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 FOR THE NATURAL GAS SECTOR

December 17, 2007

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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 for the Natural Gas Sector" (ALJ Ruling), dated November 28, 2007; and in accordance with the "Administrative Law Judges' Ruling Extending Deadline for Comments and Incorporating Responses to Staff Data Request on Natural Gas Issues" dated December 10, 2007, extending the deadline for comments to December 17, 2007; 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.

Our comments are summarized in response to question 20.

II. General

Q1. What do you view as the incremental benefits of a market-based system for GHG compliance in the natural gas sector, 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 under 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 natural gas and electricity sectors, such as energy efficiency programs, building and appliance efficiency standards, and solar water heater programs. A cap-and-trade program should serve to complement these regulatory programs to reduce emissions even lower than can be achieved through regulatory programs alone. Although the natural gas sector does not have the same variety of emission reduction strategies that exist in the electricity sector, there still are many GHG reduction opportunities that could be encouraged by the combination of programmatic measures and a cap-and-trade program.

The benefits of a *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 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. To meet AB 32's limit, California must reduce absolute emissions.
- ***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 than regulatory programs alone.
- ***Creates a price signal.*** This ensures that businesses in the natural gas 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 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 stimulate innovation (in a very general way) to develop and deploy 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 is furthers the goals of AB 32.

Q2. Can a market-based system for the natural gas sector 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), and that the remaining reductions needed to meet the natural gas 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. Specific policies and programs are addressed more fully in response to Q5, below. 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

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

Q3. What objectives or principles should the Public Utilities Commission and the Energy Commission use to determine the appropriate method of regulating GHG emissions in the natural gas sector, and why? Please rank the objectives you propose, in order of importance, adding any objectives not covered above.

NRDC/UCS support this list of principles and overriding policy objectives to be used to evaluate GHG program design options. NRDC/UCS 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).

1. Highest priority
   - *Goal attainment* – This is core to the statewide GHG emissions limit mandated by AB 32, Health and Safety Code Section 38550.
   - *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).
2. Medium priority
   - *Expandability* – It important for California to ultimately transition into a broader system 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.

- *Accuracy* – It is important to accurately measure emissions in order to accurately track reductions and ensure that the 2020 target is met.
- *Administrative simplicity* – It is helpful to reduce administrative burdens where possible.

3. Lowest priority
   - *Legal risk* – The natural gas sector will likely not face the same legal challenges that some approaches to regulating the electricity sector would face. Legal issues, should of course be considered, but are unlikely to play a large role in determining the approach to regulating the natural gas sector.

IV. Basic Design Questions: Scope of GHG Regulation

Q4. Should GHG emissions from the natural gas sector be capped under AB 32? Are there certain sources of emissions within the sector that should be exempt from an enforceable cap?

GHG emissions from the natural gas sector should be capped under AB 32. Non-combustion uses of natural gas which do not lead to GHG emissions should not be included.

Q5. For each of the following sources of GHG emissions, state whether the sources described should be subject to an enforceable cap and, if so, whether the cap should be covered by a cap-and-trade approach or only by programmatic measures. For sources you recommend covering programmatically, what specific programmatic actions should be taken? For sources you recommend covering in a cap-and-trade program, are there specific programmatic measures that should be undertaken as complimentary to the cap-and-trade program? For each source, discuss how your recommended approach is likely to affect rates.

a. Natural gas combustion in the residential, commercial, and small industrial segments of the natural gas sector.

These sources should be covered by a cap-and-trade approach, as well as programmatic measures. Programmatic measures should include expanding existing energy efficiency programs, tightening building and appliance standards, encouraging use

of biomethane, encouraging use of solar thermal water and space heating, and expanding the use of efficient combined heat and power.

In particular, the CPUC, CEC, and CARB should commit to achieving 75% of maximum achievable energy efficiency in the natural gas sector, through a combination of expanded utility efficiency programs, continuously upgraded CEC building and appliance efficiency programs, and new strategies such as time-of-sale energy efficiency requirements for homes and businesses.

The CPUC, CEC, and CARB should explore policies to encourage the use of biomethane to replace natural gas including:

- Adopt a renewable fuel portfolio standard for the natural gas sector;
- Develop a standard for biomethane to give certainty that it will be allowed to enter natural gas pipelines if it meets that standard;
- Facilitate interconnection to natural gas pipelines for biomethane facilities;
- Enable and encourage long-term contracts for biomethane facilities;
- Develop an appropriate price to be paid for biomethane sold into the pipeline;[1]
- Expand the Public Interest Research Group's focus on RD&D to advance biomethane.

The agencies should expand upon the recently enacted AB 1470 to encourage the use of solar thermal water and space heating in homes, businesses, and public buildings. AB 1470 establishes a 10-year, statewide incentive program to encourage the installation of 200,000 solar water heating systems to offset natural gas usage for water and space heating. The agencies should:

- Maximize the $250,000,000 of incentives authorized by AB 1470;
- Seek to exceed AB 1470's goal of installing 200,000 solar water heating systems by 2017, both by installing more systems and by installing htem faster;
- Investigate partnering with the California community college system and the Solar Rating and Certification Corporation (an independent, non-profit third-party certifier whose certifications are relied on in AB 1470), to create training programs for solar thermal installers in California;

[1] *See* California Energy Commission, *2007 Integrated Energy Policy Report*, November 2007, p.225; available at http://www.energy.ca.gov/2007publications/CEC-100-2007-008/CEC-100-2007-008-CTF.PDF

- In coordination with CEC's New Solar Homes Partnership, require all new homes built in the state to be "solar ready" for solar thermal.

b. Natural gas combustion by natural gas vehicles.

Natural gas-fueled vehicles can reduce greenhouse gas emissions in the transportation sector relative to petroleum-fueled vehicles. NRDC supports a cap and trade program that, at a minimum, includes all of the main sectors that burn fossil fuels, including electricity, natural gas, other large source emitters, and eventually transportation fuels. At this time, CARB has not yet decided if it will adopt a cap and trade program, and if so, what the scope of coverage will be for the program. If CARB includes all of the sectors we recommend within the scope of the cap, then it creates a "level playing field" for transportation fuels, and no special treatment is needed for natural gas vehicles. In the event that CARB adopts a program that excludes petroleum-based transportation fuels from the cap, then we believe it would be important to not disadvantage natural gas used for transportation relative to petroleum. This could be done either by excluding natural gas used for transportation from the cap or by adopting other policies to compensate.

c. Combustion-related emissions from operating the infrastructure (including infrastructure related to proprietary operations) used to deliver natural gas to end users within the State.

These sources should be covered by a cap-and-trade approach, as well as programmatic measures, such as incentives and technical assistance for upgrading and maintaining compressors and other equipment used in the transmission, storage, and distribution of natural gas. These sources account for approximately 1% of GHG emissions in the natural gas sector in California.[2] Regulating these sources would not be a large administrative burden because it would only require regulation of an additional eight entities that would not otherwise be regulated, and the reporting would be relatively straightforward.[3] Each of these entities has emissions of close to or just over 10,000

[2] California Public Utilities Commission, *Preliminary Staff Recommendations for Treatment of Natural Gas Sector Greenhouse Gas Emissions*, July 12, 2007, p.7.

[3] Southwest Gas Company, North Baja Pipeline, LLC and Tuscarora Gas Transmission Company, Kern River Transmission, El Paso Natural Gas Company and Mojave Pipeline Company, Wild Goose Storage,

metric tons CO_2e,[4] meaning that their collective operations are a significant source of emissions, and they should be regulated.

d. Fugitive emissions, including from pipelines, storage facilities, and compressor stations.

These sources should be covered by programmatic measures, such as those promoted by the U.S. EPA's Natural Gas Star program.[5] Fugitive emissions could be considered for inclusion in a cap and trade program if there is sufficient accuracy in reporting. CARB, CPUC and CEC should track the California Climate Action Registry's development of a natural gas transmission and distribution greenhouse gas reporting protocol, and consider including these emissions in the natural gas sector of a cap and trade program at a later date if the reporting is accurate enough.[6]

e. Non-combustion uses of natural gas (please specify).

Non-combustion uses of natural gas that do not emit greenhouse gases should not be covered by a cap-and-trade approach.

f. Other sources of natural gas sector emissions not listed above.

Q6. For the sources you recommend exempting from an enforceable cap, how would emission reductions be achieved?

N/A

Q7. As the Public Utilities Commission does not currently have authority to oversee all potential GHG-reducing programs for all kinds of natural gas entities in California, which agency(ies) should regulated in such areas? For example, should ARB require that publicly owned utilities meet energy efficiency targets? Would additional legislation need to be enacted?

As discussed in NRDC/UCS's comments submitted December 3, 2007, AB 32 bestows sufficient authority on ARB to meet its 2020 goals, so additional legislation

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LLC, Lodi Storage, LLC, West Coast Gas Company, Alpine Natural Gas. *See* Administrative Law Judges' Ruling Extending Deadline For Comments and Incorporating Responses to Staff Data Request on Natural Gas Issues, December 10, 2007.

[4] *Id.*, Attachments D-J.

[5] *See* Natural Gas STAR Program, at http://www.epa.gov/gasstar/index.htm.

[6] *See* California Climate Action Registry and World Resources Institute, *Discussion Paper for a Natural Gas Transmission and Distribution Greenhouse Gas Reporting Protocol, Final Draft Report*, June 6, 2007.

should not be necessary. ARB, working in consultation with the CPUC and CEC as required by AB 32, may regulate all emissions from the natural gas sector.

V. Basic Design Questions: Point of Regulation

Q8. If you believe that the natural gas sector and other sources of emissions related to combustion of natural gas should be included in a cap-and-trade system, where should the compliance obligation be placed: upstream, as close to the fuel source as possible (for example, on natural gas processing plants and pipelines) or midstream/downstream (large point sources and, for smaller users, the local distribution company level)? If you suggest another option for assigning responsibility, please describe in detail.

The compliance obligation in the natural gas sector should be placed midstream/downstream: on large point sources and on the local distribution company (LDC) for smaller users.

Q9. Should core aggregators or natural gas marketers bear the responsibility for the GHG emissions of the customers for whom they procure natural gas?

Compliance obligation should be placed on the LDC for all small customers, including those core customers who purchase their natural gas through a non-utility marketer. Although the marketer is arranging for the core customers' procurement of natural gas, the LDC is still responsible for delivering the natural gas to the customer, and has the same relationship with the customer that it has with its other core customers, and therefore the same opportunity to encourage the customer to reduce emission.[7] Currently, all core customers, including core aggregator customers, are equally eligible for LDC's energy efficiency programs.

Q10. If ARB chooses to individually regulate emissions from facilities in certain sectors as well as emissions from other large point sources, what level of GHG emissions should ARB use as the threshold to define large point sources. Explain your reasoning.

Compliance obligation should be placed on large point sources which emit more than 10,000 metric tons CO_2 per year. PG&E and Southern California Gas Company

[7] Core aggregators supply less than 1% of utility core customers with natural gas. http://www.eia.doe.gov/oil_gas/natural_gas/restructure/state/ca.html.

(SoCalGas), whose collective customers account for nearly 80% of all natural gas use[8] in California, both have a price threshold for large consumers who use more than 2 million therms per year.[9] Two million therms per year is roughly equivalent to 10,000 metric tons of CO_2, and could be a logical threshold.[10] As reported by the utilities in response to the CPUC's November 6, 2007 data request, PG&E, SoCalGas, and San Diego Gas and Electric (SDG&E) combined had only 127 customers consuming over 2 million therms per year in 2006.[11] Requiring these entities to be regulated as large point sources would not place an undue burden on them or on CARB, so this would meet the "administrative simplicity" criterion.

In addition, the Leiberman-Warner Climate Security Act (S.2191), which was recently passed by the Senate Environment and Public Works Committee, uses covers stationary sources that emit more than 10,000 metric tons of CO_2, so adopting this level would be consistent with the "expandability" criterion.[12]

VI. Deferral of a Market-based Cap-and-Trade System and Coordination with Other States

The ALJ Ruling on November 9, 2007 suggested two possible deferral scenarios with regards to the natural gas sector:

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[8] The remaining 20% of natural gas use in California is comprised of customers who arrange their own supply of natural gas through private in-state pipelines ("direct sales") or directly from interstate pipeline ("bypass" customers). California Public Utilities Commission, *Preliminary Staff Recommendations for Treatment of Natural Gas Sector Greenhouse Gas Emissions*, July 12, 2007, p.4. These are primarily electric generators and enhanced oil recovery operations, and therefore will be regulated in the electricity sector or as large point sources.

[9] *See* http://www.pge.com/tariffs/doc/GR1.doc

[10] Based on a conversion factor of 53.06 kg CO2 per 1 MMBtu. California Air Resources Board, *Updated Macroeconomic Analysis of Climate Strategies Presented in the March 2006 Climate Action Team Report: Final Report*, October 15, 2007, p. 11, available at http://www.climatechange.ca.gov/events/2007-09-14_workshop/final_report/2007-10-15_MACROECONOMIC_ANALYSIS.PDF. (2 million therms * (100,000 MBtu / million therm) * (53.06 kg CO2 / MBtu) * (1 metric tons CO2 / 1,000 kg CO2) = 10,612 metric tons CO2)

[11] *See* Administrative Law Judges' Ruling Extending Deadline For Comments and Incorporating Responses to Staff Data Request on Natural Gas Issues, December 10, 2007; Attachment A, p. 18; Attachment C, pp. 19-21; 27-30.

[12] As of December 5, 2007, Senate Bill 2191 defined a "facility" as "any activity or operation that emits 10,000 carbon dioxide equivalents in any year", and "carbon dioxide equivalent" is defined as "the quantity of the greenhouse gas that the Administrator determines makes the same contribution to global warming as 1 metric ton of carbon dioxide."

1. 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
2. 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.[13]

Q11. In developing recommendation to ARB, should the Public Utilities Commission and the Energy Commission give consideration to actions other states may take regarding regulation of natural gas sector GHG emissions? If so, how?

Regional action to reduce consumption of natural gas could result in the additional benefit of reducing natural gas prices.[14] California should be cognizant of this potential benefit as it attempts to design a system that could serve as a regional model. However, California should lead the way and not let other states' action or inaction determine its path.

Q12. Is it important that the regulation of California natural gas sector GHG emissions be consistent with actions taken by other state?

As required by AB 32, California should attempt to integrate into regional, national and international GHG reduction programs where applicable. California Health and Safety Code § 38564. In the absence of other actions, California should not hesitate to lead the way and design a cap-and-trade system that can be used as a model.

Q13. Would deferral of a cap-and-trade program for the natural gas sector facilitate or hinder California's integration into a subsequent regional or federal program?

Deferral of a cap-and-trade program for the natural gas sector in a California-only context will leave California in a position of having to accept 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

[13] ALJ Ruling Requesting Comments on Type and Point of Regulation Issues, November 9, 2007, p. 8.
[14] California Energy Commission, *2007 Integrated Energy Policy Report*, November 2007, pp. 23-37; available at http://www.energy.ca.gov/2007publications/CEC-100-2007-008/CEC-100-2007-008-CTF.PDF.

develop a system that would help serve as a model for broader systems and help serve California's interests.

Q14. 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 natural gas 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 reach even greater GHG emission reductions than regulatory programs alone, and put California in a leadership position to influence the design of other broader programs.

Q15. If a market-based cap-and-trade system is not implemented for the natural gas sector in 2012, how would you recommend addressing early actions that entities may have undertaken in anticipation of a market?

VII. Relationship to GHG Regulatory Approach in the Electricity Sector

Q16. For purposes of natural gas GHG regulation under AB 32, does it matter what is decided regarding electricity sector type and point of regulation? For example, would a load-based cap for the electricity sector necessitate a similar type of cap for the natural gas sector, with local distribution companies as the point of regulation? If applicable, explain the relationships you see between the electricity and natural gas sectors for AB 32 purposes.

The natural gas sector can be designed independently of the electricity sector, and the design of the electricity sector should not dictate the design of the natural gas sector.

Q17. If the electricity sector is not included in a California (or wider) cap-and-trade system, could/should the natural gas sector be included? What are your reasons?

NRDC/UCS believe that a cap and trade system should include as many sectors of the California economy as possible, including the electricity and natural gas sectors. We believe the natural gas sector should be included in any cap-and-trade system adopted in California. Excluding the electricity sector would make it more difficult to account for consumption shifts between sectors. The state could attempt to account for such shifts

through regulatory measures, but it would require more effort and oversight than if both sectors were included in the same liquid market under a guaranteed cap.

Q18. What implications might there be for fuel switching if GHG emissions for one sector (electricity or natural gas) are capped and GHG emissions for the other sector are not? Would such fuel switching likely lead to an overall decrease, or increase, in GHG emissions?

It is likely that fuel switching would occur away from the capped sector and into the uncapped sector. Regulatory agencies could partially control this shift through regulatory measures, but, as noted elsewhere in these comments, the absence of a guaranteed cap makes it difficult to control overall emissions levels. The absence of a cap on an important sector such as electricity or natural gas, and resultant fuel switching into that sector, would most likely result in an increase in GHG emissions, compared to the guaranteed reductions that could be achieved with a cap on both sectors. However, fuel switching from electricity to natural gas generally improves overall efficiency and decreases emissions.

Q19. How should the GHG emissions of cogeneration, combined heat and power, and distributed generation end users be considered and regulated (e.g., in the electricity sector, in the natural gas sector, or as a point source)?

We provide our preliminary responses to this question here; however, the Commissions may need to investigate further how to address these "seams" issues once the design of the overall system has been outlined. Large combined heat and power and cogeneration facilities emitting over 10,000 metric tons CO_2e per year should be regulated as point sources. If the electricity and natural gas sectors are both capped, these facilities will realize the competitive benefit of their efficient combination of electric and thermal outputs, because the total number of allowances a CHP facility would need to hold would be lower than for a less efficient combination of a power plant or purchased power and a boiler. For smaller facilities, the LDC should be the point of regulation.

Distributed generation facilities that generate electricity should be considered part of the electricity sector.

VIII. Recommendation and Comparison of Alternatives

Q20. Please explain in detail your proposal for how the natural gas sector should be treated under AB 32. Address whether the following emissions sources should be subject to an enforceable cap, and if so, whether reductions in the cap should be achieved by a cap-and-trade approach or only through programmatic requirements: end-user combustion of natural gas, combustion-related emissions from operating the infrastructure, fugitive emissions from pipelines and compressor stations, and non-combustion uses of natural gas. Identify the appropriate point of regulation for each source of emission that should be included in a cap or a cap-and-trade system. Should there just be a sectoral cap, or entity-specific caps as well? Should there be a cap-and-trade system? Address the relationship between programmatic strategies (e.g., energy efficiency programs and pipeline leak detection programs) and a sectoral cap. Discuss any legal concerns or need for new legislation to implement your recommended approach.

NRDC/UCS commend the Public Utilities Commission staff for the excellent recommendations for the natural gas sector presented in Preliminary Staff Recommendations for Treatment of Natural Gas Sector Greenhouse Gas Emissions on July 12, 2007. We largely support those recommendations.

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 natural gas sector. End-user combustion of natural gas and combustion-related emissions from operating the infrastructure used to deliver natural gas should be included in the cap. Fugitive emissions from pipelines, storage facilities, and compressor stations could possibly be included in the cap at a later date if there is accurate mandatory reporting. Natural gas fueled vehicles should be included if the cap covers the transportation fuels sector and thereby provides a "level playing field;" if the cap excludes petroleum-based transportation fuels, then the Commissions and CARB should ensure that natural gas vehicles are not disadvantaged.

The Commissions should recommend that CARB add reporting for these natural gas sector emissions to its mandatory reporting program as soon as possible.

The point of regulation for end-user combustion should be individual end-users who emit more than 10,000 metric tons CO_2e, and LDCs for smaller users. The point of regulation for combustion-related emissions from operating the infrastructure should be the infrastructure provider.

The Commissions should also expand existing, and add new, programmatic strategies to reduce emissions from the natural gas sector, including:

- expanded natural gas energy efficiency programs, upgraded building and appliance efficiency standards, and new time-of-sale efficiency requirements for homes and businesses,
- incentives or requirements to use best practices to reduce fugitive emissions from transmission and distribution,
- standards and other incentives use solar thermal energy to reduce natural gas use,
- policies to encourage the use of biomethane to replace natural gas, and
- expanding the use of efficient combined heat and power.

These programmatic strategies will help reduce emissions in the natural gas sector and advance technologies, and the sectoral cap will achieve even deeper reductions.

Q21. Describe how your recommended approach satisfies each one of the principles or objectives set forth in Section 3.2.

- ***Goal attainment:*** By setting a cap on the natural gas sector, this approach ensures that the sector will meet its reduction goal.
- ***Cost minimization:*** By allowing the flexibility of participation in a cap-and-trade system, this approach will help minimize costs for the natural gas sector.
- ***Legal risk:*** To our knowledge, there is no unique legal risk associated with this approach.
- ***Environmental Integrity:*** The natural gas sector does not face the same problem that the electricity sector faces of contract shuffling between higher and lower carbon intensive sources of electricity.
- ***Expandability:*** This approach could be expanded to a regional and national level.
- ***Accuracy:*** Point sources, LDCs, and storage and pipeline facilities can accurately measure emissions from combustion of natural gas. Methods for reporting fugitive emissions are currently under development.
- ***Administrative Simplicity:*** The natural gas sector should be added to CARB's mandatory reporting program as soon as possible. The state already has experience collecting data from natural gas LDCs, so that should be a smooth administrative transition. As noted in response to Q5(d) above, the California Climate Action Registry is developing a reporting protocol for natural gas transmission and distribution which should be of help in streamlining the reporting requirements for these emissions.

Q22. How does your recommended approach differ from the Public Utilities Commission Staff's preliminary recommendations for the natural gas sector attached to the July 12, 2007 ruling?

Our recommendations do not differ significantly from the staff's recommendations, although there are a few differences:

- The staff recommended that transportation-related uses of natural gas should be addressed separately by CARB. NRDC/UCS recommend that all major sectors, including the transportation sector, be included in a cap and trade program eventually, and that natural gas not be disadvantaged compared to petroleum.
- The staff recommended that CHP be studied further. NRDC/UCS agree that the agencies will need to examine further how to address "seams" issues, but in the meantime, endorse regulating large CHP plants as point sources.
- The staff recommended that distributed generation be studied further. NRDC/UCS believe that distributed generation facilities that generate electricity should be included in the electricity sector.
- The staff recommended that infrastructure emissions be included in the natural gas sector cap. NRDC/UCS believe that infrastructure-related combustion emissions should be included in the cap, and that fugitive emissions should be considered if a reliable reporting mechanism is developed.

IX. Conclusion

NRDC and UCS appreciate the Commissions' efforts to design GHG emissions regulation for the natural gas sector that meet the expressed criteria. We urge the Commissions and CARB to choose an overall design and proceed to address the more important design elements, including the level of the cap, allowance distribution, and enforcement.

Dated: December 17, 2007

Respectfully submitted,

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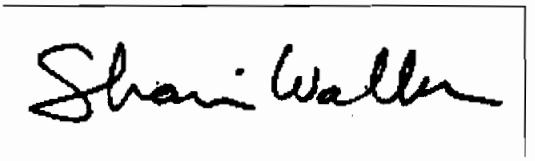
CERTIFICATE OF SERVICE

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 for the Natural Gas Sector" 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 17, 2007 at San Francisco, California.



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