited ability to prevent smaller but still significant electricity production shifts from occurring.

Furthermore, California should not wait for a regional or federal GHG program to be in place before acting to reduce the emissions for which it is responsible. In addition to conflicting with the requirements of AB 32, failing to include the emissions resulting from California's imported electricity in the cap could expose ratepayers to greater financial risks. Not accounting for the emissions costs of imported electricity leaves Californians exposed to potentially greater costs in the future, and fails to direct retail providers to plan their procurement to minimize GHG emissions from all generating sources, whether these sources are located in-state or out-of-state.

Q11. 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?

For the reasons stated above, NRDC/UCS believe that emissions associated with imported power should be *included* in any California cap-and-trade program. If these emissions are excluded, however, it will be all the more critical for the state to expand its existing suite of emissions reduction policies, including the state's energy efficiency and renewable energy programs. At minimum, the state should enact a 33% RPS for all utilities and load-serving entities, require publicly owned utilities to meet energy efficiency savings targets that capture all cost-effective savings, and aggressively

increase the stringency of the Title 20 appliance and Title 24 building standards. In addition, the state should expand the use of clean combined heat and power, evaluate whether GHG and criteria pollutant emissions can be reduced by systematically retiring and/or repowering aging power plants, require industrial customers to participate in energy efficiency programs to cut emissions, and enact statewide regulations requiring improvements in the efficiency of homes and buildings at the time they are sold.⁵ The state could also consider requiring retail providers to meet their resource needs with a greater proportion of unit-specific contracts with low GHG-emitting resources.

Q12. 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 Resources Board (ARB) have the authority to require certain energy efficiency and renewable targets be met by POUs?

AB 32 clearly gives ARB authority to implement and enforce the statewide greenhouse gas emissions limit. Health and Safety Code §§ 38510 (ARB is “the state agency charged with monitoring and regulating sources of emissions of greenhouse gases that cause global warming in order to reduce emissions of greenhouse gases”); 38560 (ARB must adopt “rules and regulations” to “achieve the maximum technologically feasible and cost-effective greenhouse gas emission reductions”); 38562(a) (ARB “shall” adopt regulations that will achieve these reductions); 38501(g) & 38562(f) (ARB must coordinate with the PUC in order to avoid “duplicative or inconsistent regulatory requirements”).

This authority should be sufficient to allow ARB to implement and enforce GHG reduction targets, energy efficiency, and renewable energy targets for all types of retail providers. The ARB should rely on the expertise of and continue to work in close coordination with the CEC and CPUC to ensure that retail providers across the state would be held to similar requirements.

⁵ See NRDC’s “Energy Efficiency Ratings and Standards for Buildings at Time-of-Sale” Scoping Plan submittal to CARB, available at http://www.arb.ca.gov/cc/scopingplan/submittals/electricity/nrdc_time_of_sale_ee_final.pdf.

Q13. What sources would a source-based system cover? Could it cover California utility-owned facilities located outside of California?

A source-based system could face possible legal challenges if it regulates interstate wholesale market sales from generation facilities, whether they are located in California or not. The Federal Power Act regulates wholesale power transactions, and California could be preempted if it purports to regulate wholesale sales of power. See NRDC's Legal Brief filed August 6, 2007. If a source-based system covered only California facilities or California utility-owned facilities that delivered power to California, then it would be on strong legal ground.

California could face Dormant Commerce Clause challenges if it directly regulates generation facilities located outside California that are not owned by California entities or selling power into California. Such regulations could trigger arguments that California is stepping outside of its jurisdictional boundaries. See *Healy v. The Beer Institute*, 491 U.S. 324, 332 (1989). However, it would be impossible to argue that California was regulating "commerce occurring wholly outside the State's borders" if the regulated facilities were owned by California entities and selling power into California. Because the transaction is occurring across state lines, there still could be an argument that California's system would be burdening interstate commerce. But as long as California is not facially discriminating against out-of-state economic interests, it has a strong argument that its legitimate interests in protecting its citizens and environment from the effects of climate change outweigh any incidental burden on interstate commerce.

Q14. Would a strengthened EPS assist in reducing emissions due to California imports? What recommended changes would you make to the EPS?

The Emissions Performance Standard (EPS) prohibits California retail providers from making new or renewed commitments of five years or more to electricity generating sources with emissions rates above 1100 lbs/MWh. Although the EPS significantly reduces the financial risk to Californians of long-term GHG-intensive financial commitments, it does not (and was not intended to) fully address the emissions leakage that would occur from a California-only source-based cap. As mentioned previously, a

source-based cap that does not include imports would likely raise California's wholesale market prices, which would attract out-of-state generation from a variety of GHG-emitting sources using a variety of sales instruments (e.g., spot market sales, short-term contracts, unspecified contracts). If the EPS is modified to prohibit financial commitments of fewer than five years in duration to GHG-intensive sources, it could assist in addressing some portion of emissions leakage due to increased imports from the most GHG intensive generation. Even so, the EPS is not a suitable mechanism for reducing emissions from imports that fall below the 1,100 lbs/MWh threshold, and these imports, if they are not included in a California cap, could displace a substantial portion of cleaner in-state generation if wholesale market prices are sufficiently high. Therefore, NRDC/UCS do not believe that the EPS could be strengthened to substantially prevent the emissions leakage that will inevitably occur from a California-only source-based cap-and-trade regime.

B. Deliverer/First Seller

Q15. 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.

NRDC/UCS generally agree with the findings of the paper for how a first seller system would work. In particular, we strongly agree with the paper's finding that "allocating allowances to First Sellers is not feasible,"⁶ and instead allowances should either be auctioned to first sellers and the revenues distributed to retail providers, or freely allocated to retail providers and bought by first sellers in a secondary market.⁷ We also agree with the paper that the use of eTags for reporting would require that "The regulating body [CARB] would have to be authorized to receive the [eTag] information

⁶ Attachment A at 3.

⁷ Attachment A at 14. These two allowance value distribution methods under a first seller system are consistent with the "Opening Comments of the Natural Resources Defense Council (NRDC) and Union of Concerned Scientists (UCS) on Allowance Allocation Issues," October 31, 2007.

[to be used to identify first sellers] from whichever source is selected.”⁸ It remains unclear to us whether California would be able to obtain this authorization.

While recognizing the paper’s concerns regarding the use of contract information to assign carbon content to specific sources of imported power under a first seller approach,⁹ NRDC/UCS believe that contract information, if used judiciously, can provide more accurate emissions tracking and reporting and should be relied upon as such in certain conditions. If a California retail provider or other first seller enrolls a bilateral contract with a specified new out-of-state resource, the state should rely on contract information and plant-level data to impute emissions to that source, rather than applying a default emissions factor that could produce an inaccurate estimate of the plant’s actual emissions. To minimize the possibility for contract shuffling, contracts with existing out-of-state facilities should not be used to assign emissions to imports (though exceptions can be made for RPS-eligible contracts with out-of-state renewables).

C. Source-based for In-state Generation, Load-based for Imports

Q16. Please describe in detail your view of how this option would work.

Under this system, the point of regulation would be different for in-state generation (electricity generators) and imported electricity (retail providers). This is similar to our understanding of one of the approaches being considered for the Regional Greenhouse Gas Initiative (RGGI) in the Northeast to deal with emissions leakage out of the RGGI states.

Q17. Do you support such an approach? Why or why not?

This is one of the cap-and-trade approaches that could work for California’s electric sector, along with the load-based and first-seller approaches, as each of these covers all GHG emissions associated with Californian consumption of electricity. As mentioned previously, the approach that is most appropriate depends on the how California policymakers prioritize the various selection criteria.

⁸ Attachment A at 6.

⁹ Attachment A at 11.

Q18. Does this approach have legal issues associated with it? Provide a detailed analysis and legal citations.

The source-based for in-state generation and load-based for imports approach would probably not face the same legal challenges that the first seller approach might face. As mentioned in response to Question 13, there are possible problems with the Federal Power Act if the GHG regulatory approach covers the interstate wholesale sales of in-state generators. However, if the system covers in-state generators for the power they sell into California retail markets, then it should be able to avoid any entanglement with the Federal Power Act. As explained in NRDC's Legal Brief filed August 6, 2007, the state should be able to carefully design a cap-and-trade program to avoid preemption problems even if it does include some wholesale transactions.¹⁰

There is a remote possibility of a DCC challenge to such a "hybrid" approach, based on the argument that the system will alter the purchasing decisions of load-serving entities buying power in interstate commerce. However, because California is placing most of the burden of addressing climate change on itself, rather than discriminating against other states, a court is likely to find that this is a valid state law that only incidentally affects interstate commerce.

Q19. 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?

Yes.

Q20. 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 uses 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?

The mixed source-based/load-based approach would increase accuracy of emissions accounting over a load-based approach, but only for in-state sources. With currently-available information (i.e., the lack of an emissions and generation tracking

¹⁰ NRDC and Environmental Defense, "Legal Brief of the Natural Resources Defense Council (NRDC) and Environmental Defense (ED) on the 'First Seller' Approach," August 6, 2007.

system in the west), however, the mixed approach does not offer any advantages for imports over the load-based approach. The same issues would apply for imports in the mixed approach as for the load-based and first seller approaches.

VI. Deferral of a Market-based Cap-and-Trade System

The ALJ Ruling describes this approach as one of three options:

1. A load-based cap could still be developed for retail providers, with assignment of individual entity obligations and trading available within the California electricity sector only, but not with other sectors; or
2. Develop individual entity caps (or carbon budgets) which entities could not exceed without facing penalties or fee, but not allow for any trading of allowances at this time; or
3. Ramp up the mandatory levels of existing programs such as energy efficiency and RPS programs to higher goals, and make all retail providers obligated to meet these additional goals, without assigning specific cap levels to individual entities.¹¹

Each of these options is very different. Option 3 represents a true deferral of a cap-and-trade program, whereas Option 2 would eliminate trading but still utilize entity caps, and Option 1 would still entail some amount of trading and thus is not a full deferral of a cap-and-trade, as the title of this scenario suggests.

Q21. How important is it that a cap-and-trade system be included in the near-term as part of the electricity sector's AB 32 compliance strategy?

Allowing a cap-and-trade program to operate for as long as possible will help reap the benefits that such a program would bring, as described in our response to Q1. If a cap-and-trade program is designed to have a tight cap that provides real emission reductions, distributes allowances in the public interest, limits offsets, and has strong enforcement, we believe it is an important near-term part of the electricity sector's AB 32 compliance policy tools. California also has the opportunity for leadership in this area; the sooner it acts to design its own cap-and-trade program, the more likely its decisions will play into and influence the deliberations at the regional and federal levels. Waiting

¹¹ ALJ Ruling, p. 8.

on others will relegate California to simply being one voice among many at the table, instead of allowing California to continue its leadership by example.

Q22. Would your answer to Q12 be different if there is no market-based cap-and-trade system? If so, please explain.

No. CARB would still have the authority under AB 32 to implement and enforce regulations for the POUs for energy efficiency and renewable energy targets in order to meet the overall goals of AB 32.

Q23. Address the following:

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

As we discussed in response to Q11, there are numerous regulatory policies that the state should expand upon or enact to reduce GHG emissions. The state should implement and strengthen the various regulatory policies, whether or not a cap-and-trade system is adopted. However, regulatory policies in the absence of a cap on absolute emissions would not guarantee that the electric sector will meet the GHG reductions goals of the state for this sector. One of the most important advantages of a cap-and-trade program is that the cap provides certainty, if the program is designed well, that electric sector emissions will not exceed a maximum level.

- ***How increased programmatic goals would impact rates***

The Commission's modeling being conducted by Energy and Environmental Economics will help address the impact of different policies on rates. We also strongly urge the Commission to focus primarily on the impact of an overall package of policies on customer bills in evaluating the best approach to reduce the electric sector's emission to contribute to AB 32's 2020 statewide limit.

Q24. 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.

Deferral of a cap-and-trade program for the electricity sector in a California-only context will leave California in a position of deferring to other jurisdictions' program

designs if it then wants to integrate into a regional or federal program. This may ultimately disadvantage the state. Today, California has the opportunity to design and develop a system that would help serve as a model for broader systems and help serve California's interests. For example, if California adopts a cap-and-trade program with an allowance distribution scheme that does not reward dirty polluters, it would advantage California, as a relatively clean state, if a similar system were adopted nationally.

Q25. 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?

NRDC/UCS believe that the state should begin implementing a system of its own now, rather than waiting for a regional or national system. Designing and implementing any program will take several years, and it is to California's advantage to begin now. A cap-and-trade program will allow the state to more efficiently achieve GHG emissions reductions than regulatory programmatic policies alone and will solidify California's leadership position in influencing the design of regional or federal programs.

Q26. What flexible compliance mechanisms could be integrated into a non-market based GHG emission reduction approach?

The flexible compliance mechanisms that are appropriate for any specific policy tool must be considered in the context of the public policy goals of that policy. While many options are available, and California has experience with utilizing different types of flexible compliance mechanisms, this is not a design element that can be adequately addressed in the abstract, without considering the specific proposed non-market based GHG emission reduction approach.

Q27. 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?

In the event that the "deferral option" considered involves either Option 1 or 2 (which still include a load-based cap, with limited or no trading), early actions can be rewarded in the same manner as in the full load-based approach. In either deferral Option

1 or 2, rewarding early actions is contingent upon not selecting a grandfathering distribution of allowance value (and emission reduction responsibility). Grandfathering allowances would unnecessarily reward entities that made risky financial investments in GHG-intensive resources, while penalizing entities that took early action to manage the risk. We urge the Commissions to reject any allocation approach that is based on historical emissions. These considerations are described more fully in NRDC/UCS' opening and reply comments on allowance allocation issues.¹²

VII. Recommendation and Comparison of Alternatives

Q28. 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.

NRDC/UCS recommend that the state adopt a cap-and-trade program as part of a comprehensive suite of policies to reduce emissions and spur technological innovation in the electric sector. We recommend that the cap-and-trade program incorporate both in-state emissions and emissions associated with imports. The state can take one of several possible approaches to the point of regulation for the electricity sector: out of the options provided above, NRDC/UCS suggest that a load-based, first-seller, or a "hybrid" (mixed source-based for in-state and load-based for imports) are all options that would be workable. Exactly which approach is best for the state depends on the Commissions' prioritization of the various selection criteria. We urge the CPUC/CEC and CARB to settle on a point of regulation for the electricity sector and proceed to developing the more important components of the program – including establishing a tight cap that achieves real emission reductions, distributing allowances in the public interest, and providing strong enforcement.

¹² NRDC/UCS, "Opening Comments of the Natural Resources Defense Council (NRDC) and Union of Concerned Scientists (UCS) on Allowance Allocation Issues," October 31, 2007; and NRDC/UCS/GPI, "Reply Comments of the Natural Resources Defense Council (NRDC), Union of Concerned Scientists (UCS), and Green Power Institute (GPI) on Allowance Allocation Issues," November 14, 2007.

Q29. Address and compare how each of the alternatives identified in the above questions, and the proposal you submit in 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.

We address in turn each of the alternatives listed in the ALJ Ruling with respect to each of the principles, and we focus on the differences between the approaches. At the end of this section, we present a table summary of the relative ranking of each of the approaches for each of the criteria.

A. Load-based cap-and-trade

Legal risk – The relative legal risk of being delayed or overturned is very low. ARB would be regulating retail sales within California, so it would be on solid legal ground for both Federal Power Act preemption concerns and Dormant Commerce Clause concerns.

Goal attainment – The load-based approach is the strongest when judged against the goal attainment criteria, as it places the compliance responsibility on the retail providers and thus creates additional incentive for retail providers to identify low-cost reduction opportunities. In California and the west, retail providers are the key decision-makers (together with their public governing boards and/or the CPUC) for demand side investments and new long-term supply side investments, since almost all new generation investments require long-term commitments from retail providers.

Environmental integrity – Contract shuffling and leakage can be minimized through proper program design.

Cost minimization – The load-based approach is the best approach for minimizing total costs to end users. First, generators in a load-based approach have no opportunity to include the value of allowances in their bid prices (whereas under any version of a source-based approach, generators will include the value of allowances in their bid prices, raising the wholesale market price for *all* power sources). In addition, placing the point of regulation on the retail providers has the ability to promote more energy efficiency, which produces net savings, than under other approaches.

Expandability – Load-based ranks lowest for integration or serving as a model based on point of regulation alone, since the point of regulation in a federal system will likely be generator based. However, even under a load-based approach, California can and should serve as a model for others in its establishment of other design options, such as a tight cap, use of the allowance value in the public interest, and limited offsets.

Accuracy – Given currently available sources of information, precision of accounting for in-state sources in a load-based system is not as great as it is under a source-based system. A regional tracking system would help increase accuracy.

Administrative simplicity – Medium simplicity. Even though regulation of retail providers is a traditional mode of regulation for the state, some type of tracking system is needed to improve accuracy of tracking and reporting of emissions under a load-based approach.

Compatibility with wholesale markets and the MRTU – Compatible. Some parties have expressed concern that a load based approach would interfere with wholesale markets, but wholesale markets can operate in conjunction with the encouragement of long-term financial commitments to clean resources (a goal that the state should strive to meet under AB 32) that the load based approach would effectively promote.

B. Pure source-based cap-and-trade

Legal risk – The relative legal risk of being delayed or overturned is slightly higher for this approach than for the load-based approach, for the reasons explained in response to Question 13.

Goal attainment – Lower, since imports are not directly capped and there is high concern of leakage.

Environmental integrity – This approach is poorest at mitigating leakage, as described in Q9.

Cost minimization – This approach is inferior to a load-based approach in minimizing total costs to consumers. Under any derivation of a source-based approach, generators will include the value of allowances in their bid prices, raising the

wholesale market price for *all* power sources, thereby raising total costs for customers.

Expandability – This approach ranks highest in this area. We expect a future federal system to be generator-based, and a pure California source-based approach will have the greatest similarities with a federal system that presumably would not deal with imports. California's adoption of a source-based approach may also help it serve as a model for other design choices of the program, in particular allowance auctions and the principle that the value of allowances should be used to reduce costs for consumers and provide other public benefits.

Accuracy – High accuracy for in-state generation, but very poor accuracy for imports since they are not included.

Administrative simplicity – Highest simplicity, as it requires only capping the in-state generation.

Compatibility with wholesale markets and the MRTU – Compatible.

C. Deliverer/First-seller cap-and-trade

Legal risk – The relative legal risk of being delayed or overturned is highest for this approach. As discussed in NRDC's previous comments, the first seller approach raises possible legal challenges under the Dormant Commerce Clause and Federal Power Act preemption doctrine. These concerns are surmountable, but greater than for other approaches.

Goal attainment – Not as high as load-based, since the incentives for long-term emissions reductions are diminished by not placing compliance responsibility on retail providers.

Environmental integrity – Contract shuffling and leakage can be minimized through proper program design.

Cost minimization – This approach is inferior to a load-based approach in minimizing total costs to consumers. Under any derivation of a source-based approach, generators will include the value of allowances in their bid prices, raising the wholesale market price for *all* power sources, thereby raising total costs for customers.

Expandability – We expect a future federal system to be generator-based and presumably would not deal with imports, so the importing first-seller aspect would not be expandable nor serve as a model, while the source-based component would. California’s adoption of a source-based approach may also help it serve as a model for other design choices of the program, in particular allowance auctions and the principle that value of allowances should be used to reduce costs for consumers and provide other public benefits.

Accuracy – High accuracy for in-state generation, but similar challenges for accuracy to other approaches for imports. As noted by the “First Seller Design Description” (Attachment A to the ALJ Ruling), “For imported power, identifying the source or carbon content under a First Seller approach may be at least as challenging as doing so under a Load-Based approach.” (p. 8)

Administrative simplicity – Medium simplicity if the state can gain access to eTags, however, it is still unclear to us whether California would be able to easily identify first sellers to be regulated (especially a constantly changing set of importing first sellers) and obtain access to eTags for verification purposes.

Compatibility with wholesale markets and the MRTU – Compatible.

D. Hybrid cap-and-trade: Source-based for in-state generation, load-based for imports

Legal risk – The relative legal risk of being delayed or overturned is low, as explained in response to Question 18.

Goal attainment – Similar to the load-based approach, the load-based aspect of this approach that places compliance responsibility with retail providers ensures that a wide span of demand- and supply-side investments are utilized to reduce long-term emissions. However, since the load-based aspect is limited only to imports, this incentive is not as effective in this approach compared to the pure load-based approach.

Environmental integrity – Contract shuffling and leakage can be minimized through proper program design.

Cost minimization – This approach is inferior to a load-based approach in minimizing total costs to consumers. Under any derivation of a source-based approach, generators will include the value of allowances in their bid prices, raising the wholesale market price for *all* power sources, thereby raising total costs for customers.

Expandability – We expect a future federal system to be generator-based and presumably would not deal with imports, so the load-based imports component would not be expandable nor serve as a model, while the source-based component would. California's adoption of a source-based approach may also help it serve as a model for other design choices of the program, in particular allowance auctions and the principle that value of allowances should be used to reduce costs for consumers and provide other public benefits.

Accuracy – High accuracy for in-state generation, but equivalent accuracy to other approaches for imports.

Administrative simplicity – Medium simplicity, as it will require two different points of regulation for the electricity sector and thus will require separation of in-state generation versus imports for the retail providers.

Compatibility with wholesale markets and the MRTU – Compatible.

E. Deferral of a market-based cap-and-trade, Option 1 (Load-based cap but trading only allowed within electricity sector)

Legal risk – The relative legal risk of being delayed or overturned is very low. ARB would be regulating retail sales within California, so it would be on solid legal ground for both Federal Power Act preemption concerns and Dormant Commerce Clause concerns.

Goal attainment – Moderately high, for the same advantages as described for a load-based approach, but a narrower span for trading could limit cost reductions and thereby lower emissions reductions achievable at the same overall cost.

Environmental integrity – Same concerns under any of the broader cap-and-trade approaches.

Cost minimization – Similar to load-based approach, since placing the compliance responsibility on the retail providers, who serve as portfolio managers, increases incentives for them to identify low-cost reduction opportunities. However, restricted trading could lessen the cost reductions that could be achieved with full trading with other sectors.

Expandability – Any load-based approach ranks lowest for integration or serving as a model based on point of regulation alone, since the point of regulation in a federal system will likely be generator-based. However, even under a load-based approach, California can and should serve as a model for others in its establishment of other design options, such as a tight cap, use of the allowance value in the public interest, and limited offsets.

Accuracy – Given currently available sources of information, precision of accounting in a load-based system is not as great as under a source-based system. A regional tracking system would help increase accuracy.

Administrative simplicity – Medium; similar to load-based approach. Even though regulation of retail providers is a traditional mode of regulation for the state, some type of tracking system is needed to improve accuracy of tracking and reporting of emissions under a load-based approach.

Compatibility with wholesale markets and the MRTU – Compatible.

F. Deferral of a market-based cap-and-trade, Option 2 (Individual entity caps but no trading allowed)

Legal risk – The relative legal risk of being delayed or overturned is very low. ARB would be regulating retail providers within California, so it would be on solid legal ground for both Federal Power Act preemption concerns and Dormant Commerce Clause concerns. Also, AB 32 allows but does not mandate a market-based approach. Therefore, not adopting a market-based approach immediately should not leave ARB open to challenge.

Goal attainment – Moderately high, for the same advantages as described for a load-based approach, but elimination of trading could limit cost reductions and thereby result in fewer emissions reductions achievable at the same overall cost.

Environmental integrity – Same concerns under any of the broader cap-and-trade approaches.

Cost minimization – Similar to load-based approach, since placing the compliance responsibility on the retail providers, who serve as portfolio managers, increases incentives for them to identify low-cost reduction opportunities. However, elimination of trading could result in fewer cost-effective cost reductions than would otherwise be achieved with trading.

Expandability – Any load-based ranks lowest for integration or serving as a model based on point of regulation alone, since the point of regulation in a federal system will likely be generator-based. However, even under a load-based approach, California can and should serve as a model for others in its establishment of other design options, such as a tight cap, use of the allowance value in the public interest, and limited offsets.

Accuracy – Given currently available sources of information, precision of accounting in a load-based system is not as great as under a source-based system. A regional tracking system would help increase accuracy.

Administrative simplicity – Medium; similar to load-based approach. Even though regulation of retail providers is a traditional mode of regulation for the state, some type of tracking system is needed to improve accuracy of tracking and reporting of emissions.

Compatibility with wholesale markets and the MRTU – Compatible.

G. Deferral of a market-based cap-and-trade, Option 3 (Ramp up mandatory levels of existing programs without individual entity caps)

Legal risk – The relative legal risk of being delayed or overturned is extremely low. AB 32 allows but does not mandate a market-based approach. Therefore, not adopting a market-based approach immediately should not leave ARB open to challenge.

Goal attainment – Lowest; as described in our responses to Q1 and Q23. A cap provides certainty of goal attainment, and cap-and-trade complements regulatory programs to reduce emissions even further than the programs alone can.

Environmental integrity – Same concerns under any of the broader cap-and-trade approaches.

Cost minimization – As explained in our response to Q1, a cap-and-trade could help lower overall costs. However, a cap-and-trade system that is broader than just California could reduce costs.

Expandability – None for the design of a broader cap-and-trade program, but ramp up of existing programs and policies could serve as a model for complimentary policies to a federal cap-and-trade program.

Accuracy – High for in-state sources, but lower for imports. A regional tracking system would help increase accuracy.

Administrative simplicity – High, as this approach is most similar to the status quo.

Compatibility with wholesale markets and the MRTU – Most compatible without question.

The following Table 1 provides a summary of the above discussion outlining the relative performance of the different regulatory approaches under each high-level policy criteria. We have organized the table in the criteria priority groupings we outlined above (highest, medium, and lowest), but note that the criteria within each grouping can (and should) be further prioritized. As we have stressed, NRDC/UCS strongly urge the Commissions and CARB to quickly select the best type and point of regulation approach, and then proceed to developing the details of that program. NRDC/UCS continue to believe that California could successfully implement a cap-and-trade program in the electricity sector using either a load-based, first seller, or “hybrid” approach that would meet all the highest priority criteria.

Table 1: Comparison of different cap-and-trade regulatory approaches for electricity sector for various criteria

		Load-based A	Source-based			Deferral		
			Pure source B	First seller C	Hybrid D	Option 1 E	Option 2 F	Option 3 G
<i>Highest priority</i>								
Legal risk (threshold)		lower	medium	medium	medium	lower	lower	lowest
Goal attainment		highest	low	medium	high	high	high	lowest
Environmental integrity		high	lowest	high	high	high	high	lowest
Cost minimization		highest	low	low	low	high	medium	depends on policies
Expandability	Pt of reg	low	high	medium	medium	low	low	n/a
	Other design	equal	equal	equal	equal	equal	equal	n/a for C&T
<i>Medium priority</i>								
Accuracy	In-state	medium	highest	highest	highest	medium	medium	lowest
	Imports	equal	lowest	equal	equal	equal	equal	lowest
Administrative simplicity		high	high	medium	medium	high	high	highest
<i>Lowest priority</i>								
Compatibility with wholesale markets/MRTU		equal	equal	equal	equal	equal	equal	highest

VIII. Conclusion

NRDC and UCS appreciate the Commissions' efforts to examine the various approaches proposed for regulating the GHG emissions of the electric sector, and we urge the Commissions and CARB to settle the point of regulation as quickly as possible and proceed to address the more important design elements, including the level of the cap, allowance distribution, and enforcement.

Dated: December 3, 2007

Respectfully submitted,



Audrey Chang
Staff Scientist
Natural Resources Defense Council
111 Sutter St., 20th Floor
San Francisco, CA 94104
415-875-6100
achang@nrdc.org



Cliff Chen
Energy Analyst
Union of Concerned Scientists
2397 Shattuck Avenue, Suite 203
Berkeley, CA 94704
510-843-1872
cchen@ucsusa.org

CERTIFICATE OF SERVICE

I hereby certify that I have this day served a copy of the **“Opening Comments of the Natural Resources Defense Council (NRDC) and Union of Concerned Scientists (UCS) on Type and Point of Regulation Issues”** in the matter of **R.06-04-009** to all known parties of record in this proceeding by delivering a copy via email or by mailing a copy properly addressed with first class postage prepaid.

Executed on December 3, 2007 at San Francisco, California.



Shari Walker
Natural Resources Defense Council
111 Sutter St., 20th Floor
San Francisco, CA 94104
415-875-6100
Swalker@nrdc.org