

**BEFORE THE PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA
AND THE CALIFORNIA ENERGY COMMISSION**

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)

Energy Commission Docket 07-OIIP-01

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

**COMMENTS OF PACIFICORP (U 901 E) ON TYPE AND
POINT OF REGULATION ISSUES**

Kyle L. Davis
PacifiCorp
825 NE Multnomah, 20th Floor
Portland, OR 97232
Telephone: 503-813-6601
Facsimile: 503-813-6060
Email: Kyle.L.Davis@pacificorp.com

Date: December 3, 2007

**BEFORE THE PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA
AND THE CALIFORNIA ENERGY COMMISSION**

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)

Energy Commission Docket 07-OIIP-01

**COMMENTS OF PACIFICORP (U 901 E) ON TYPE AND
POINT OF REGULATION ISSUES**

Pursuant to the *Administrative Law Judges' Ruling Requesting Comments on Type and Point of Regulation Issues* dated November 9, 2007, and the *Administrative Law Judges' Ruling Granting Extension of Time* dated November 19, 2007, PacifiCorp respectfully submits these comments addressing issues related to the type and point of regulation to be used to reduce greenhouse gas ("GHG") emissions in the electricity sector. PacifiCorp appreciates the opportunity to provide further comments in this proceeding on these important issues.

I. INTRODUCTION

PacifiCorp is one of the West's leading utilities, serving more than 1.6 million customers in six western states (California, Idaho, Oregon, Utah, Washington, and Wyoming). PacifiCorp has more than 10,400 megawatts of generation capacity on a system-wide basis from coal, hydro, wind power, natural gas-fired combustion turbines, solar and geothermal. PacifiCorp also has ownership interests in thermal generation units located in three additional western states (Arizona, Colorado, and Montana). In California, PacifiCorp serves approximately 46,500 customers in Del Norte, Modoc, Shasta and Siskiyou counties.

No one should underestimate the challenge of de-carbonizing an economy that has relied on carbon-based fuels for two centuries. Technology development is the key to long-term, sustainable emissions reductions. At the national level, PacifiCorp and its parent, MidAmerican Energy Holdings Company, have advocated for a phased-in, technology and policy-driven national approach to reduce long-term global GHG emissions while minimizing the costs and risks to the economy.¹ Transitioning to a low-carbon economy cannot take place overnight, but there are measures that should be undertaken now. In the first phase, we suggest focusing on technology development and sector-specific reductions from existing technologies that may have incremental costs that are slowing deployment. In the electricity sector, for example, we propose six priorities:

1. Adoption of flexible renewable and clean technology portfolio goals.
2. More stringent energy efficiency mandates.
3. Policies to encourage efficiency improvements at existing facilities.
4. A ten-year, multi-billion dollar research and development program for emission reduction, funded equally by the private sector and the government.
5. Removing the legal and regulatory barriers to the development of low-emissions technologies such as carbon sequestration and new nuclear development.
6. Tax policies to support these programs, such as a long-term extension of the renewable energy tax credit and clean coal initiatives.

Beginning around 2020, as new baseload zero- and low-emissions technologies become available, we propose moving to the second phase of an emissions reduction program. PacifiCorp has suggested a hybrid system of phased-in emissions reductions based on carbon intensity targets, together with trading and safety valve price mechanisms. By using this

¹ See, "Testimony of David L. Sokol, Chairman and CEO MidAmerican Energy Holdings Company for the Subcommittee on Energy and Air Quality, Committee on Energy and Commerce U.S. House of Representatives, March 20, 2007 (available at: <http://www.pacificorp.com/File/File73583.pdf>)

transitional glide path, the U.S. should be poised for dramatic reductions in the third phase, beginning around 2030. Given the breadth of the challenge, PacifiCorp supports a national regulatory solution.

If California moves forward with a cap-and-trade program regulating GHG emissions from the electricity sector, PacifiCorp respectfully requests that the Commission carefully consider the impact of its GHG rules on PacifiCorp and other small multi-jurisdictional utilities (collectively, "SMJUs"). The combination of utility-owned generating resources and resources providing contracted for power located throughout the western United States, coupled with load-serving responsibilities and multi-state cost structures, places SMJUs in the complicated position of having to equitably assign the costs of system energy, including emissions/allowances, to each state's retail load. The Commission has recognized the unique implementation issues facing SMJUs, most notably within the Renewable Portfolio Standard Program ("RPS"), R.06-02-012. Unlike large California investor-owned utilities, PacifiCorp's generating assets and power purchases are not used exclusively to serve California retail load and PacifiCorp does not rely significantly on unspecified power purchases.

II. DISCUSSION

The Ruling requests responses to several specific questions related to the type and point of regulation to be used to reduce GHG emissions in the electricity sector, which PacifiCorp outlines below in the order in which they were presented. Importantly, PacifiCorp respectfully requests that the Commission not perceive the absence of comments by PacifiCorp on any specific issue or other matter as a conclusive indication of PacifiCorp's lack of interest with respect thereto. PacifiCorp acknowledges the ongoing nature of this proceeding and reserves the right to present additional comments at a future time, as necessary.

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

It is difficult to assess potential incremental benefits of a market-based system

without additional details on the scope, coverage, reduction levels, timing, and other aspects of a market-based system. In general, the most significant benefit is expected to be a lower cost of compliance if, in fact, the market acts rationally and is not subject to manipulation. While one of the most successful environmental policies is the sulfur dioxide (“SO₂”) cap-and-trade system authorized by the federal Clean Air Act Amendments of 1990, caution must be exercised in extending the reach of its success too broadly. The Acid Rain Trading program capped emissions of SO₂ from power plants and has achieved drastic reductions in pollution at a fraction of the estimated costs of traditional regulation—however, pollution control equipment was available to control SO₂; such is not the case with GHG emissions. Regardless of the type of regulation, transformation to a low-carbon economy will require significant investment in new and innovative technologies.

Similar to the Acid Rain Program, a cap on GHG emissions could send an economy-wide signal favoring reductions; emissions trading would ensure that reductions are achieved at the lowest cost possible, provided that there are cost-effective ways to reduce emissions and the trading market is liquid. Further reductions could be phased in over time as new technologies come online and capital stock turns over.

As far as other important incremental benefits, the achievement of required emission reductions can be accelerated when emission reduction requirements are phased-in and firms are able to bank emissions reduction credits. Also, the initial allocation of allowances in cap-and-trade programs has shown that equity and political concerns can be addressed without impairing the cost savings from trading or the environmental performance of these programs. However, emissions trading programs must be designed properly in order to realize their potential cost-reduction and environmental compliance goals. As with any emissions control program, poor design is likely to lead to disappointing results.

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

A market-based system will only provide additional emissions reductions beyond existing policies and/or programs if there are sufficient and affordable alternatives to carbon-based electricity supplies available in amounts needed to reduce a specified quantity of GHG emissions. It is difficult to determine the potential emission reductions that could be achieved through expansion of existing policies and/or programs without consideration of practical implementation and cost. While it is possible to, for example, expand the RPS to require that 100% of the electricity consumed in California be supplied by renewable resources—however, it is not practical to expand the RPS to do so. Electricity consumers expect uninterrupted supplies of electricity at an acceptable cost. Conversely, one must question the value of an RPS at all if there is a GHG reduction requirement and few options to achieve such a reduction. Will a new renewable generation project count toward an RPS or a GHG reduction program, neither, or both? Caution should be exercised when considering how existing policies and programs influence the viability of a GHG reduction program.

An additional consideration regarding the level of additional emissions reductions beyond existing policies and/or programs is that the ability to achieve those reductions may be most accurately assessed on a company- or sector-specific basis, considering the peculiarities of specific business operations. A manufacturing entity that is a heavy electricity user may be able to reduce its GHG emissions by purchasing more efficient equipment or implementing process improvements; a natural gas-fired combined cycle electricity generator may have few options to reduce its GHG emissions, beyond reducing its output. A comprehensive cap-and-trade system puts a price on carbon throughout the economy, and gives every regulated entity the incentive to reduce its greenhouse gas emissions to the maximum extent possible, which in some cases would likely be below their individual caps. In this example, additional emission reductions could be achieved. However, broadly speaking, there more than likely would be companies with excess emissions who would buy the surplus allowances. In this scenario, additional emissions reductions would not necessarily be achieved, but rather achieved earlier and more cost-effectively than they might otherwise have occurred under a traditional command and control

policies and/or programs.

While the expansion of existing policies and/or programs may similarly achieve emission reductions earlier, doing so may not be accomplishing them in the most cost-effective manner. Federal and state mandates relating to renewable and alternative energy development, vehicle fleet requirements, energy efficiency and demand-side management have traditionally been developed in isolation, without consideration of GHG impacts, and without consideration of the cost of alternatives. These mandates fail to capture useful data on climate impacts and/or benefits and have the potential to result in unintended consequences. Furthermore, overly narrow requirements imposed by state programs, such as the requirement that a renewable resource be located in the regulating state, discourage cost effective ways to reduce climate impacts.

For example, PacifiCorp's multiple programs for clean and alternative energy development have been largely designed in isolation from one another, with the intent of stimulating innovation or improving environmental performance in each technology sub-category. Energy efficiency and demand-side management programs have individual budgets and targets. RPS programs stimulate particular technologies up to a certain percentage of a particular state's electricity retail sales; solar photovoltaic programs aim to achieve specific capacity installation targets; heat rate improvement projects and higher efficiency generation technologies focus on fuel savings. Other opportunities in low- or zero-carbon energy development — such as waste heat recovery and methane capture — are not fully developed or recognized under existing RPS programs. While these are important programs individually, they do not include all technologies that can contribute to carbon emissions mitigation.

In lieu of expanding existing policies and/or programs, California should adopt a broad climate policy that allows a utility to pursue a portfolio strategy with carbon-equivalent savings as the unifying principle. All actions that result in such savings would contribute to carbon emissions reduction goals, thus providing an incentive for a utility and its customers to prioritize ratepayer investments based upon comparable cost-effectiveness, as well as undertake what are now generally unrecognized beneficial carbon-reducing acts. For example, California

should consider modifying the RPS program and allow utilities to net out retail megawatt-hours generated by zero-carbon emitting generation, such as nuclear, hydro and fossil equipped with carbon capture and sequestration.² A strategy with carbon-equivalent savings as the unifying principle is one already pursued by consumer-owned utilities, but would need to be supported by the Commission for investor-owned utilities and potentially replace and/or unify all existing clean and alternative energy programs and mandates. PacifiCorp observes that Commission staff appears to have arrived at a similar conclusion. Within staff's greenhouse gas emissions reduction measures workpaper, the following comment was made:

It bears mentioning that cost-effectiveness as defined under the current Public Utilities Commission regulatory framework refers to how a given measure compares to a calculated avoided cost for a utility. Under a regulatory framework set by an overarching limit on GHG emissions, cost-effectiveness of a given measure would instead be defined by how it compares to an alternative means of reducing emissions to meet one's obligation. *Greenhouse Gas Emissions Reduction Measures For the Electricity and Natural Gas Sectors Under Consideration as Part of R.06-04-009* at 6, n. 10.

PacifiCorp recommends that any market-based system should utilize carbon-equivalent savings as the unifying principle and provide additional (or earlier) *cost-effective* emissions reductions beyond (or be implemented in lieu of) existing policies and/or programs. Achieving additional (or earlier) cost-effective emissions reductions may be possible if they can be properly valued.

Question No. 3: Do you agree with the set of objectives to be considered in evaluating design options? 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.

PacifiCorp has ranked each of the objectives as follows:

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

² For fossil-fueled units the megawatt-hours would be pro-rated based upon the actual emissions sequestered versus total emissions generated.

Unlike most other California investor-owned utilities, PacifiCorp is a vertically-integrated utility owning approximately 80 percent of its generation portfolio, most of which is located outside the state. PacifiCorp's California customer base is limited and includes a significant proportion of low-income customers. Further, PacifiCorp's service territory lacks relatively large industrial customers. Collectively, these factors mean that PacifiCorp's residential customers will likely bear a disproportionate financial burden of achieving a given GHG reduction target compared to the customers of other California utilities who have already divested themselves of fossil generation. Those deregulated utilities have had, for several years, the ability to contract away any potential stranded cost risk, while also placing new construction risk squarely on independent generators competing for their business. PacifiCorp considers cost minimization a critical objective and respectfully requests that the Commission carefully consider the impacts of GHG emissions allowances mechanisms on customers served by SMJUs.

(2) Legal risk: Is the approach at greater relative risk of being delayed or overturned in court?

Earlier this year, PacifiCorp submitted public comments³ on the Market Advisory Committee's final recommendations for designing a greenhouse gas cap-and-trade system for California. Within those comments, PacifiCorp strongly encouraged the Committee or the California Air Resource Board to subject the plan it ultimately proposes to an objective, independent analysis by a reputable third party, external to the overseeing and implementing administrative agency, for Constitutional review. PacifiCorp observed that it would frustrate every purpose for a cap-and-trade system for it to be formulated with so much effort, but delayed or ultimately overturned by a Federal lawsuit. Legal risk is the most significant initial objective to consider when evaluating different types and points of regulation.

One of the strongest appeals of the load-based approach is its perceived ability to withstand legal challenges. It is generally accepted that California institutions cannot explicitly

³ See, http://www.climatechange.ca.gov/events/2007-06-12_mac_meeting/public_comments/PacifiCorp%20Comments%20on%20MAC%20Recommendations.pdf

regulate the production of electricity in other states. However, regulating the *purchases* of electricity would place the point of regulation upon firms operating strictly within California. As with the RPS, this would be acceptable within the confines of the constitution's commerce clause as long the regulation does not explicitly treat purchases from imports differently than those from production within the state.

(3) (a new objective) Technological feasibility: Is the approach taking into account technological feasibility?

PacifiCorp approaches key challenges through a multi-stage process whose primary components are – assess, plan, execute, measure and adjust. Applying these same tools to the challenge of dealing with carbon emissions and climate change, PacifiCorp recommends that California implement a multi-phased, economy-wide approach that matches emissions reduction goals to reasonable expectations of technology development.

PacifiCorp's recommendation is based primarily on concepts developed by the Electric Power Research Institute ("EPRI") and described within their recently released study "The Power to Reduce CO₂ Emissions: The Full Portfolio." In that document, EPRI describes a technology path for the electricity sector to return to 1990 emissions levels by 2030. This will require the long-term commitment of billions of dollars in energy research, development and deployment in every aspect of electric generation, transmission and consumption. EPRI establishes specific technology deployment targets in seven areas: efficiency, renewables, nuclear generation, advanced coal generation, carbon capture and storage ("CCS"), plug-in hybrid electric vehicles ("PHEV") and distributed energy resources. While one could argue that carbon emission reductions from some of these targets could be slightly higher or somewhat lower, the overall picture is clear – getting from the present to a low carbon future can be accomplished, but only with substantial and consistent investment, the right policy choices and a realistic timeline. The most encouraging aspect of the study is that, as we move toward 2030, emissions levels can begin falling fairly dramatically and the potential of some of the more dire predictions of climate change can be minimized.

The emphasis here is that there will be a hierarchy of value in the dollars spent attempting to address climate change. It is critical to address technology research and development that will assist in long term solutions along with measures that offer immediate carbon benefits from investments in energy efficiency, renewable energy, and increasing the efficiency of existing fossil generation.

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

A rigorous and consistent monitoring and reporting of GHG emissions is important for two key reasons: 1) to ensure environmental integrity and credibility of the system (i.e., allowing the inclusion of emissions that are difficult to measure or the use of poor emissions determination methods could lead to a violation of the trading system cap), and 2) to provide a sense of fairness among participants in the trading program (i.e., if some firms were under-estimating their emissions due to the use of poor methods, failure to account for some activities, or other reasons, then they would not only gain advantage over their competitors but also be perceived as cheating. This too would undermine the credibility of the program).

(5) 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 proposed approach should be administratively simple and facilitate regional and international linkages. This is a critical objective because administrative simplicity encourages robust trading and ultimately reduces the overall costs of the program.

(6) 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?

Goal attainment is a critical objective; however, PacifiCorp would observe that the original targets established within Assembly Bill 32 were economy-wide goals and the

appropriate share of the economy-wide cap to be assigned to the electricity sector should reflect an amount and timetable that is linked to technological feasibility.

As far as advantages to promoting energy efficiency, combined heat and power, or renewable energy, the approach ought to not distinguish between the different existing policies and/or programs, but rather engender the pursuit of lowest cost opportunities for emissions reductions. Again, PacifiCorp strongly recommends a market-based system, with carbon-equivalent savings as the unifying principle that provides the most effective means of achieving *cost-effective* emissions reductions beyond or in lieu of existing policies and/or programs.

(7) 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?

This objective is critical, but only to the extent that California's program exists in isolation. As has been discussed previously, the risk of contract shuffling and leakage diminishes greatly under either a regional program, as envisioned by the Western Climate Initiative, or a national program.

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

PacifiCorp declines to comment on this question at this time, but reserves the right to present additional comments at a future time, as necessary.

(9) 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.

The proposed approach should facilitate regional and international linkages. A larger market encourages robust trading which ultimately reduces the overall costs of the

program.

Question No. 4: **With a load-based cap-and-trade system, should exports from in-state generation sources be included and accounted for under the cap? 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.**

Within a load-based cap-and-trade system, exports from in-state generation sources should be included and accounted for as part of a mandatory reporting rule, but not counted against the cap. Emissions liability associated with exported energy are ultimately the responsibility of the end user who pays for the energy. To be consistent with the imputation of carbon liability for emissions associated with electricity produced out of state, but consumed within California, likewise the converse should be true. If California chooses to regulate the emissions associated with the production of electricity exported out of the state, it may do so, treating it akin to an industrial emitter, but not include those emissions within the load-based cap. A load-based cap is meant to reflect emissions associated within California's electricity consumption. To do otherwise would be to establish a "hybrid" regulatory system; a hybrid system includes elements of both a load-based and source-based system.

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

The long economic lifetime and development lead-time of many electricity generation investments requires that utility resource planning consider potential costs and risks over a lengthy time horizon. Although enactment of state GHG regulations are increasingly likely (if not already in place), and Congressional consideration of federal GHG legislation is occurring, uncertainty surrounding the exact nature and timing of those regulations can pose substantial financial risks for utility ratepayers and shareholders. Consequently, many western utilities (sometimes required by state regulatory rules) are beginning to actively assess carbon

regulatory risk within their resource planning, and are evaluating options for mitigating that risk.

The fact is that, in the absence of federal legislation, states are increasingly taking action on their own to limit greenhouse gas emissions.⁴ As the Commission is aware, in the West, California, Oregon, Washington, New Mexico, Arizona, and Utah have all established statewide greenhouse gas emission reduction goals, and have joined with the Canadian provinces of British Columbia and Manitoba to develop a regional a cap-and-trade system or other market-based mechanisms to reduce their combined emissions to 15% below 2005 levels by 2020.⁵ Of these Western states, California, Oregon, and Washington have passed legislation formally codifying their emission reduction goals, although only California's law creates regulatory authority to enforce those goals.⁶

California and Washington have also both established emission performance standards for electric power generation that effectively prohibit the states' utilities from building or signing new long-term contracts with coal-fired power plants lacking carbon sequestration.⁷ Oregon and Washington require that new power plants mitigate a portion of their projected carbon emissions.⁸ Although the focus of this study is on the West, states in other regions of the

⁴ For summaries of state and regional carbon policies throughout the U.S., see Johnson et al. (2006), Pew Center (2006), and Pew Center (2007).

⁵ See, <http://www.westernclimateinitiative.org/cwebeditpro/items/O104F13006.pdf>

⁶ California's Assembly Bill (AB) 32, enacted in 2006, caps statewide emissions at 1990 levels in 2020, and directs the California Air Resources Board to develop regulations to achieve this goal. Washington's Engrossed Substitute Senate Bill (ESSB) 6001, enacted in 2007, also caps statewide emissions at 1990 levels in 2020, and ratchets down the cap to 25% below 1990 levels in 2035, and, in 2050, to the lesser of 50% below 1990 levels and 70% below projected emissions in 2050. Oregon House Bill 3543, enacted in 2007, caps statewide emissions at 10% below 1990 levels in 2020 and at 75% below 1990 levels in 2050.

⁷ California's Senate Bill (SB) 1368, enacted in 2006, prohibits the state's utilities from taking new ownership interest in, or signing new contracts with a term of five or more years for, baseload generation with a carbon dioxide emission rate exceeding that of a combined-cycle natural gas unit. Washington's ESSB 6001, adopted in 2007, includes essentially the same set of provisions.

⁸ Pursuant to Oregon House Bill 3283, enacted in 1997, the Oregon Energy Facility Siting Council requires that new baseload gas-fired generation and new non-baseload generation mitigate all projection CO₂ emissions in excess of what would be produced by a plant with an emission rate of 675 lbs/MWh (approximately 15-20% below the emission rate of the most efficient CCGT) operating 8760 hours per year for 30 years. Applicants for site certificates can mitigate their excess CO₂ emissions through cogeneration, by implementing mitigation projects directly or through a third party, or by providing an up-front payment (currently set at \$1.27 per short ton of CO₂) to

country are also developing significant policies and regulations to reduce greenhouse gas emissions.

Finally, of the eleven western states, only three (Idaho, Wyoming, and Utah) have not adopted a state RPS. Of the remaining eight, including California, RPS targets are only expected to get become more stringent over the next two decades. The possibility also exists that a federal RPS may be adopted within the next five years.

As a consequence, PacifiCorp does not consider contract shuffling under a load-based program to be a significant threat. Regionally, with the creation of the Western Climate Initiative and increased Congressional activity, western utilities are weighing the financial risks of owning or overly relying on electricity generated from higher carbon fuels. That, coupled with aggressive RPS requirements within most of the western states, makes it unlikely that significant amounts of contract shuffling would occur or allowed within a subsequent prudence review. Until a utility's GHG regulatory landscape becomes clearer, and with state RPS requirements only becoming more challenging, it is unlikely any western utility or their regulators will encourage contract shuffling which could leave their ratepayers at higher financial risk over the long term or the utility at risk of not receiving cost recovery.

In the case of PacifiCorp, its utility-owned and contracted for sources of electricity are considered "system" resources; shared among the six states in which PacifiCorp offers retail electricity service. With California and Washington passing legislation enacting greenhouse gas emissions performance standards, a new coal resource could not be built by the company and designated as a system resource. Instead, if such a plant were built, its costs would be assigned on a situs basis to the State(s) willing to approve cost recovery. Similarly, in order for an existing system resource to be removed or retired from the shared portfolio, presumably to reduce the emissions associated with system power, doing so would likewise require the review and consent of the six state utility commissions. If in the future the states PacifiCorp serves agree

the Climate Trust, a designated third-party provider of mitigation projects. Washington's House Bill 3141, enacted in 2004, is similar to the Oregon law, except that it is applicable to all baseload plants regardless of fuel source, and requires all projects to mitigate a flat 20% of projected CO₂ emissions. Among the set of mitigation options, applicants can pay a mitigation fee of \$1.60 per metric ton CO₂.

to changes proposed by PacifiCorp to its portfolio of existing system resources, PacifiCorp does not believe such changes can be construed as contract shuffling.

Question No. 6: 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?

Unlike most other California utilities, PacifiCorp still owns the majority of its generation and contracts for power from primarily known sources. PacifiCorp currently uses contracts and settlements data to determine emission imputed on purchased power, but ultimately, supports 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. Tracking systems for multi-jurisdictional utilities is complicated by the need to accommodate inter-jurisdictional cost allocation methodologies (accompanied by the allocation of carbon liability) employed by multi-jurisdictional utilities who serve different states.

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

It is unclear whether a TEAC system would accommodate inter-jurisdictional cost allocation methodologies (and similarly the allocation of carbon liability) employed by multi-jurisdictional utilities who serve different states.

Question No. 8: Do you view a source-based approach as compliant with Assembly Bill (AB) 32? Please support your answer. The threat of leakage can be viewed over two time horizons: short-term and long-term.

AB 32 specifically states that regulators must consider the GHG impact of electricity imports. Accordingly, some other regulatory mechanism, such as a carbon tax (in lieu of a load-based cap), would have to be deployed to deal with imports that would operate in

parallel to a source-based cap-and trade system. Over the long term, the threat of leakage should diminish as either a regional or national program emerges. To accommodate multiple jurisdictions, it is more likely than not it will follow the more traditional source-based cap-and-trade system. All national cap-and-trade proposals to date rely largely on a source-based cap-and-trade system.

Question No. 9: **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.)?**

Under a source-based cap-and-trade system, some other regulatory mechanism, such as a carbon tax (in lieu of a load-based cap), could be deployed to deal with imports that would operate in parallel. Also, the newly promulgated GHG emissions performance standards effectively regulate new long term financial commitments for high capacity factor facilities located outside the state.

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

PacifiCorp anticipates a longer term shift of renewables production to regions outside of California as regional transmission projects move forward. Also, please see responses to questions 8 and 9.

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

Please see responses to questions 2 and 9. Possibilities include those identified as potential sources of additional reductions articulated within the California Public Utilities

Commission staff workpaper “Greenhouse Gas Emissions Reduction Measures For the Electricity and Natural Gas Sectors Under Consideration as Part of R.06-04-009” beginning at page 6 through 11, specifically:

- * Additional energy efficiency (beyond the currently targeted levels)
- * Increased renewables (beyond currently targeted levels)
- * Increased Combined Heat and Power (CHP)
- * Environmental Dispatch
- * Repowering and New Build with Low Carbon Technologies
- * Increased conventional non-carbon resources (i.e., hydro, nuclear)

PacifiCorp, however, would place more emphasis on achieving broad commercial deployment of CCS technology as a critical component of achieving long-term reductions in greenhouse gas emissions for all types of fossil fuels (i.e., coal, natural gas, and biomass). CCS refers to the separation (capture) of carbon dioxide from industrial and power generation sources, and transport to storage locations (via pipelines) for long term storage within deep geological formations (reservoirs).

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

To the extent a source-based system did cover California utility-owned facilities located outside of California, in the case of multi-jurisdictional utilities, the reach of the regulatory authority would need to be limited to only California’s share of the facility as defined by the appropriate allocation methodology.

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

A strengthened EPS could assist in reducing emissions due to California imports

if applied to additional types of financial commitments. However, a strengthened EPS may also have the unintended consequence of reducing available supply of electricity in California, either from in-state or out-of-state generation if not even state-of-the-art natural gas-fired generation could meet the more stringent standard. PacifiCorp does not currently have a recommended change.

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

The paper accurately reflects the circumstance PacifiCorp would find itself in under a deliverer/first seller program (i.e., essentially regulated akin to a load-based program) and would be responsible for reporting the emissions for all of its sources of electricity. Unlike most other California utilities, PacifiCorp still owns the majority of its generation and contracts for power from primarily known sources. However, the risk of contract shuffling discussed within the paper is likely to be overstated for the reasons articulated within the response to question 5. PacifiCorp also disagrees with the paper and believes California could allocate GHG emissions allowances freely to existing emitters based upon historic emissions, however, PacifiCorp also acknowledges that auctioning the allowances may be reasonable provided the revenues are returned to load-serving entities in order to avoid customer rate shock.

Question No. 16: Please describe in detail your view of how a point of regulation would be the electricity generators for in-state generation and the retail providers for imported power would work.

Even if California were to adopt a hybrid type of regulation, SMJUs, such as PacifiCorp, would still need to be regulated according to the load-based approach. The reason being, unlike most other California investor-owned utilities, PacifiCorp is a vertically-integrated utility owning approximately 80 percent of its generation portfolio, most of which is located outside the state and none of its in-state generation coming from a fossil-fueled facility. This being the case, we would defer to other parties to more precisely describe how a hybrid type of

regulation would work.

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

Please see response to question 16.

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

Please see response to question 16.

Question No. 23a: How could emission reduction obligations be met if there is no cap-and-trade system for the electricity sector?

Similar to the current energy efficiency and RPS programs, the Commission could establish utility-specific emissions reduction targets. However, PacifiCorp would still recommend that such a regulatory approach be designed with carbon-equivalent savings as the unifying principle. Although opportunities that are derived from outside of the utilities operations could not be pursued via trading (with the possible exception of carbon offsets), such a unifying principle would allow the utility to prioritize its own opportunities based upon cost effectiveness.

Question No. 23b: How would increased programmatic goals impact rates?

Please see answer to question 23a. Also, the impact on customer's rates would depend on the assigned cap, the accompanying schedule and rate of decline, as well as a utility's emission reduction opportunity supply curves.

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

Equivalent emissions reductions or "carbon offsets" created outside of a utility's operations is a flexible compliance mechanism that could be integrated into a non-market based GHG emission reduction approach. Similarly, valuing of early action, in advance of state or federal carbon regulation, would accelerate early carbon emissions reduction investments. A

perverse result of the current uncertainty over carbon regulation is a delay in the development of cutting edge initiatives that could be overcome with timely and targeted policy intervention. California should consider creating a banking mechanism, with clear underlying property rights attributable to the entity initiating early action, to allow value to be realized from carbon reductions resulting from that early action.

A uniform structure for quantifying carbon equivalent, establishing how it will be credited, certified and tracked, as well as defining a process to bank the credits, should be established to appropriately address the risk and reward of emission reductions. This action would supplement the numerous issues related to designing the ultimate carbon control regime. By clearly defining a process by which a risk-taking entity can receive future rewards under a carbon-control regime (while the environment benefits from emissions reductions that occur much earlier), California can liberate early action as well as provide a basis for liquidity in any future credit markets that may emerge. A stable set of early incentives for carbon-saving investment needs to be established in the United States. The combination of a banking system with clear underlying property rights will enable private entities to act on the basis of their own assessment of the future value of carbon credits.

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

Please see response to question 26.

Question No. 29a: **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.**

The combination of utility-owned generating resources and resources providing contracted for power located throughout the western United States, coupled with load-serving

responsibilities and multi-state cost structures, puts SMJUs in the complicated position of having to equitably assign the costs of system energy, including emissions, to each state's retail load. Alternative rules should be developed for SMJUs to address their complicated position in the western energy market. Given these unique circumstances and peculiarities of SMJUs, it is not disputed that under either the deliverer/first seller or the hybrid approach, PacifiCorp should be regulated according to the load-based approach.

Question 29b. **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.**

Please see response to question 29a. The Commission has routinely stated it prefers a "simpler is better" approach. It has opted for simplicity where it can, unless there were reasons or details that require complexity. The load-based approach is preferable. The point of regulation would be placed upon California electricity load-serving entities. Within California, there are currently five investor-owned utilities, approximately twenty-six municipal electric utilities, three rural cooperatives, approximately seventeen federal and state agencies and irrigation districts which could be considered electric utilities⁹ and approximately seventeen registered electric service providers.¹⁰ That equates to less than seventy California entities that could be regulated under a load-based approach. A California load-based approach would be an adequate means for regulating GHG emissions until such time it is replaced either by a regional or national source-based program.

III. CONCLUSION

PacifiCorp appreciates the opportunity to provide comments addressing issues

⁹ See, California Energy Commission website (<http://www.energy.ca.gov/electricity/utilities.html>)

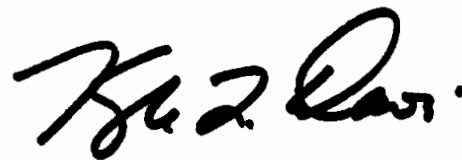
¹⁰ See, California Public Utilities Commission website (http://www.cpuc.ca.gov/published/ESP_Lists/esp_udc.htm)

related to the type and point of regulation to be used to reduce GHG emissions in the electricity sector. For all the foregoing reasons, PacifiCorp recommends that the Joint Staff pursue a load-based approach and in the alternative, consider developing a load-based regulation exclusively for SMJUs and their unique circumstances.

Dated: December 3, 2007

Respectfully submitted,

By

A handwritten signature in black ink, appearing to read "Kyle L. Davis".

Kyle L. Davis
Manager of Environmental Policy &
Strategy PacifiCorp
825 NE Multnomah
Portland, OR 97232
(503) 813-6601 Phone
(503) 813-7247 Fax
E-Mail: Kyle.L.Davis@PacifiCorp.com

CERTIFICATE OF SERVICE

I hereby certify that on this 3rd day of December, 2007, I caused to be served, a true and correct copy of the foregoing

**COMMENTS OF PACIFICORP (U-901) ON TYPE
AND POINT OF REGULATION ISSUES**

to be served on the parties on the attached service list via Electronic Mail or U.S. Mail and Overnight delivery to the parties below:

Commissioner Michael R. Peevey
California Public Utilities Commission
State Building, Fifth Floor
505 Van Ness Avenue
San Francisco, California 94102

Administrative Law Judge Jonathan Lakritz
California Public Utilities Commission
505 Van Ness Avenue
San Francisco, California 94102

Administrative Law Judge Charlotte F. Terkeurst
California Public Utilities Commission
505 Van Ness Avenue
San Francisco, California 94102

Executed this 3rd day of December 2007


Debbie DePetrìs
Supervisor, Regulatory Administration

Cindy Adams
Covanta Energy Corporation
40 Lane Road
Fairfield, NJ 7004

Steven Huhman
Morgan Stanley Capital Group Inc.
2000 Westchester Avenue
Purchase, NY 10577

Keith R. Mccrea
Sutherland, Asbill & Brennan, LLP
1275 Pennsylvania Ave., N.W.
Washington, DC 20004-2415

Catherine M. Krupka
Mcdermott Will and Emery LLP
600 Thirteen Street, NW
Washington, DC 20005

Cathy S. Woollums
MidAmerican Energy Holdings Company
106 East Second Street
Davenport, IA 52801

Kevin Boudreaux
Calpine Power America-CA, LLC
717 Texas Avenue, Suite 1000
Houston, TX 77002

E.J. Wright
Occidental Power Services, Inc.
5 Greenway Plaza, Suite 110
Houston, TX 77046

Timothy R. Odil
Mckenna Long & Aldridge LLP
1875 Lawrence Street, Suite 200
Denver, CO 80202

Jenine Schenk
Aps Energy Services
400 E. Van Buren Street, Suite 750
Phoenix, AZ 85004

Steven S. Schleimer
Barclays Bank, Plc
200 Park Avenue, Fifth Floor
New York, NY 10166

Rick C. Noger
Praxair Plainfield, Inc.
2711 Centerville Road, Suite 400
Wilmington, DE 19808

Adam J. Katz
Mcdermott Will & Emery LLP
600 13th Street, Nw.
Washington, DC 20005

Kyle D. Boudreaux
Fpl Group
700 Universe Blvd., Jes/Jb
Juno Beach, FL 33408

Cynthia A. Fonner
Constellation Energy Group Inc
550 W. Washington St, Ste 300
Chicago, IL 60661

Thomas Dill
Lodi Gas Storage, L.L.C.
1021 Main St Ste 1500
Houston, TX 77002-6509

Paul M. Seby
Mckenna Long & Aldridge LLP
1875 Lawrence Street, Suite 200
Denver, CO 80202

Stephen G. Koerner, Esq.
El Paso Corporation
2 North Nevada Avenue
Colorado Springs, CO 80903

John B. Weldon, Jr.
Salmon, Lewis & Weldon, P.L.C.
2850 East Camelback Road, Suite 200
Phoenix, AZ 85016

Kelly Barr
Salt River Project
Po Box 52025, Pab 221
Phoenix, AZ 85072-2025

Steven S. Michel
Western Resource AdvocaTates
2025 Senda De Andres
Santa Fe, NM 87501

Lorraine Paskett
La Dept. Of Water & Power
111 N. Howard St., Room 1536
Los Angeles, CA 90012

Sid Newsom
Southern California Gas Company
555 West 5th Street
Los Angeles, CA 90051

Curtis L. Kebler
J. Aron & Company
2121 Avenue Of The Stars
Los Angeles, CA 90067

Gregory Koiser
Constellation New Energy, Inc.
350 South Grand Avenue, Suite 3800
Los Angeles, CA 90071

Michael Mazur
3 Phases Renewables, LLC
2100 Sepulveda Blvd., Suite 37
Manhattan Beach, CA 90266

Tiffany Rau
CARson Hydrogen Power Project LLC
One World Trade Center, Suite 1600
Long Beach, CA 90831-1600

Richard Helgeson
Southern California Public Power Authority
225 S. Lake Ave., Suite 1250
Pasadena, CA 91101

Robert R. Taylor
Agricultural Improvement And Power Dist.
1600 North Priest Drive, Pab221
Tempe, AZ 85281

Roger C. Montgomery
Southwest Gas Corporation
Po Box 98510
Las Vegas, NV 89193-8510

Ronald F. Deaton
Los Angeles Department Of Water & Power
111 North Hope Street, Room 1550
Los Angeles, CA 90012

David L. Huard
Manatt, Phelps & Phillips, LLP
11355 West Olympic Boulevard
Los Angeles, CA 90064

Dennis M.P. Ehling
Kirkpatrick & Lockhart Nicholson Graham
10100 Santa Monica Blvd., 7th Floor
Los Angeles, CA 90067

Norman A. Pedersen
Hanna and Morton, LLP
444 South Flower Street, No. 1500
Los Angeles, CA 90071

Vitaly Lee
Aes Alamitos, LLC
690 N. Studebaker Road
Long Beach, CA 90803

Gregory Klatt
Douglass & Liddell
411 E. Huntington Drive, Ste. 107-356
ArCADia, CA 91006

Daniel W. Douglass
Douglass & Liddell
21700 Oxnard Street, Suite 1030
Woodland Hills, CA 91367

Paul Delaney
American Utility Network (A.U.N.)
10705 Deer Canyon Drive
Alta Loma, CA 91737

Akbar Jazayeiri
Southern California Edison Company
2244 Walnut Grove Ave. Room 390
Rosemead, CA 91770

Cathy A. Karlstad
Southern California Edison Company
2244 Walnut Grove Ave.
Rosemead, CA 91770

Ronald Moore
Golden State Water/Bear Valley Electric
630 East Foothill Boulevard
San Dimas, CA 91773

Aimee M. Smith
Sempra Energy
101 Ash Street Hq13
San Diego, CA 92101

Alvin Pak
Sempra Global Enterprises
101 Ash Street
San Diego, CA 92101

Daniel A. King
Sempra Energy
101 Ash Street, Hq 12
San Diego, CA 92101

Theodore Roberts
Sempra Global
101 Ash Street, Hq 13d
San Diego, CA 92101-3017

Marcie Milner
Shell Trading Gas & Power Company
4445 Eastgate Mall, Suite 100
San Diego, CA 92121

Barry R. Wallerstein
South Coast Aqmd
21865 Copley Drive
Diamond Bar, CA 91765-4182

Annette Gilliam
Southern California Edison Company
2244 Walnut Grove Avenue
Rosemead, CA 91770

Laura I. Genao
Southern California Edison
2244 Walnut Grove Avenue
Rosemead, CA 91770

Don Wood
Pacific Energy Policy Center
4539 Lee Avenue
La Mesa, CA 91941

Allen K. Trial
San Diego Gas & Electric Company
101 Ash Street
San Diego, CA 92101

Dan Hecht
Sempra Energy
101 Ash Street
San Diego, CA 92101

Symone Vongdeuane
Sempra Energy Solutions
101 Ash Street, Hq09
San Diego, CA 92101-3017

Donald C. Liddell, P.C.
Douglass & Liddell
2928 2nd Avenue
San Diego, CA 92103

Reid A. Winthrop
Pilot Power Group, Inc.
8910 University Center Lane, Suite 520
San Diego, CA 92122

Thomas Darton
Pilot Power Group, Inc.
8910 University Center Lane
San Diego, CA 92122

Gloria Britton
Anza Electric Cooperative, Inc.
Po Box 391909
Anza, CA 92539

Tamlyn M. Hunt
Community Environmental Council
26 W. Anapamu St., 2nd Floor
Santa Barbara, CA 93101

John P. Hughes
Southern California Edison Company
601 Van Ness Avenue, Ste. 2040
San Francisco, CA 94102

Marcel Hawiger
The Utility Reform Network
711 Van Ness Avenue, Suite 350
San Francisco, CA 94102

Diana L. Lee
Calif Public Utilities Commission
505 Van Ness Avenue
San Francisco, CA 94102-3214

Audrey Chang
Natural Resources Defense Council
111 Sutter Street, 20th Floor
San Francisco, CA 94104

Evelyn Kahl
Alcantar & Kahl, LLP
120 Montgomery Street, Suite 2200
San Francisco, CA 94104

Michael P. Alcantar
Alcantar & Kahl, LLP
120 Montgomery Street, Suite 2200
San Francisco, CA 94104

Steve Rahon
San Diego Gas & Electric Company
8330 Century Park Court, Cp32c
San Diego, CA 92123-1548

Lynelle Lund
Commerce Energy, Inc.
600 Anton Blvd., Suite 2000
Costa Mesa, CA 92626

Jeanne M. Sole
City And County Of San Francisco
1 Dr. Carlton B. Goodlett Place, Rm. 234
San Francisco, CA 94102

Lad Lorenz
Sempra Utilities
601 Van Ness Avenue, Suite 2060
San Francisco, CA 94102

Nina Suetake
The Utility Reform Network
711 Van Ness Ave., Ste. 350
San Francisco, CA 94102

F. Jackson Stoddard
Calif Public Utilities Commission
505 Van Ness Avenue
San Francisco, CA 94102-3214

Donald Brookhyser
Alcantar & Kahl
120 Montgomery Street
San Francisco, CA 94104

Kristin Grenfell
Natural Resources Defense Council
111 Sutter Street, 20th Floor
San Francisco, CA 94104

Seema Srinivasan
Alcantar & Kahl, LLP
120 Montgomery Street, Suite 2200
San Francisco, CA 94104

William H. Chen
Constellation New Energy, Inc.
One Market Street
San Francisco, CA 94105

Edward G Poole
Anderson Donovan & Poole
601 California Street Suite 1300
San Francisco, CA 94108

Brian T. Cragg
Goodin, Macbride, Squeri, Ritchie & Day
505 Sansome Street, Suite 900
San Francisco, CA 94111

Jeanne B. Armstrong
Goodin Macbride Squeri Day & Lamprey
505 Sansome Street, Suite 900
San Francisco, CA 94111

Lisa A. Cottle
Winston & Strawn LLP
101 California Street, 39th Floor
San Francisco, CA 94111

Vidhya Prabhakaran
Goodin, Macbride, Squeri, Day, Lamprey
505 Sansome Street, Suite 900
San Francisco, CA 94111

Jeffrey P. Gray
Davis Wright Tremaine, LLP
505 Montgomery Street, Suite 800
San Francisco, CA 94111-6533

Sara Steck Myers
122 28th Avenue
San Francisco, CA 94121

Andrew L. Harris
Pacific Gas & Electric Company
Po Box 770000 Mail Code B9a
San Francisco, CA 94177

Brian K. Cherry
Pacific Gas And Electric Company
77 Beale Street, B10c
San Francisco, CA 94106

Ann G. Grimaldi
Mckenna Long & Aldridge LLP
101 California Street, 41st Floor
San Francisco, CA 94111

James D. Squeri
Goodin Macbride Squeri Ritchie & Day LLP
505 Sansome Street, Ste 900
San Francisco, CA 94111

Karen Bowen
Winston & Strawn LLP
101 California Street
San Francisco, CA 94111

Sean P. Beatty
Cooper, White & Cooper, LLP
201 California St., 17th Floor
San Francisco, CA 94111

Joseph M. Karp
Winston & Strawn LLP
101 California Street
San Francisco, CA 94111-5802

Christopher J. Warner
Pacific Gas And Electric Company
77 Beale Street, Po Box 7442
San Francisco, CA 94120-7442

Lars Kvale
Center For Resource Solutions
Po Box 39512
San Francisco, CA 94129

Andrea Weller
Strategic Energy
3130 D Balfour Rd., Suite 290
Brentwood, CA 94513

Jennifer Chamberlin
Strategic Energy, LLC
2633 Wellington Ct.
Clyde, CA 94520

Kerry Hattevik
Mirant Corporation
696 West 10th Street
Pittsburg, CA 94565

William H. Booth
Law Offices Of William H. Booth
1500 Newell Avenue, 5th Floor
Walnut Creek, CA 94596

Janill Richards
California Attorney General's Office
1515 Clay Street, 20th Floor
Oakland, CA 94702

Gregg Morris
Green Power Institute
2039 Shattuck Avenue, Ste 402
Berkeley, CA 94704

Kenneth C. Johnson
Kenneth Carlisle Johnson
2502 Robertson Rd
Santa Clara, CA 95051

C. Susie Berlin
McCarthy & Berlin, LLP
100 Park Center Plaza, Suite 501
San Jose, CA 95113

Joy A. Warren
Modesto Irrigation District
1231 11th Street
Modesto, CA 95354

John Jensen
Mountain Utilities
Po Box 205
Kirkwood, CA 95646

Beth Vaughan
California Cogeneration Council
4391 N. Marsh Elder Court
Concord, CA 94521

Avis Kowalewski
Calpine Corporation
3875 Hopyard Road, Suite 345
Pleasanton, CA 94588

J. Andrew Hoerner
Redefining Progress
1904 Franklin Street
Oakland, CA 94612

Cliff Chen
Union Of Concerned Scientist
2397 Shattuck Avenue, Ste 203
Berkeley, CA 94704

R. Thomas Beach
Crossborder Energy
2560 Ninth Street, Suite 213a
Berkeley, CA 94710-2557

Barry F. McCarthy
McCarthy & Berlin, LLP
100 Park Center Plaza, Suite 501
San Jose, CA 95113

Mike Lamond
Alpine Natural Gas Operating CO. #1 LLC
Po Box 550
Valley Springs, CA 95252

Udi Helman
California Independent Sys. Oper. Corp
151 Blue Ravine Road
Folsom, CA 95630

Mary Lynch
Constellation Energy Commodities Group
2377 Gold Medal Way, Suite 100
Gold River, CA 95670

Leonard Devanna
Clean Energy Systems, Inc.
11330 Sunco Drive, Suite A
Rancho Cordova, CA 95742

Bruce McLaughlin
Braun & Blaising, P.C.
915 L Street, Suite 1270
Sacramento, CA 95814

Jane E. Luckhardt
Downey Brand LLP
555 Capitol Mall, 10th Floor
Sacramento, CA 95814

Virgil Welch
Environmental Defense
1107 9th Street, Suite 540
Sacramento, CA 95814

Downey Brand
Downey Brand
555 Capitol Mall, 10th Floor
Sacramento, CA 95814-4686

Steven M. Cohn
Sacramento Municipal Utility District
Po Box 15830
Sacramento, CA 95852-1830

Dan Silveria
Surprise Valley Electric Corporation
Po Box 691
Alturas, CA 96101

Donald Brookhyser
Alcantar & Kahl
1300 Sw Fifth Ave., Suite 1750
Portland, OR 97210

Kyle L. Davis
PacifiCorp
825 Ne Multnomah St., Suite 2000
Portland, OR 97232

Andrew Brown
Ellison, Schneider & Harris, LLP
2015 H Street
Sacramento, CA 95811

Greggory L. Wheatland
Ellison, Schneider & Harris, LLP
2015 H Street
Sacramento, CA 95814

Jeffery D. Harris
Ellison, Schneider & Harris LLP
2015 H Street
Sacramento, CA 95814

William W. Westerfield, 111
Ellison, Schneider & Harris L.L.P.
2015 H Street
Sacramento, CA 95814

Raymond J. Czahar, C.P.A.
West Coast Gas Company
9203 Beatty Drive
Sacramento, CA 95826

Ann L. Trowbridge
Day Carter & Murphy, LLP
3620 American River Drive, Suite 205
Sacramento, CA 95864

Jessica Nelson
Plumas-Sierra Rural Electric Co-Op
73233 State Route 70, Ste A
PORTOLA, CA 96122-7064

Cynthia Schultz
Pacific Power And Light Company
825 N.E. Multnomah
Portland, OR 97232

Ryan Flynn
PacifiCorp
825 Ne Multnomah Street, 18th Floor
Portland, OR 97232

Ian Carter
International Emissions Trading Assn.
350 Sparks Street, Ste. 809
Ottawa, ON K1r 7s8
Canada
Brian M. Jones
M. J. Bradley & Associates, Inc.
47 Junction Square Drive
Concord, MA 1742

Kenneth A. Colburn
Symbiltic Strategies, LLC
26 Winton Road
Meredith, NH 3253

Kathryn Wig
Nrg Energy, Inc.
211 Carnegie Center
Princeton, NY 8540

George Hopley
Barclays CApiTal
200 Park Avenue
New York, NY 10166

Dallas Burtraw
1616 P Street, Nw
Washington, DC 20036

Andrew BradfORd
Fellon-McCORd & Associates
9960 Corporate Campus Drive
Louisville, KY 40223

Ralph E. Dennis
Fellon-McCord & Associates
9960 Corporate Campus Drive, Ste 2000
Louisville, KY 40223

Barry Rabe
1427 Ross Street
Plymouth, MI 48170

Jason Dubchak
Wild Goose Storage LLC
607 8th Avenue S.W.
Calgary, Ab T2p Oa7
Canada
Matthew Most
Edison Mission Marketing & Trading, Inc.
160 Federal Street
Boston, MA 02110-1776

Richard Cowart
Regulatory Assistance Project
50 State Street, Suite 3
Montpelier, VT 5602

Sakis Asteriadis
Apx Inc
1270 Fifth Ave., Suite 15r
New York, NY 10029

Elizabeth Zelljadt
1725 I Street, N.W. Suite 300
Washington, DC 20006

Veronique Bugnion
Point Carbon
205 Severn River Rd
Severna Park, MD 21146

Gary Barch
Fellon-McCord & Associates, Inc.
9960 Corporate Campus Drive
Louisville, KY 40223

Samara Mindel
Fellon-McCord & Associates
9960 Corporate Campus Drive, Suite 2000
Louisville, KY 40223

Brian Potts
Foley & Lardner
150 East Gilman Street
Madison, WI 53701-1497

James W. Keating
Bp America, Inc.
150 W. Warrenville Rd.
Naperville, IL 60563

Trent A. Carlson
Reliant Energy
1000 Main Street
Houston, TX 77001

Jeanne Zaiontz
Bp Energy Company
501 Westlake Park Blvd, Rm. 4328
Houston, TX 77079

Fiji George
El Paso Corporation
Po Box 2511
Houston, TX 77252

Frank Stern
Summit Blue Consulting
1722 14th Street, Suite 230
Boulder, CO 80302

Nicholas Lenssen
Energy Insights
1750 14th Street, Suite 200
Boulder, CO 80302

Wayne Tomlinson
El Paso Corporation
2 North Nevada Avenue
Colorado Springs, CO 80903

Sandra Ely
New Mexico Environment Department
1190 St Francis Drive
Santa Fe, NM 87501

Douglas Brooks
Sierra Pacific Power Company
6226 West Sahara Avenue
Las Vegas, NV 89151

James Ross
Rcs, Inc.
500 Chesterfield Center, Suite 320
Chesterfield, MO 63017

Gary Hinnners
Reliant Energy, Inc.
Po Box 148
Houston, TX 77001-0148

Julie L. Martin
North America Gas And Power
501 Westlake Park Blvd.
Houston, TX 77079

Ed Chiang
Element Markets, LLC
One Sugar Creek Center Blvd., Suite 250
Sugar Land, TX 77478

Nadav Enbar
Energy Insights
1750 14th Street, Suite 200
Boulder, CO 80302

Elizabeth Baker
Summit Blue Consulting
1722 14th Street, Suite 230
Boulder, CO 80304

Kevin J. Simonsen
Energy Management Services
646 East Third Avenue
Durango, CO 81301

Brian Mcquown
Reliant Energy
7251 Amigo St., Suite 120
Las Vegas, NV 89119

Anita Hart
Southwest Gas Corporation
5241 Spring Mountain Road
Las Vegas, NV 89193

Randy Sable
Southwest Gas Corporation
5241 Spring Mountain Road
Las Vegas, NV 89193

Bill Schrand
Southwest Gas Corporation
Po Box 98510
Las Vegas, NV 89193-8510

Jj Prucnal
Southwest Gas Corporation
Po Box 98510
Las Vegas, NV 89193-8510

Sandra Carolina
Southwest Gas Corporation
Po Box 98510
Las Vegas, NV 89193-8510

Cynthia Mitchell
Energy Economics, Inc.
530 Colgate Court
Reno, NV 89503

Christopher A. Hilen
Sierra Pacific Power Company
6100 Neil Road
Reno, NV 89511

Elena Mello
Sierra Pacific Power Company
6100 Neil Road
Reno, NV 89520

Trevor Dillard
Sierra Pacific Power Company
6100 Neil Road, Ms S4a50
Reno, NV 89520

Darrell Soyars
Sierra Pacific Resources
6100 Neil Road
Reno, NV 89520-0024

Joseph Greco
CAithness Energy, LLC.
9590 Prototype Court, Suite 200
Reno, NV 89521

Leilani Johnson Kowal
Los Angeles Dept. Of Water And Power
111 N. Hope Street, Room 1050
Los Angeles, CA 90012

Randy S. Howard
Los Angeles Dept. Of Water And Power
111 North Hope Street, Room 921
Los Angeles, CA 90012

Robert K. Rozanski
Los Angeles Dept Of Water And Power
111 North Hope Street, Room 1520
Los Angeles, CA 90012

Robert L. Pettinato
Los Angeles Department Of Water & Power
111 North Hope Street, Suite 1151
Los Angeles, CA 90012

Hugh Yao
Southern California Gas Company
555 W. 5th St, Gt22g2
Los Angeles, CA 90013

Rasha Prince
Southern California Gas Company
555 West 5th Street, Gt14d6
Los Angeles, CA 90013

Randall W. Keen
Manatt Phelps & Phillips, LLP
11355 West Olympic Blvd.
Los Angeles, CA 90064

S. Nancy Whang
Manatt, Phelps & Phillips, LLP
11355 West Olympic Blvd.
Los Angeles, CA 90064

Peter Jazayeri
Stroock & Stroock & Lavan LLP
2029 Century Park East, Suite 1800
Los Angeles, CA 90067

Derek Markolf
California Climate Action Registry
515 S. Flower Street, Suite 1640
Los Angeles, CA 90071

David Nemtzow
1254 9th Street, No. 6
Santa Monica, CA 90401

Harvey Eder
Public Solar Power Coalition
1218 12th St., 25
Santa Monica, CA 90401

Steve Endo
Pasadena Department Of Water & Power
45 East Glenarm Street
Pasadena, CA 91105

Steven G. Lins
Glendale Water And Power
613 East Broadway, Suite 220
Glendale, CA 91206-4394

Tom Hamilton
Energy Concierge Services
321 Mesa Lila Rd
Glendale, CA 91208

Bruno Jeider
Burbank Water & Power
164 West Magnolia Blvd.
Burbank, CA 91502

Richard J. Morillo
City Of Burbank
215 E. Olive Avenue
Burbank, CA 91502

Roger Pelote
Williams Power Company
12736 Califa Street
Valley Village, CA 91607

Aimee Barnes
Ecosecurities
206 W. Bonita Avenue
Claremont, CA 91711

Case Administration
Southern California Edison Company
2244 Walnut Grove Ave., Rm. 370
Rosemead, CA 91770

Tim Hemig
Nrg Energy, Inc.
1819 Aston Avenue, Suite 105
Carlsbad, CA 92008

Barry Lovell
15708 Pomerado Rd., Suite 203
Poway, CA 92064

Aldyn Hoekstra
Pace Global Energy Services
420 West Broadway, 4th Floor
San Diego, CA 92101

Yvonne Gross
Semptra Energy
101 Ash Street
San Diego, CA 92103

John Laun
Apogee Interactive, Inc.
1220 Rosecrans St., Suite 308
San Diego, CA 92106

Kim Kiener
504 CAtalina Blvd.
San Diego, CA 92106

Scott J. Anders
University Of San Diego School Of Law
5998 Alcala Park
San Diego, CA 92110

Joseph R. Kloberdanz
San Diego Gas & Electric
Po Box 1831
San Diego, CA 92112

Andrew McAllister
California Center For Sustainable Energy
8690 Balboa Ave., Suite 100
San Diego, CA 92123

Jack Burke
California Center For Sustainable Energy
8690 Balboa Ave., Suite 100
San Diego, CA 92123

Jennifer Porter
California Center For Sustainable Energy
8690 Balboa Avenue, Suite 100
San Diego, CA 92123

Sephra A. Ninow
California Center For Sustainable Energy
8690 Balboa Avenue, Suite 100
San Diego, CA 92123

Despina Niehaus
San Diego Gas And Electric Company
8330 Century Park Court, Cp32h
San Diego, CA 92123-1530

John W. Leslie
Luce, Forward, Hamilton & Scripps, LLP
11988 El Camino Real, Suite 200
San Diego, CA 92130

Orlando B. Foote, Iii
Horton, Knox, Carter & Foote
895 Broadway, Suite 101
El Centro, CA 92243

Elston K. Grubaugh
Imperial Irrigation District
333 East Barioni Blvd.
Imperial, CA 92251

Thomas McCabe
Edison Mission Energy
18101 Von Karman Ave., Suite 1700
Irvine, CA 92612

Jan Pepper
Clean Power Markets, Inc.
418 Bevenue Avenue
Los Altos, CA 94024

Gloria D. Smith
Adams, Broadwell, Joseph & Cardozo
601 Gateway Blvd., Suite 1000
South San Francisco, CA 94080

Marc D. Joseph
Adams Bradwell Joseph & Cardozo
601 Gateway Blvd. Ste 1000
South San Francisco, CA 94080

Diane I. Fellman
Fpl Energy Project Management, Inc.
234 Van Ness Avenue
San Francisco, CA 94102

Hayley Goodson
The Utility Reform Network
711 Van Ness Avenue, Suite 350
San Francisco, CA 94102

Michel Florio
711 Van Ness Ave., Ste. 350
San Francisco, CA 94102

Dan Adler
California Clean Energy Fund
5 Third Street, Suite 1125
San Francisco, CA 94103

Michael A. Hyams
San Francisco Public Utilities Comm
1155 Market St., 4th Floor
San Francisco, CA 94103

Norman J. Furuta
Federal Executive Agencies
1455 Market St., Suite 1744
San Francisco, CA 94103-1399

Annabelle Malins
British Consulate-General
One Sansome Street, Suite 850
San Francisco, CA 94104

Karen Terranova
Alcantar & Kahl, LLP
120 Montgomery Street, Ste 2200
San Francisco, CA 94104

Olof Bystrom
Cambridge Energy Research Associates
555 California Street, 3rd Floor
San Francisco, CA 94104

Sheryl Carter
Natural Resources Defense Council
111 Sutter Street, 20th Floor
San Francisco, CA 94104

Carmen E. Baskette
Enernoc
594 Howard St., Suite 400
San Francisco, CA 94105

James W. Tarnaghan
Duane Morris LLP
One Market, Spear Tower
San Francisco, CA 94105

Khurshid Khoja
Thelen Reid Brown Raysman & Steiner
101 Second Street, Suite 1800
San Francisco, CA 94105

Theresa Burke
San Francisco Puc
1155 Market Street, 4th Floor
San Francisco, CA 94103

Amber Mahone
Energy & Environmental Economics, Inc.
101 Montgomery Street, Suite 1600
San Francisco, CA 94104

Devra Wang
Natural Resources Defense Council
111 Sutter Street, 20th Floor
San Francisco, CA 94104

Nora Sheriff
Alcantar & Kahl, LLP
120 Montgomery Street, Suite 2200
San Francisco, CA 94104

Seth Hilton
Stoel Rives
111 Sutter St., Suite 700
San Francisco, CA 94104

Ashlee M. Bonds
Thelen Reid Brown Raysman & Steiner LLP
101 Second Street
San Francisco, CA 94105

Colin Petheram
Sbc California
140 New Montgomery St., Suite 1325
San Francisco, CA 94105

Kevin Fox
Wilson Sonsini Goodrich & Rosati
One Market Street, Spear Tower, 3300
San Francisco, CA 94105

Peter V. Allen
Thelen Reid Brown Raysman & Steiner
101 Second Street, Suite 1800
San Francisco, CA 94105

Sheridan J. Pauker
Wilson Sonsini Goodrich & Rosati
One Market St
San Francisco, CA 94105

Robert J. Reinhard
Morrison And Foerster
425 Market Street
San Francisco, CA 94105-2482

California Energy Markets
517-B Potrero Avenue
San Francisco, CA 94110

Howard V. Golub
Nixon Peabody LLP
2 Embarcadero Center, Ste. 2700
San Francisco, CA 94111

Janine L. Scancarelli
Folger, Levin & Kahn, LLP
275 Battery Street, 23rd Floor
San Francisco, CA 94111

Joseph F. Wiedman
Goodin Macbride Squeri Day & Lamprey LLP
505 Sansome Street, Suite 900
San Francisco, CA 94111

Martin A. Mattes
Nossaman, Guthner, Knox & Elliott, LLP
50 California Street, Suite 3400
San Francisco, CA 94111

Jen McGraw
Center For Neighborhood Technology
Po Box 14322
San Francisco, CA 94114

Lisa Weinzimer
Platts McGraw-Hill
695 Ninth Avenue, No. 2
San Francisco, CA 94118

Steven Moss
San Francisco Community Power Coop
2325 3rd Street, Suite 344
San Francisco, CA 94120

Shaun Ellis
2183 Union Street
San Francisco, CA 94123

Arno Harris
Recurrent Energy, Inc.
220 Halleck St., Suite 220
San Francisco, CA 94129

Bianca Bowman
Pacific Gas And Electric Company
Po Box 770000
San Francisco, CA 94177

Ed Lucha
Pacific Gas And Electric Company
Po Box 770000, Mail Code B9a
San Francisco, CA 94177

Grace Livingston-Nunley
Pacific Gas And Electric Company
Po Box 770000 Mail Code B9a
San Francisco, CA 94177

Jasmin Ansar
Pg&E
Po Box 770000
San Francisco, CA 94177

Jonathan Forrester
PG&E
Po Box 770000
San Francisco, CA 94177

Raymond Hung
PG&E
Po Box 770000 Mail Code B9a
San Francisco, CA 94177

Sebastien Csapo
Pacific Gas and Electric Company
Po Box 770000
San Francisco, CA 94177

Soumya Sastry
Pacific Gas and Electric Company
Po Box 770000
San Francisco, CA 94177

Stephanie La Shawn
Pacific Gas and Electric Company
Po Box 770000, Mail code B9a
San Francisco, CA 94177

Valerie J. Winn
Pacific Gas and Electric Company
Po Box 770000, B9a
San Francisco, CA 94177-0001

Karla Dailey
City Of Palo Alto
Box 10250
Palo Alto, CA 94303

Farrokh Albuyeh
Open Access Technology International Inc
1875 South Grant Street
San Mateo, CA 94402

Dean R. Tibbs
Advanced Energy Strategies, Inc.
1390 Willow Pass Road, Suite 610
ConcORd, CA 94520

Jeffrey L. Hahn
Covanta Energy Corporation
876 Mt. View Drive
Lafayette, CA 94549

Andrew J. Van Horn
Van HORn Consulting
12 Lind Court
ORinda, CA 94563

Joseph M. Paul
Dynergy, Inc.
4140 Dublin Blvd., Ste. 100
Dublin, CA 94568

Sue Kateley
California Solar Energy Industries Assn
Po Box 782
Rio Vista, CA 94571

Greg Blue
Enxco Development Corp
5000 Executive Parkway, Ste.140
San Ramon, CA 94583

Sarah Beserra
California Reports
39 CAstle Hill Court
Vallejo, CA 94591

Monica A. Schwebs, Esq.
Bingham Mccutchen LLP
1333 N. California Blvd., Suite 210
Walnut Creek, CA 94596

Peter W. Hanschen
Morrison & Foerster, LLP
101 Ygnacio Valley Road, Suite 450
Walnut Creek, CA 94596

Joseph Henri
31 Miramonte Road
Walnut Creek, CA 94597

Patricia Thompson
Summit Blue Consulting
2920 CAmino Diablo, Suite 210
Walnut Creek, CA 94597

William F. Dietrich
Dietrich Law
2977 Ygnacio Valley Road, 613
Walnut Creek, CA 94598-3535

Betty Seto
Kema, Inc.
492 Ninth Street, Suite 220
Oakland, CA 94607

Jody S. London
Jody London Consulting
Po Box 3629
Oakland, CA 94609

Mrw & Associates, Inc.
1814 Franklin Street, Suite 720
Oakland, CA 94612

Adam Briones
The Greenlining Institute
1918 University Avenue, 2nd Floor
Berkeley, CA 94704

Clyde Murley
1031 ORdway Street
Albany, CA 94706

Carla Peterman
Ucei
2547 Channing Way
Berkeley, CA 94720

Ryan Wiser
Berkeley Lab
One Cyclotron Road
Berkeley, CA 94720

Phillip J. Muller
Scd Energy Solutions
436 Nova Albion Way
San Rafael, CA 94903

Carl Pechman
Power Economics
901 Center Street
Santa Cruz, CA 95060

Gerald L. Lahr
Abag Power
101 Eighth Street
Oakland, CA 94607

Steven Schiller
Schiller Consulting, Inc.
111 Hillside Avenue
Piedmont, CA 94611

Reed V. Schmidt
Bartle Wells Associates
1889 AlCAtraz Avenue
Berkeley, CA 94703

Steve Kromer
3110 College Avenue, Apt 12
Berkeley, CA 94705

Brenda Lemay
Horizon Wind Energy
1600 Shattuck, Suite 222
Berkeley, CA 94709

Edward Vine
Lawrence Berkeley National Laboratory
Building 90r4000
Berkeley, CA 94720

Chris Marnay
1 Cyclotron Rd Ms 90r4000
Berkeley, CA 94720-8136

Rita Norton
Rita Norton And Associates, LLC
18700 Blythswood Drive,
Los Gatos, CA 95030

Mahlon Aldridge
Ecology Action
Po Box 1188
Santa Cruz, CA 95060

Richard Smith
Modesto Irrigation District
1231 11th Street
Modesto, CA 95352-4060

Thomas S. Kimball
Modesto Irrigation District
1231 11th Street
Modesto, CA 95354

Barbara R. Barkovich
Barkovich & Yap, Inc.
44810 Rosewood Terrace
Mendocino, CA 95460

Clark Bernier
Rlw Analytics
1055 Broadway, Suite G
Sonoma, CA 95476

Carolyn M. Kehrein
Energy Management Services
1505 Dunlap Court
Dixon, CA 95620-4208

Grant Rosenblum, Esq.
California Iso
151 Blue Ravine Road
Folsom, CA 95630

Robin Smutny-Jones
California Iso
151 Blue Ravine Road
Folsom, CA 95630

David Branchcomb
Branchcomb Associates, LLC
9360 Oaktree Lane
Orangeville, CA 95662

Kirby Dusel
Navigant Consulting, Inc.
3100 Zinfandel Drive, Suite 600
Rancho Cordova, CA 95670

Roger Van Hoy
Modesto Irrigation District
1231 11th Street
Modesto, CA 95354

Wes Monier
Turlock Irrigation District
333 East Canal Drive, Po Box 949
Turlock, CA 95381-0949

John R. Redding
Arcturus Energy Consulting
44810 Rosewood Terrace
Mendocino, CA 95460

Richard McCann, Ph.D
M. Cubed
2655 Portage Bay, Suite 3
Davis, CA 95616

California Iso
151 Blue Ravine Road
Folsom, CA 95630

Karen Edson
151 Blue Ravine Road
Folsom, CA 95630

Saeed Farrokhpay
Federal Energy Regulatory Commission
110 Blue Ravine Rd., Suite 107
Folsom, CA 95630

Kenny Swain
Navigant Consulting
3100 Zinfandel Drive, Suite 600
Rancho Cordova, CA 95670

Gordon Pickering
Navigant Consulting, Inc.
3100 Zinfandel Drive, Suite 600
Rancho Cordova, CA 95670-6078

Laurie Park
Navigant Consulting, Inc.
3100 Zinfandel Drive, Suite 600
Rancho Cordova, CA 95670-6078

Scott Tomashefsky
Northern California Power Agency
180 Cirby Way
Roseville, CA 95678-6420

Audra Hartmann
Dynergy Inc.
980 Ninth Street, Suite 1420
Sacramento, CA 95814

Curt Barry
717 K Street, Suite 503
Sacramento, CA 95814

Danielle Matthews Seperas
Calpine Corporation
1127 11th Street, Suite 242
Sacramento, CA 95814

Douglas K. Kerner
Ellison, Schneider & Harris, LLP
2015 H Street
Sacramento, CA 95814

Kassandra Gough
Calpine Corporation
1127 11th Street, Suite 242
Sacramento, CA 95814

Kevin Woodruff
Woodruff Expert Services
1100 K Street, Suite 204
Sacramento, CA 95814

Panama Bartholomy
California Energy Commission
1516 9th Street
Sacramento, CA 95814

David Reynolds
Northern California Power Agency
180 Cirby Way
Roseville, CA 95678-6420

Ellen Wolfe
Resero Consulting
9289 Shadow Brook Pl.
Granite Bay, CA 95746

Bob Lucas
Lucas Advocates
1121 L Street, Suite 407
Sacramento, CA 95814

Dan Skopec
Climate & Energy Consulting
1201 K Street Suite 970
Sacramento, CA 95814

David L. Modisette
California Electric Transp. Coalition
1015 K Street, Suite 200
Sacramento, CA 95814

Justin C. Wynne
Brau & Blaising, P.C.
915 L Street, Suite 1270
Sacramento, CA 95814

Kellie Smith
Senate Energy/Utilities & Communication
State Capitol, Room 4038
Sacramento, CA 95814

Michael Waugh
Air Resources Board
1001 10th Street
Sacramento, CA 95814

Patrick Stoner
Local Government Commission
1303 J Street, Suite 250
Sacramento, CA 95814

Rachel McMahon
Ceert
1100 11th Street, Suite 311
Sacramento, CA 95814

Steven A. Lipman
Steven Lipman Consulting
500 N. Street 1108
Sacramento, CA 95814

Webster Tasat
Air Resources Board
1001 I Street
Sacramento, CA 95814

Laurie Ten Hope
California Energy Commission
1516 9th Street, Ms-32
Sacramento, CA 95814-5512

Lynn Haug
Ellison, Schneider & Harris, LLP
2015 H Street
Sacramento, CA 95816

Bud Beebe
Sacramento Municipal Util Dist
6201 S Street
Sacramento, CA 95817-1899

Douglas Macmullen
CA Department Of Water Resources
3310 El Camino Ave., Room 356
Sacramento, CA 95821

Karen Lindh
Lindh & Associates
7909 Walerga Road, No. 112, Pmb 119
Antelope, CA 95843

Anne-Marie Madison
Transalta Energy Marketing Inc.
222 Sw Columbia Street, Ste 1105
Portland, OR 97201

Ryan Bernardo
Braun & Blaising, P.C.
915 L Street, Suite 1270
Sacramento, CA 95814

Steven Kelly
Independent Energy Producers
1215 K Street, Suite 900
Sacramento, CA 95814

Edward J. Tiedemann
Kronick, Moskovitz, Tiedemann & Girard
400 Capitol Mall, 27th Floor
Sacramento, CA 95814-4416

Joshua Bushinsky
Pew Center On Global Climate Change
2101 Wilson Blvd., Suite 550
Arlington, Va 95816

Obadiah Bartholomy
Sacramento Municipal Utility District
6201 S. Street
Sacramento, CA 95817

Balwant S. Purewal
Department Of Water Resources
3310 El Camino Ave., Ll-90
Sacramento, CA 95821

Karen NORene Mills
California Farm Bureau Federation
2300 River Plaza Drive
Sacramento, CA 95833

Elizabeth W. Hadley
City Of Redding
777 Cypress Avenue
Redding, CA 96001

Annie Stange
Alcantar & Kahl
1300 Sw Fifth Ave., Suite 1750
Portland, OR 97201

Elizabeth Westby
Alcantar & Kahl, LLP
1300 Sw Fifth Avenue, Suite 1750
Portland, OR 97201

Alan Connes
West Coast Power
3934 Se Ash Street
Portland, OR 97214

Cathie Allen
PacifiCorp
825 Ne Multnomah Street, Suite 2000
Portland, OR 97232

Sam Sadler
Oregon Department Of Energy
625 Ne Marion Street
Salem, OR 97301-3737

Clare Breidenich
224 1/2 24th Avenue East
Seattle, Wa 98112

Jesus Arredondo
Nrg Energy Inc.
4600 CARlsbad Blvd.
Carlsbad, CA 99208

Thomas Elgie
Powerex Corporation
1400, 666 Burrand St
Vancouver, Bc V6c 2x8
Canada

David Zonana
California Attorney General's Office
455 Golden Gate Avenue, Suite 11000
San Francisco, CA 94102

Anne Gillette
Calif Public Utilities Commission
505 Van Ness Avenue
San Francisco, CA 94102-3214

Alexia C. Kelly
The Climate Trust
65 Sw Yamhill Street, Suite 400
Portland, OR 97204

Kyle Silon
Ecosecurities Consulting Limited
529 Se Grand Avenue
Portland, OR 97214

Phil Carver
Oregon Department Of Energy
625 Marion St., Ne
Salem, OR 97301-3737

Lisa Schwartz
Oregon Public Utility Commission
Po Box 2148
Salem, OR 97308-2148

Donald Schoenbeck
Rcs, Inc.
900 Washington Street, Suite 780
Vancouver, Wa 98660

Charlie Blair
Delta Energy & Environment
15 Great Stuart Street
Edinburgh, Uk Eh2 7tp
United Kingdom

Clarence Binninger
Department Of Justice
455 Golden Gate Avenue, Suite 11000
San Francisco, CA 94102

Andrew Campbell
Calif Public Utilities Commission
505 Van Ness Avenue
San Francisco, CA 94102-3214

Beth Moore
Calif Public Utilities Commission
505 Van Ness Avenue
San Francisco, CA 94102-3214

Cathleen A. Fogel
Calif Public Utilities Commission
505 Van Ness Avenue
San Francisco, CA 94102-3214

Christine S. Tam
Calif Public Utilities Commission
505 Van Ness Avenue
San Francisco, CA 94102-3214

Ed Moldavsky
Calif Public Utilities Commission
505 Van Ness Avenue
San Francisco, CA 94102-3214

Harvey Y. MORris
Calif Public Utilities Commission
505 Van Ness Avenue
San Francisco, CA 94102-3214

Jaclyn Marks
Calif Public Utilities Commission
505 Van Ness Avenue
San Francisco, CA 94102-3214

Jamie Fordyce
Calif Public Utilities Commission
505 Van Ness Avenue
San Francisco, CA 94102-3214

George S. Tagnipes
Calif Public Utilities Commission
505 Van Ness Avenue
San Francisco, CA 94102-3214

Jonathan Lakritz
Calif Public Utilities Commission
505 Van Ness Avenue
San Francisco, CA 94102-3214

Julie A. Fitch
Calif Public Utilities Commission
505 Van Ness Avenue
San Francisco, CA 94102-3214

Charlotte Terkeurst
Calif Public Utilities Commission
505 Van Ness Avenue
San Francisco, CA 94102-3214

Donald R. Smith
Calif Public Utilities Commission
505 Van Ness Avenue
San Francisco, CA 94102-3214

Eugene CAdenasso
Calif Public Utilities Commission
505 Van Ness Avenue
San Francisco, CA 94102-3214

Henry Stern
Calif Public Utilities Commission
505 Van Ness Avenue
San Francisco, CA 94102-3214

Jacqueline Greig
Calif Public Utilities Commission
505 Van Ness Avenue
San Francisco, CA 94102-3214

Jason R. Salmi Klotz
Calif Public Utilities Commission
505 Van Ness Avenue
San Francisco, CA 94102-3214

Joel T. Perlstein
Calif Public Utilities Commission
505 Van Ness Avenue
San Francisco, CA 94102-3214

Judith Ikle
Calif Public Utilities Commission
505 Van Ness Avenue
San Francisco, CA 94102-3214

Kristin Ralff Douglas
Calif Public Utilities Commission
505 Van Ness Avenue
San Francisco, CA 94102-3214

Lainie Motamedi
Calif Public Utilities Commission
505 Van Ness Avenue
San Francisco, CA 94102-3214

Matthew Deal
Calif Public Utilities Commission
505 Van Ness Avenue
San Francisco, CA 94102-3214

Pamela Wellner
Calif Public Utilities Commission
505 Van Ness Avenue
San Francisco, CA 94102-3214

Pearlie Sabino
Calif Public Utilities Commission
505 Van Ness Avenue
San Francisco, CA 94102-3214

Richard A. Myers
Calif Public Utilities Commission
505 Van Ness Avenue
San Francisco, CA 94102-3214

Scott Murtishaw
Calif Public Utilities Commission
505 Van Ness Avenue
San Francisco, CA 94102-3214

Steve Roscow
Calif Public Utilities Commission
505 Van Ness Avenue
San Francisco, CA 94102-3214

Bill Lockyer
State Of California, Dept Of Justice
Po Box 944255
Sacramento, CA 94244-2550

Baldassaro Di Capo
151 Blue Ravine Road
Folsom, CA 95630

Lana Tran
Calif Public Utilities Commission
505 Van Ness Avenue
San Francisco, CA 94102-3214

Nancy Ryan
Calif Public Utilities Commission
505 Van Ness Avenue
San Francisco, CA 94102-3214

Paul S. Phillips
Calif Public Utilities Commission
505 Van Ness Avenue
San Francisco, CA 94102-3214

Rahmon Momoh
Calif Public Utilities Commission
505 Van Ness Avenue
San Francisco, CA 94102-3214

Sara M. Kamins
Calif Public Utilities Commission
505 Van Ness Avenue
San Francisco, CA 94102-3214

Sean A. Simon
Calif Public Utilities Commission
505 Van Ness Avenue
San Francisco, CA 94102-3214

Theresa Cho
Calif Public Utilities Commission
505 Van Ness Avenue
San Francisco, CA 94102-3214

Ken Alex
1300 I Street, Suite 125
Sacramento, CA 94244-2550

Judith B. Sanders
California Independent System Operator
151 Blue Ravine Road
Folsom, CA 95630

Julie Gill
California Independent System Operator
151 Blue Ravine Road
Folsom, CA 95630

Mary McDonald
California Independent System Operator
151 Blue Ravine Road
Folsom, CA 95630

Philip D. Pettingill
California Independent System Operator
151 Blue Ravine Road
Folsom, CA 95630

Michael Scheible
California Air Resources Board
1001 I Street
Sacramento, CA 95677

Evan Powers
California Air Resources Board
1001 I St, Po Box 2815
Sacramento, CA 95812

Jeffrey Doll
California Air Resources Board
Po Box 2815 1001 I Street
Sacramento, CA 95812

Pam Burmich
Air Resources Board
1001 I Street, Box 2815
Sacramento, CA 95812

B. B. Blevins
California Energy Commission
1516 9th Street, Ms-39
Sacramento, CA 95814

Daryl Metz
California Energy Commission
1516 9th St., Ms-20
Sacramento, CA 95814

Deborah Slon
Office Of The Attorney General
1300 I Street, 15th Floor
Sacramento, CA 95814

Don Schultz
Calif Public Utilities Commission
770 L Street, Suite 1050
Sacramento, CA 95814

Karen Griffin
California Energy Commission
1516 9th Street, Ms 39
Sacramento, CA 95814

Lisa Decarlo
California Energy Commission
1516 9th Street Ms-14
Sacramento, CA 95814

Marc Pryor
California Energy Commission
1516 9th St., Ms-20
Sacramento, CA 95814

Michelle Garcia
Air Resources Board
1001 I Street
Sacramento, CA 95814

Pierre H. Duvair
California Energy Commission
1516 Ninth Street, Ms-41
Sacramento, CA 95814

Wade McCartney
Calif Public Utilities Commission
770 L Street, Suite 1050
Sacramento, CA 95814

Carol J. Hurlock
California Dept. Of Water Resources
3310 El Camino Ave. Rm 300
Sacramento, CA 95821

Holly B. Cronin
California Department Of Water Resources
3310 El Camino Ave., Ll-90
Sacramento, CA 95821

Ross A. Miller
California Energy Commission
1516 9th Street Ms 20
Sacramento, CA 96814-5512