

BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA

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Order Instituting Rulemaking to Implement the
Commission's Procurement Incentive Framework
and to Examine the Integration of Greenhouse
Gas Emissions Standards into Procurement
Policies.

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

COMMENTS OF THE COMMUNITY ENVIRONMENTAL COUNCIL ON
NATURAL GAS SECTOR POINT OF REGULATION ISSUES

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December 17, 2007

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NATURAL GAS SECTOR POINT OF REGULATION ISSUES

The Community Environmental Council ("CE Council") respectfully submits these comments in accordance with the "Administrative Law Judges' Ruling Requesting Comments on Type and Point of Regulation Issues for the Natural Gas Sector" ("ALJR"), dated November 28, 2007.

The CE Council is a member-supported environmental non-profit organization formed in Santa Barbara in 1970 and is the leading environmental organization in our region. In 2004, the CE Council shifted its primary focus to energy issues and we are spearheading a regional effort to wean our communities from fossil fuels entirely during the next two decades. We are almost unique in combining on the ground work on a number of energy and climate change-related issues with our work on state and federal policy issues. Our state policy work is directly informed by our experience with what has worked, or is likely to work, at the local level. More information on the CE Council and our energy program may be found at www.fossilfreeby33.org.

I. Discussion

According to the just-released Air Resources Board 2004 greenhouse gas emissions inventory, about 19% of California's total emissions come from natural gas end use and less than 1% from fugitive emissions.¹ So the natural gas sectors considered in this phase of this proceeding (which excludes natural gas used in electricity generation) constitute about one fifth of the state's greenhouse gas emissions.

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 four ways to reduce natural gas sector emissions covered in this phase of this proceeding:

- 1) reduce demand by increasing the efficiency of end-use natural gas combustion;
- 2) reduce demand through end-user conservation (behavioral change) induced by, *inter alia*, better education or higher natural gas prices;
- 3) reduce fugitive emissions from production, transmission and distribution;
- 4) switch to a different fuel or energy source, such as solar hot water heaters or ground source heat pumps (passive geothermal), instead of natural gas.

A market-based system may have some impact on residential and small commercial natural gas end-users (#1 and 2 above) if natural gas purveyors (utilities and natural gas pipeline companies, collectively "Purveyors") are

¹ California 1990 Greenhouse Gas Emissions Level and 2020 Emissions Limit, Air Resources Board, November, 2007, Table 3.

subject to a cap or can commoditize their emissions reductions for sale into a cap and trade system. This is the case because Purveyors, while not able to directly reduce emissions from end-user emissions, may work with end-users to reduce emissions in a number of ways, including existing utility natural gas efficiency programs (coordinated in R.06-04-010).

Large commercial and industrial natural gas end-users should be directly subject to a cap on their emissions, so a market-based system would likely lead to incremental benefits for these entities also.

Similarly, 4) above may benefit from a market-based system insofar as residential, commercial and industrial end-users are subject to GHG limits or can sell into a cap and trade system (either indirectly, through Purveyors, or directly through a cap on emissions of large end-users).

#3 above may benefit from a market-based system because there are relatively few entities that own and operate production, transmission and distribution lines for natural gas in California and most of these entities should be subject to a GHG cap if a cap is developed for the natural gas sector. The inter-state pipeline companies are subject to FERC regulation, but almost all natural gas sector emissions may be reached by the Commission and ARB through regulation of large end-users and distribution companies, allowing the Commission and ARB to avoid attempting direct regulation of primarily FERC-regulated pipeline companies (with all the attendant legal uncertainties previously addressed in parties' comments on the Market Advisory Committee's First Seller Report, in this proceeding).

As the Market Advisory Committee Report states: "In the case of natural gas pipelines, the first entity having legal ownership of the gas and taking delivery of

the gas within the State's borders is the party that would bear responsibility for surrendering sufficient emissions allowances to be in compliance with the California's program requirements." (Pp. 34-35.) In our proposal, we suggest that FERC-regulated importers not be included in the cap and trade system and that, instead, in-state distribution companies (generally the investor-owned utilities) and large end-users should be the regulated entities.

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?

A market-based system for the natural gas sector could provide additional emissions reductions as described in CE Council's response to Q1. The level at which additional emissions reductions are realized will depend on the stringency of the cap imposed and the market price for emissions allowances, among many other factors. The CE Council believes, given the discussion in response to Q1, that a cap and trade system for the natural gas sector emissions covered in this portion of this proceeding will have increased impact when paired with a cap and trade system for the electricity sector, by allowing cross-sectoral trading of allowances.

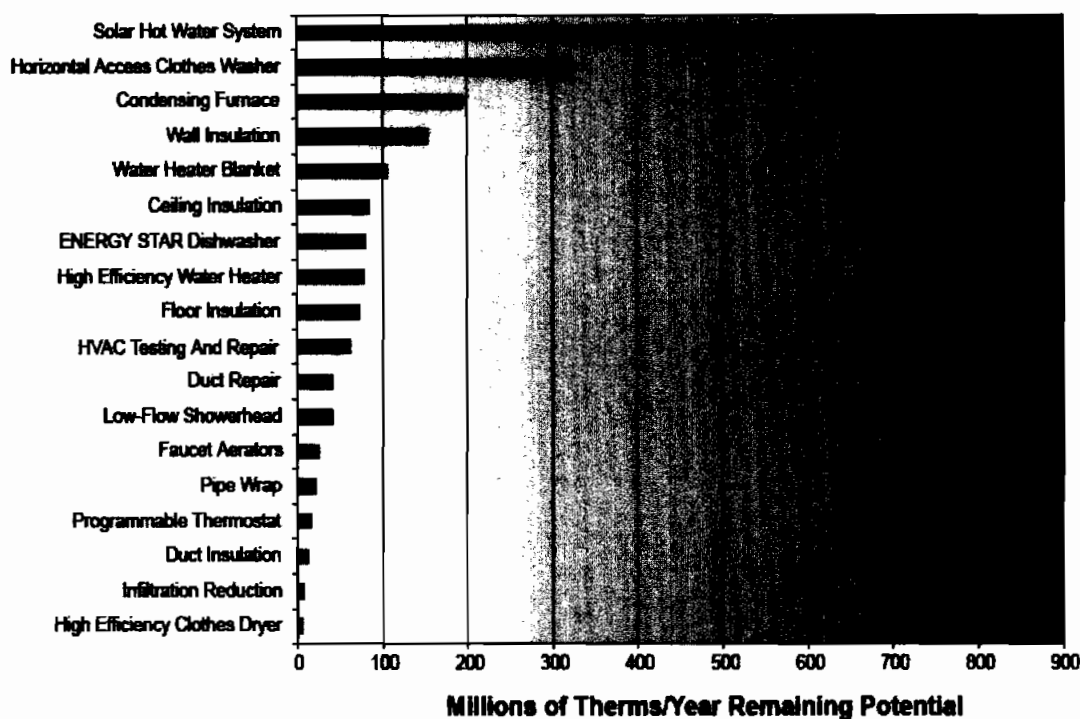
That said, much of the expected emissions reductions from a natural gas sector cap and trade system probably could be (and probably will be) realized through existing state and federal policies to increase natural gas efficiency and to promote alternatives to natural gas, such as solar hot water systems. In particular, the Commission has implemented a number of fairly ambitious energy efficiency programs for the investor-owned utilities, for electricity and natural gas. AB 1470, which set in motion the creation of an incentive pool up to \$250 million for solar hot water systems that can directly offset natural gas use in

homes and businesses, was signed into law in 2007.² This legislation hopes to incentivize up to 200,000 new solar hot water systems, which may have a significant impact on natural gas demand reduction. Homeowners and businesses purchasing solar thermal systems also qualify for a 30% federal tax credit.

AB 1470 states: "Solar water heating systems represent the largest untapped natural gas saving potential remaining in California." However, it is still unclear how many new solar thermal systems will be installed in California by 2020 because even with the AB 1470 incentive (the exact rebate amount per system has not yet been determined), and the federal tax credit, solar hot water systems will still have relatively long payback periods (ten to twenty years) for most end-users. In addition, even 200,000 solar hot water systems will not make a huge dent in natural gas use in California - no more than 5% by 2020, according to Environment California, a key supporter of the bill. With solar hot water systems capable of far higher natural gas sector demand reductions (Figure 1), other means of encouraging solar water and other solar thermal technologies and passive geothermal technologies should be implemented, such as combining incentives for energy efficiency measures with solar hot water and solar PV (as the CE Council has proposed in R.06-04-010 as part of the statewide energy efficiency Strategic Plan process).

Figure 1. *Potential of various measures to reduce natural gas demand in homes.*

² The Commission's regulatory process for AB 1470 probably won't start until mid-2008, so the program itself will probably not be implemented until at least the middle of 2009. AB 1470 specifies that the pilot solar hot water program administered by CCSE in San Diego will inform the Commission's regulatory process under AB 1470, so the CCSE program will need more time to assess its efforts before the Commission can rely on that experience.



Source: KEMA-Xenergy

A market-based system for the natural gas sector may further encourage adoption of solar hot water systems, and other solar thermal technologies, by the commercial and industrial sectors if these sectors are subject to a cap and trade system. This is the case because entities subject to the cap and trade system (either Purveyors or large end-users) would receive an additional financial incentive from the “green attributes” (zero emissions) of solar thermal systems they install, if such emissions benefits could be commoditized and sold or used for compliance.

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 below.

- **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 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?

The CE Council agrees that the Commission's list includes almost all relevant priorities, but environmental justice should be added as a priority. We rank these priorities accordingly:

- Goal attainment
- Expandability
- Cost minimization
- Accuracy
- Environmental integrity
- Administrative simplicity
- Legal risk
- Environmental justice

We also acknowledge that all of these criteria are important and a forced ranking should not be used to sacrifice one priority for another unless absolutely necessary.

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?

Yes, emissions from the natural gas sector should be capped, but the nature and extent of the cap will depend on the entities regulated. Distribution utilities and large end-users should be the entities regulated. In both cases, the financial burden should not be great and it is likely that large cost savings will in fact accrue to the regulated entities. This is the case because investor-owned utilities are already heavily incentivized to invest in increased end-user efficiency through D.07-09-043. And large end-users should realize cost savings through increasing the efficiency with which they use natural gas, thus saving money and reducing emissions.

Publicly-owned utilities, if regulated by ARB under a natural gas sector cap and trade system, may not realize cost savings themselves, but their customers/owners probably will due to reductions in natural gas demand. For example, if the Los Angeles Department of Water & Power is subject to ARB regulation and a cap and trade system for its customers' end-use emissions, it will probably invest more heavily in end-use energy efficiency programs similar to what the IOUs are already doing, thus achieving cost savings for customers and higher approval for the public utility and its leaders.

The CE Council previously supported the Market Advisory Committee's "first seller" recommendation for the electricity sector, in comments submitted on August 6, 2007, and we express support now for this approach with respect to

the natural gas sector. Under a first seller approach, emissions sources above a certain threshold would be regulated individually and distribution companies receiving natural gas imports would be regulated as the first seller of natural gas into California's market. Such an approach eliminates concerns about regulating small end-users such as homeowners and small businesses because they will not be directly regulated. Investor-owned utilities will be the primary regulated entities, and they are already subject to a high degree of regulation from the Commission and other agencies. Moreover, the Commission recently created a financial incentive system, with D.07-09-043, that has radically changed the way the utilities will generate profits in California. The new incentive system, combined with existing natural gas efficiency programs, should result in an investor-owned utility sector that is ready to meet and exceed any cap imposed by ARB and the Commission.

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 complementary 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.

Under the first seller approach outlined above, combustion in the residential, small commercial and small industrial segments would be indirectly regulated through distribution utilities.

b. Natural gas combustion by natural gas vehicles.

Similarly, natural gas used in natural gas vehicles should be regulated through distribution utilities under a first seller approach.

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.

Natural gas emissions from operating infrastructure should also be regulated under a first seller approach. Purveyors will generally be the regulated entities. However, if the pipeline operator is regulated by FERC (as is the case with Kern River Gas Transmission Co. and Mojave Pipeline Co.), some difficult legal issues may arise. The CE Council recommends, accordingly, that infrastructure operating emissions from FERC-regulated pipelines not be included in a market-based system in this part of this proceeding.

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

Again, the first seller approach would be the best approach. The same legal issues may arise for FERC-regulated entities as in c) above. The CE Council recommends, accordingly, that fugitive emissions from FERC-regulated pipelines not be included in a market-based system in this part of this proceeding. According to the latest GHG inventory, approved in December by ARB, fugitive emissions account for less than 1% of the state's total emissions. So if regulation of these emissions must wait until a federal system is put in place, it will not be a great harm to the effectiveness of California's system.

Emissions from storage facilities (from operations and fugitive emissions) should be subject to a cap, unless a *de minimis* threshold is not reached, in which case programmatic efforts to reduce emissions should apply.

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

This category may also fall into the *de minimis* category because emissions are relatively small on a state-wide basis. As such, a programmatic approach may be appropriate. Non-combustion use of natural gas is the only category for which we recommend a purely programmatic approach. A programmatic approach will work in this case because where natural gas is used without combustion, in creating cement or nitric acid for example, emissions result largely from leakage during the manufacturing process.

f. Other sources of natural gas sector emissions not listed above (please specify).

As we have discussed previously, **not all natural gas is created equal**. Liquefied natural gas (LNG) has associated emissions that result in it being a potentially far higher source of GHG emissions and criteria emissions than domestically produced natural gas – up to twice as high, depending on the amount of energy used to liquefy, transport and re-gasify the natural gas.³ Under a first seller approach, distribution companies receiving imports should be accountable not just for the volume of natural gas they import, but also for the associated emissions from the type of natural gas they import. The state, through ARB and the CEC, is fully committed to considering the sources of biofuels, such as corn for ethanol, in determining which alternative transportation fuels to pursue. It makes no sense to avoid the same questions in the electricity sector. Attempting to mitigate climate change without considering lifecycle emissions could lead to highly counter-productive results.

Calculating the associated emissions need not be an overly burdensome process for the Commission or regulated entities. Instead, the Commission may draw

³ Jaramillo, P., Griffin, M., et al., "Comparative Life-Cycle Air Emissions of Coal, Domestic Natural Gas, LNG, and SNG for Electricity Generation," Environmental Science & Technology, published online July 25, 2007. Abstract available at <http://pubs.acs.org/cgi-bin/abstract.cgi/esthag/asap/abs/es063031o.html>.

upon established scholarship by the CEC and others (pursuant to the AB 1007 process, for example) to establish emissions factors for domestic natural gas versus LNG and any other relevant categories and apply these factors to each first seller as appropriate. With Sempra (SDG&E's parent company) and PG&E subsidiaries working to import LNG into California, these concerns become more immediate. This issue will also arise in R.07-11-001, which will examine the merits of a special LNG procurement process for the IOUs.

The Commission's sister agencies, ARB and CEC have expressed support for considering lifecycle emissions in crafting policies to mitigate climate change. The CEC stated, in the 2004 California greenhouse gas emissions inventory, published in December of 2006: **"Because GHGs affect the entire planet, not just the location where they are emitted, policies developed to address climate change should include an evaluation of emissions from the entire fuel cycle whenever possible."** (P. iii.) ARB is also on the record in numerous forums (including Deputy Director Mike Scheible's oral comments to the Commission during the pre-hearing conference for Phase II of this proceeding) regarding its belief that lifecycle emissions analysis should be conducted when determining policies for mitigating climate change. **Accordingly, the Commission is alone in declining to utilize lifecycle emissions analysis.**

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

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 regulate in such areas? For example, should ARB require that publicly owned utilities meet energy efficiency targets? Would additional legislation need to be enacted?

ARB should impose a cap on publicly-owned utilities and their greenhouse gas emissions. Following the principles of local control and optimal devolution, it **should be up to each POU to decide how best to meet that cap.** As discussed above, the CE Council recommends that primarily FERC-regulated entities not be subject to the cap at this time because the large majority of emissions may be reached by regulating only distribution utilities (private and public) and large end-users.

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 or 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.

As discussed above, the CE Council believes a first seller approach should be adopted as the preferred type of cap and trade system for the non-electricity generation natural gas sector. Under the first seller approach, distribution utilities and large end-users will be the regulated entities, allowing the Commission and ARB to reach almost all natural gas emissions in the state.

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

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.

Any answer to this question will have some degree of arbitrariness, unfortunately. It is important that the metric used is emissions and not btus of natural gas. This is the case because at some point California's regulatory system will include lifecycle emissions considerations for the utility sector, in which case using the emissions metric will allow easy incorporation of lifecycle emissions, whereas a btu metric will not be as readily adaptable. We look forward to the opportunity to comment on the Commission's proposed threshold.

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

Yes, other states' actions in this area should be considered. While California is a significant emitter of GHGs, all knowledgeable parties fully acknowledge that any reductions of California's emissions will have a minimal effect by itself on mitigating climate change. Where California can have a significant effect is in influencing the existence and shape of other state, and possibly a federal, GHG mitigation systems. Accordingly, it will be very important for California's system to be replicable in other states or by the federal government, and to be able to mesh with other systems, both in the US and internationally.

Cap and trade systems may work across national borders and carbon taxes may also be harmonized to achieve the same effect. The first seller approach that the MAC and CE Council have supported should allow California's system to mesh easily with other states because it is a hybrid source-based approach. It is a source-based approach for in-state emissions and this system is readily adaptable in any other state or on a national basis. For imports, the first seller approach deviates from a pure source-based approach, but the first seller approach may be modified as other states join with California insofar as the first seller to be

regulated for imports is the entity first taking delivery of the fossil fuel at the extant border of the multi-state first seller system.

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

See response to Q11.

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?

We cannot know the answer to this question at this time, but if California wishes to be a leader and help set the course for other states and the federal government in designing a natural gas sector cap and trade system, it would behoove the Commission to not defer such a program. The CE Council recommends that the Commission not defer implementation of a cap and trade system.

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?

The CE Council does not believe the Commission should delay implementing its policies for reducing natural gas sector emissions – no matter what form those policies take. We have no guarantee that any regional or federal system will be in operation even a decade from now and with many highly-respected scholars and policymakers stating that we must act collectively over the next ten years to avoid the worst impacts of climate change, California should take the lead now.

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?

The CE Council believes no action would be necessary to address early actions that entities may have undertaken because such actions, as discussed above, will almost always lead to cost savings for large end-users, IOU shareholders and ratepayers, and for publicly-owned distribution companies such early actions will have their own benefits in terms of reduced energy bills for customers and higher approval ratings for POU leaders.

Alternatively, some variety of carbon tax may be appropriate in lieu of a cap and trade system. One of the many advantages of a revenue-neutral carbon fee (or tax), as the CE Council discussed in its August 6, 2007, comments on the MAC Report, is the fact that early actions are rewarded. If a regulated entity takes action to reduce emissions prior to being subject to a fee on its carbon emissions, the regulated entity will benefit through a reduced fee once it is imposed. The CE Council and TURN have recommended (in the August 6, 2007, comments) that ARB and the Commission impose a relatively small carbon fee prior to any variety of cap and trade in 2012, as a means of taking action sooner and as a test case for a more robust carbon fee in lieu of, or as a complement to, the eventual cap and trade system that seems to be supported by the Governor and his state agencies.

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 CE Council can envision scenarios in which different market designs may function in parallel for the electricity and natural gas sectors. However, we strongly recommend that the same design – a first seller approach – be used for both sectors, largely because the primary regulated entities should be the investor-owned utilities. It will greatly complexify matters if two different approaches are implemented.

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?

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?

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)?

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.

We have explained our proposal above, but summarize it again here: A first seller cap and trade approach should be developed, under which distribution utilities and large end-users will be the regulated entities (either by the Commission or ARB in the case of publicly-owned utilities). Entities that first receive ownership of natural gas in California will be the regulated entities.

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

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?

Respectfully submitted,

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A handwritten signature in black ink, consisting of stylized, overlapping loops and a long horizontal stroke extending to the right.

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Dated: December 17, 2007

CERTIFICATE OF SERVICE

I hereby certify that I have served by electronic service a copy of the foregoing COMMENTS OF THE COMMUNITY ENVIRONMENTAL COUNCIL ON NATURAL GAS SECTOR POINT OF REGULATION ISSUES on all known interested parties of record in R.06-04-009 included on the service list appended to the original document filed with this Commission. Service by first class U.S. mail has also been provided to those who have not provided an email address.

Dated at Santa Barbara, California, December 17, 2007.



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