

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



FILED

11-13-07

04:59 PM

Order Instituting Rulemaking to Develop Additional
Methods to Implement the California Renewables
Portfolio Standard

Rulemaking 06-02-012

**POST-WORKSHOP COMMENTS OF
SAN DIEGO GAS & ELECTRIC COMPANY (U 902 E)
CONCERNING TRADABLE RENEWABLE ENERGY CREDITS**

AIMEE M. SMITH
101 Ash Street, HQ-12
San Diego, California 92101
Telephone: (619) 699-5042
Facsimile: (619) 699-5027
amsmith@sempra.com

Attorney for
SAN DIEGO GAS & ELECTRIC COMPANY

November 13, 2007

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

Order Instituting Rulemaking to Develop Additional
Methods to Implement the California Renewables
Portfolio Standard

Rulemaking 06-02-012

**POST-WORKSHOP COMMENTS OF
SAN DIEGO GAS & ELECTRIC COMPANY (U 902 E)
CONCERNING TRADABLE RENEWABLE ENERGY CREDITS**

**I.
INTRODUCTION AND BACKGROUND**

In accordance with the Rules of Practice and Procedure of the California Public Utilities Commission (the “Commission”), the *Administrative Law Judge’s Ruling Requesting Post-Workshop Comments on Tradable Renewable Energy Credits*, dated October 16, 2007 (the “ALJ Ruling”), San Diego Gas & Electric Company (“SDG&E”) hereby submits these comments responding to questions set forth in the ALJ Ruling regarding use of tradable renewable energy credits (“TRECs”) for compliance with Renewable Portfolio Standard (“RPS”) program requirements.

As SDG&E has noted previously, it strongly supports development of a system of TRECs. SDG&E believes that access to TRECs will facilitate the ability of all LSEs to achieve RPS compliance. The availability of TRECs will benefit LSEs by increasing contract flexibility and innovation, allowing creative solutions to challenges such as transmission bottlenecks and scheduling issues. It is important to note, however, that the availability of TRECs will not eliminate the need for new transmission. TRECs will simplify the transaction process by 1) streamlining transaction documentation, 2) easing scheduling concerns across interties and 3) providing

time of delivery flexibility in-state that currently exists only for out-of-state resources. Moreover, permitting RPS-obligated LSEs to satisfy RPS requirements with TRECs will provide an alternate revenue stream for renewable projects and therefore can only help to increase potential for renewable project development.

Indeed, the Legislature expressly acknowledged the potential benefits conferred by TRECs by including express language in Senate Bill (“SB”) 107 authorizing use of TRECs for compliance with RPS requirements, while leaving to the Commission the determination of how best to integrate TRECs into the existing RPS structure.^{1/}

Achieving the full potential of TRECs may, however, require a change in the statute to eliminate the in-state delivery requirement for RPS, as explained more fully in the responses below.

Because a robust TREC market has yet to develop, it is difficult to provide demonstrable proof of the benefits to be obtained by creation of such a market. This should not, however, dissuade the Commission from authorizing use of TRECs for RPS compliance; if RPS-obligated LSEs are permitted to participate in the TREC market, it is reasonable to expect a corollary increase in liquidity (supply) to be created in the existing market, which will place downward pressure on prices for renewable resources. The benefits in terms of increased contracting flexibility are also plain. As the 2010 deadline for RPS compliance approaches, the Commission must facilitate access to every tool available to ensure LSEs’ ability to achieve RPS compliance. Indeed, use of TRECs as a compliance measure is analogous to use of short-term renewable trades, which the Commission

^{1/} Senate Bill (SB) 107, Sec. 19, § 399.16 (Stats. 2006, Ch. 464).

has recently identified as a potential tool for bridging short-term gaps in meeting the 20% RPS mandate.^{2/}

While the Commission can play a useful role in establishing the guidelines for use of RECs for RPS compliance and in clarifying such critical issues as the interplay between RECs and GHG credits, it is important that the Commission recognize that a REC trading market already exists in the Western region, as was discussed at the TREC workshop held September 5-7, 2007. Because the Commission is not creating the TREC market, it need not attempt to define new trading rules or to impose cost control measures. Rather, Commission action is required in order to allow jurisdictional LSEs to enter into this market and to use TRECs for RPS compliance. The Commission's focus should be on how TRECs fit within existing or contemplated reporting and compliance schemes. The Commission should avoid placing artificial restrictions on LSE participation in the Western Electricity Coordinating Council ("WECC")-wide TREC market as a means of attempting to control the cost associated with the use of TRECs for compliance.

Given the limited scope of the task before the Commission, SDG&E submits that evidentiary hearings are not necessary and would not be a productive use of the Commission's and parties' time and resources. The issues to be considered by the Commission regarding TRECs do not include material issues of disputed fact. Rather, the considerations are of a policy nature and involve determinations related to administration of the RPS program.

^{2/} See Assigned Commissioner's Ruling Regarding 2008 Renewables Portfolio Standard (RPS) Plans and 2010 RPS Goals issued on July 31, 2007 in R.06-05-027.

These and other issues are described in more detail below.

II. DISCUSSION

In Section A of the ALJ Ruling, the Commission outlines the guiding principles proposed by staff to evaluate proposals for the use of REC trading for RPS compliance. SDG&E generally supports the proposed guiding principles. With regard to the principle that “REC trading rules, guidelines, and policies should take account of the process of implementing California's greenhouse gas (GHG) reduction policy and the potential for federal programs for GHG reduction,”^{3/} SDG&E explains below that RECs are not interchangeable with future GHG credits and should be tracked separately. Section B of the ALJ Ruling sets forth specific questions related to tradable RECs. SDG&E provides the following responses to the queries set forth in Section B:

1. Basics of a tradable REC market

(1) Of the following statements from Attachment D, please agree or disagree with each, and provide justification based on specific experiences and/or economic analysis.

(a) Tradable RECs will not affect current factors limiting new renewable energy projects in California. The limiting factors include: lack of adequate transmission infrastructure, complex and lengthy permitting processes, and in-state delivery requirements for RPS-eligible generation.

RESPONSE: TRECs will assist in facilitating delivery but will not solve the need to construct new transmission. The assistance afforded by TRECs may be somewhat limited at the outset of trading due to the in-state delivery requirement currently included in SB 107.^{4/} A Commission decision on TRECs cannot modify in-state delivery requirements – only the Legislature can accomplish that. However, if in-state delivery requirements are lifted to allow in-WECC delivery of energy associated

^{3/} ALJ Ruling, p. 3.

^{4/} Senate Bill (SB) 107, Sec. 2, § 25741 (a) and (b) (Stats. 2006, Ch. 464).

with the TREC, then TRECs offer significant potential for facilitating transactions for intermittent resources that exist out-of-state by solving scheduling issues across interties. While TRECs may provide marginal improvement in helping IOUs and other LSEs to meet RPS goals, California must adopt every means of assisting RPS compliance that it can identify. It is equally possible that TRECs will enable innovative trading and become a key element in complying with CPUC RPS compliance goals.

(b) Tradable RECs will provide buyers and sellers of RPS-eligible generation with additional contracting flexibility in the near term and long term.

RESPONSE: Agree. As a new market tool, initial short-term use of TRECs may be marginal due to the restrictions on in-state delivery requirements referenced above, but the flexibility offered by TRECs should be made available to RPS-obligated LSEs as well as to generators who have any amount of uncommitted RPS-eligible energy. Elimination of the in-state delivery requirement and other innovative ideas could make TRECs a larger part of LSEs' RPS compliance efforts and could open new markets in the West to renewable developers, creating new revenue streams to enable project financing. TREC transactions should be streamlined with regard to transaction documentation, scheduling issues and time of delivery constraints compared to long term contracts that are tied specifically to a new project development. This will help to ensure that the benefits of increased flexibility are realized.

(c) Tradable RECs will facilitate RPS compliance for small LSEs, but will only marginally affect large IOUs' RPS compliance in the near term (*i.e.* until the 20% target is reached).

RESPONSE: Perhaps, unless the in-state delivery requirement included in SB 107 (described in Response 1(a) above) is modified. However, Commission action to allow TRECs to count toward RPS compliance should not be guided by supposition as to what party will benefit most from a new trading tool. California must implement every measure available to permit achievement of the RPS goals, regardless of whether they are considered marginal for some entities. As familiarity with TRECs increases, it is likely that innovative uses will be found for TRECs. All tools should be made fully available to all LSEs, large or small.

(d) Given the stringent RPS targets and limited supply of surplus renewable energy in the near term (at least until the 20% target is reached), the California REC market would reflect a supply and demand imbalance.

RESPONSE: Disagree. The TREC market would not reflect higher prices than would be expected in general as a result of the stringent RPS targets. The CPUC should not focus on the likely target price for TRECs when considering allowing their use for RPS. TRECs pricing will likely look like short-term renewable power pricing and the CPUC has recently invited the IOUs to consider the use of short-term renewable transactions without placing limits on its price or expressing concerns over availability.^{5/}

(2) What are the most likely sources of RECs that could be traded in the 2008-2011 timeframe? Please focus on RECs associated with generation that will meet the delivery requirements of Pub. Util. Code § 399.16(a)(3).

RESPONSE: It is premature and would be speculative to attempt to determine the most likely sources of RECs that could be traded in the 2008-2011 timeframe. The Commission's focus should be on maximizing the benefits derived from the availability of having additional tools for RPS compliance. The availability of additional tools will ultimately lead to greater flexibility and increased innovation amongst buyers and sellers, resulting in an increase in supply by some amount. This market should continue to be a Western region-wide market that allows development of and access to the full range of renewables that are specific to the location of the resource.

(3) Please revisit the following two issues discussed in pre-workshop comments in light of the presentations and discussion at the workshop:

(a) How, if at all, would REC trading, as compared to the current firming and shaping rules for delivery of RPS-eligible power into California, provide more flexibility or be less costly for procuring out-of-state renewable energy?

b) How, if at all, would REC trading, as compared to current RPS flexible delivery rules, provide more flexibility or be less costly in overcoming transmission congestion constraints? Please provide specific examples of situations in which REC trading would enable renewable energy projects to be developed in transmission constrained areas in California that would not otherwise be feasible.

RESPONSE: Implementation of a tradable REC program will not eliminate the need for new transmission. TREC trading will not allow for delivery of new renewable generation where that generation would otherwise require new transmission to be

^{5/} See Assigned Commissioner's Ruling Regarding 2008 Renewables Portfolio Standard (RPS) Plans and 2010 RPS Goals issued on July 31, 2007 in R.06-05-027.

built to enable its interconnection and delivery. The Commission must move expeditiously to approve transmission that accesses renewable resources, such as the proposed Tehachapi and Sunrise transmission projects.

TRECs will, however, be helpful in facilitating trades with existing renewable generation that exists on the opposite side (from buyers load) of a transmission constraint. That generation could serve load on its own side of the constraint with RECs flowing to the benefit of the buyer. Current flexibility rules allow this type of unbundling (within California) without calling these “REC transactions.”

TRECs would:

- 1) Simplify the scheduling provisions of these transactions, where a paper TREC deal would replace a physical power swap or bookouts. Simpler transactions would likely lead to greater trading volumes; and
- 2) Expand the practice of separating delivery from renewable attributes. This separation is currently allowed within California, based on geography (delivery of the power must be anywhere “in-state,” but the REC is considered delivered to load) and out-of-state, where temporal separation is allowed (where REC creation and actual generation can be trued up annually – RECs are not matched to hourly generation). Further flexibility would be provided if the in-state delivery requirement contained in SB 107 were to be relaxed in order to allow in-WECC delivery. Expansion of these flexibility mechanisms would greatly increase liquidity in a WECC-wide REC trading market.

(4) Describe the foreseeable market in California and neighboring states for null power in the timeframe 2008-2011. Please discuss:

- Market demand for in-state null intermittent power;
- Market demand for null firmed power delivered in California from out-of-state facilities.

RESPONSE: The ISO imbalance market provides an adequate market for sale of null power. Additionally, all LSEs have short-term power needs and null power may meet part of this demand.

- Characteristics of the existing spot market that affect procurement of null intermittent power; and

RESPONSE: Null power may need special status during minimum load conditions. Much like hydro spill energy or nuclear power, null power generation should not be curtailed to handle these dispatch situations, since to do so would waste free fuel and would reduce the amount of RECs created.

- How, if at all, would the implementation of the California Independent Systems Operator's (CAISO) market redesign and technology upgrade (MRTU) affect the demand for and the treatment of null intermittent power and out-of-state null firmed power?

RESPONSE: The MRTU should create a ready market for the null power and reveal the value of that power.

(5) Please comment on Dr. Weiss's assessment of the elasticity of RPS demand and supply curves.

RESPONSE: In general, SDG&E agrees that a TREC market would complement rather than supplant long-term contracting via RFOs and that there should be extensive banking and borrowing allowed. With these conditions, Dr. Weiss finds that there would be sufficient elasticity of supply and demand for TRECs. The Commission's focus on outcomes in the tradable REC market (*i.e.*, attempting to guess supply/demand and clearing prices) is not a useful exercise.

(6) If demand for tradable RECs for RPS compliance exceeds supply in the California REC market (at least in the near term), do you agree with Dr. Weiss's analysis that REC prices would tend to float to the RPS penalty amount (\$50/MWh)? Would prices float to any other price cap the Commission might implement?

RESPONSE: The Commission should not approach the enabling of TREC transactions from the perspective of price control, but rather should view TRECs as a tool that will create new trading opportunities and market liquidity, both of which will help LSEs achieve their RPS goals. If TREC prices rise to a cap, it will only mean that there is a supply shortage – placing limits on the TREC market will not help alleviate that shortage. The best remedy to this potential problem is to maximize all available sources of supply in all markets, not to constrain them by arbitrary policy.

(a) If REC prices floated to the penalty amount or a price cap, would a market for tradable RECs drive up the price of bundled RPS contracts?

RESPONSE: No. The tradable REC market would only be reflecting the underlying shortage, not causing it. To some degree, spot prices are incorporated into forward deals, but the price for 20-year transactions that commence post-2010 are probably independent of TREC pricing between 2008-2010. They are driven much more by the cost of the technology and associated delivery costs and future anticipated demand conditions.

(b) If REC prices floated to the penalty amount or a price cap, how would this affect California ratepayers in the short term? In the long term?

RESPONSE: California’s ratepayers will pay market prices for RPS compliance through the State’s structure for acquisition of renewables through RFOs and short-term market trades. Attempting to craft price controls for TRECs will merely reduce supply, thus shifting transactions to a different market. The Commission should recognize that TRECs are very similar to short-term physical power transactions. Any limit placed on TREC prices that is more binding than the physical market will just drive short-term transactions, to the extent possible, to switch from TRECs to physical supply. That supply is just as likely to reach penalty price caps as TRECs are.

(c) If REC prices floated to the penalty amount or a price cap, would all RPS non-compliance costs then be transferred from utility shareholders to ratepayers? Would some portion of noncompliance costs be transferred?

RESPONSE: No. Utilities must comply with RPS obligations, which mean that their customers must pay the market price for renewable power. Utilities may not refuse to comply with RPS obligations in order to incur shareholder penalties in place of customers paying for renewable power. State law provides price protections for IOU customers – IOUs are not obligated to pay more than the market price referent (“MPR”) for renewable power.^{6/} If such power is not available at or below this price, the utility is not obligated to procure and consumers will not bear any excess costs, and neither will the utility bear penalty costs. Similarly, the utility is not required to purchase RECs if physical power is not available at prices below the MPR plus available supplemental energy payments.^{7/} If REC prices floated to the penalty amount or price cap, the Commission should view this situation as ratepayers seeing the full cost of RPS compliance rather than as a shifting of non-compliance penalties. The price ceiling (penalty price) has not yet been established by the Commission; it has stated that it will revisit this issue prior to 2010.^{8/} The Commission should not lose sight of the fact that adding additional flexibility to meet the RPS goals will not increase the cost of compliance for IOU customers. TRECs will instead provide additional supply options -- additional supply can only place downward pressure on market prices.

^{6/} Public Utilities Code § 399.15(b)(5).

^{7/} Public Utilities Code § 399.16(a)(8).

^{8/} See D.06-10-050, *mimeo*, p. 29 (expressly acknowledging the obligation to adopt specific flexible compliance rules for use in 2010 and beyond).

(7) Dr. Weiss presents an analysis of REC markets showing a bimodal pricing distribution, colloquially referred to as “boom-bust” pricing.

(a) Please describe any situations in a California REC market in which the boom-bust pricing pattern is likely not to apply.

RESPONSE: To the extent that geographic and temporal rigidities are eliminated and LSE long-term contracting is encouraged, boom-bust cycles are reduced according to Dr. Weiss. To help alleviate the “boom-bust” cycle, the Commission should refrain from requiring that all renewable power (and thus all RECs) be tied up in long-term transactions in order to ensure that there is liquidity in a TREC market.

(b) In the timeframe 2008-2011, are contracts for RECs likely to provide developers of new renewable facilities in California and neighboring states with additional financial resources (both in terms of cash flow for the facility and in terms of willingness of investors and/or lenders to provide capital for development of the facility)? Why or why not?

RESPONSE: Yes. A contract for RECs provides the developer with an additional income stream. Allowing developers to monetize the environmental attribute of renewable power can only help with potential financing.

(c) Please describe how the design of a tradable REC market for compliance with the California RPS should take into account the boom-bust pricing tendency. Please specify whether your design proposal posits a REC market whose principal purpose is:

- (i) providing compliance flexibility for California RPS-obligated LSEs; or
- (ii) stimulating development of new renewable energy generation capable of delivering into California; or
- (iii) Either (i) or (ii) depending on whether the timeframe considered is 2008-2011 or 2012-2020; or
- (iv) both (i) and (ii).

RESPONSE: The REC market should, as a principal purpose, provide compliance flexibility for California RPS-obligated LSEs while stimulating development of new renewable energy generation in the Western region. To the extent that geographic and temporal rigidities are eliminated and LSE long-term contracting is encouraged, boom-bust cycles are reduced. One overarching principle that the Commission needs to keep in mind is that TRECs and short-term physical power are analogous. The Commission’s singular goal in establishing the use of TRECs for compliance seems to be in controlling clearing prices based on the questions above. However, the Commission has endorsed trading of short-term physical renewable energy and its pricing will exhibit the same tendencies as TRECs. In fact, the sources of TRECs and short-term renewable power are probably very similar, if not the same, with the current delivery into California requirement. Thus, creating price caps to control

TREC prices, or not allowing them for RPS compliance, will not lower the overall RPS compliance costs. It will simply complicate compliance by shifting transactions to the short-term physical renewable power market in 2008-2011. The principle purpose of REC trading is to increase liquidity in RPS markets. That goal will benefit both stimulation of development as well as LSE compliance.

2. Staff straw proposal

(1) For each area of the straw proposal please address the following issues, as well as any other issues that would contribute to a complete discussion of the straw proposal. Please provide all information necessary to support the analysis presented in the comments. Where relevant, please comment on the rationale provided by staff for each area.

- (a) Impact on and integration with the existing methods of RPS compliance, including both procurement methods and existing flexible compliance rules.
- (b) Impact on and integration with the existing methods of RPS reporting.
- (c) Impact on the development of new renewable resources in California and neighboring states.
- (d) Impact on RPS compliance in the timeframe 2008-2011.
- (e) Impact on RPS compliance in the timeframe 2012-2020,
 - (1) with the existing mandate of 20% of electricity sold at retail in California to be generated by eligible renewable resources by 2010, *and*
 - (2) with a new mandate of 33% of electricity sold at retail in California to be generated by eligible renewable resources by 2020, with the current statutory framework for RPS otherwise unchanged.
- (f) Impact on the development of a market for tradable RECs for RPS compliance.
- (g) Impact on and integration with a possible market of tradable allowances for compliance with the Global Warming Solutions Act, Assembly Bill (AB) 32 (Nuñez/Pavley), 2006 Stats. ch. 488.

Straw Proposal Element: Market Participants

RESPONSE: SDG&E agrees that the TREC rules, indeed all RPS rules, should be consistent for all entities with RPS obligations.

With regard to AB 32 implementation, the scope of market participants in a future GHG trading scheme (whether national or international) would be reduced if GHG credits and RECs were bundled together. It is difficult, for example, to envision that a German GHG buyer would buy a California REC in order to get GHG credit when that same buyer could purchase a GHG-only product elsewhere that would not be encumbered by compliance with WREGIS, CEC eligibility, etc.

Straw Proposal Element: TREC Usage Limits

RESPONSE: To the extent that TRECs are similar to, and for the most part, interchangeable with, short-term physical renewable power transactions, imposing the same usage limit on TRECs as currently exists for short-term power should not create any unique barriers for LSEs participating in the TREC market. However, any proposal that would limit the use of TRECs – such as the proposed long-term contracting requirement - will reduce the size and availability of this additional means of project funding. Therefore, to the extent that this limit reduces TREC liquidity, it will consequently limit some of the benefit to be derived from this innovative product.

TREC reporting will be facilitated through WREGIS. This, when coupled with current RPS compliance reporting requirements, is adequate to ensure the accurate tracking and verification of TRECs and any requirement as to minimum long-term contracting. Information regarding TREC volumes can be easily integrated into existing RPS compliance reports as additional volumes without the need for changes to the existing template document.

It is important to note that a market for TRECs already exists; the Commission action here will allow jurisdictional LSEs to enter into this market. If this California demand is allowed to participate in the existing REC market, it is reasonable to expect a corollary increase in liquidity (supply) to be created in the existing market.

Generally, SDG&E believes that REC attributes and GHG attributes are two different elements of any given renewable MWh, as recognized in the European market. The simplest way to ensure that TREC trading will not complicate future GHG trading

markets is to allow each to be traded separately. Bundling of the two attributes will inevitably lead to a reconfiguration of the TREC market when GHG trading is implemented. If the GHG attributes are bundled as part of the tradable REC, GHG trading would be complicated since some renewables have different GHG characteristics (biomass, geothermal, solar with gas assist, firm wind). A fungible GHG product (a ton is a ton) should be a desired outcome in GHG trading, which can only be achieved if the attributes are separated.

Straw Proposal Element: Flexible Compliance – Banking / Earmarking

RESPONSE: The Straw Proposal allows for unbundled RECs to be traded from Commission-approved projects that have not been built. Yet IOUs cannot use TRECs for earmarking. These two ideas seem contradictory, and compliance and procurement within the constraints of these two rules appears likely to be difficult. While SDG&E did not support earmarking of TRECs in its pre-workshop comments, upon further consideration it has concluded that earmarking should be permitted if sufficient liquidated damages are included in the TREC contract to cover the risk to the utility of supplier non-performance.

TRECs, like all other flexible compliance measures, provide for temporal shifting of RPS obligations. If flexible compliance measures are used to move an obligation into a future year, the LSE is still required to make up that volume with physical generation volumes in that future year, beyond that year's APT – thus supporting the RPS goal of increasing renewable generation. TRECs are another flexible compliance measure, and should have flexibility comparable to other RPS flexible compliance measures.

Aggressive RPS goals are going to require all available means of meeting these higher targets. TRECs will be one of those various tools. TRECs can only help with LSE compliance in this critical timeframe. Thus, limiting LSE use for TRECs will limit demand and therefore lower liquidity in the TREC market. In general, higher liquidity should be a goal of the Commission.

Straw Proposal Element: Treatment of Bundled Contracts

RESPONSE: TRECs will allow market flexibility in the event that direct access (“DA”) is reinstated and will enable more LSEs to ensure RPS compliance. Allowing TRECs to be created from bundled contracts will provide an easy means of shifting stranded renewable attributes in the event of DA resumption. That is, if an IOU has met its 20% RPS goal, but future load migration reduces its RPS obligation so that the IOU is now “long green,” TRECs are a simple means of monetizing that long position. TRECs can also help more LSEs to achieve compliance while reducing the risk to some LSEs of contracting long-term above the RPS mandated levels. If the LSE ends up long on renewable power, short-term TRECs are a quick, easy way to transfer excess renewable power to another entity that may be short.

Similar to SDG&E’s observations above regarding banking/earmarking proposals, the first year of bundled contracting seems difficult to track and trade around. If a bundled contract is needed in any year for an LSE’s compliance, it cannot be sold as a REC. This is self-policing through the tracking/compliance report. Through the combination of WREGIS and current CPUC compliance documents, the required tracking and verification of TRECs and their impact on the bundled contract (making them null power sources) can be tracked.

SDG&E submits that enhancing its flexibility in the trading of resources will promote the market for development of new resources.

Straw Proposal Element: Cost Recovery

RESPONSE: The CPUC proposal compels shortlisting of at least some TREC transactions. Rather than forced shortlisting of TRECs, the IOU will evaluate as part of its LCBF analysis any TREC offer in light of other physical renewable power offers. This data will be available to the CPUC for price discovery to be used in evaluating consummated TREC trades, keeping in mind that offered prices and executed prices can differ.

The proposed price cap is counterproductive. TRECs and short-term physical renewable power are largely interchangeable and should therefore be similarly priced. Since the Commission proposes no cap in the context of the short-term physical power, a price cap on TRECs will be ineffective except to shift transactions to the physical power market if the price cap is reached.

Reporting for cost recovery of TRECs should be similar to the short-term transactions for conventional power. To increase efficiency, the review should be carried out in the same ERRA quarterly transaction reports as conventional power. For short-term TRECs, the required justification would be accomplished by any of the following: 1) broker quotes, 2) RFO results, or 3) mark-to-model created by the LSE to show how it valued the TREC in the absence of 1) or 2).

(2) In order to evaluate the TREC usage limits section of the straw proposal, please comment on whether the minimum quota proposal would help:

(a) maintain a focus on new renewable infrastructure development;

RESPONSE: SDG&E believes that there is sufficient focus on development of new renewable infrastructure and that this minimum long-term contracting requirement adds complication with the only discernable benefit being to require smaller LSEs to purchase some renewable energy long-term, thus adding their demand contribution to the development of new resources and not relying on IOUs to get all future renewable generation built.

(b) reduce ratepayer compliance costs that might otherwise result from a high demand for RECs relative to available supply;

RESPONSE: No. The market will work out the proper equilibrium between short-term and long-term prices without the CPUC trying to control prices in a WECC-wide TREC market. Attempts to regulate this balance are guaranteed to be less efficient than a market solution and hence more expensive.

(c) enable RPS procurement to remain a hedge against volatile natural gas prices;

RESPONSE: No. There are many ways for an LSE to hedge against gas volatility. If use of long-term contracts with fixed price renewables is a cost effective hedge, then it is useful. However, when TRECs are a portfolio “best-fit,” it does not mean that long-term renewables are better than any other means of hedging the associated conventional power volumes in the portfolio. In other words, hedging price may be an ancillary benefit of the RPS, but should not be a requirement. The existence of the TREC alone meets the RPS legislative goal of reducing reliance on fossil fuels because a renewable MWh had to be generated to create the TREC and this displaced other (fossil) generation.

(d) respond to the impact of supply and demand on REC market prices and liquidity by imposing more stringent minimum contracting requirements for short-term REC contracts than for short-term bundled contracts.

RESPONSE: No. Short-term bundled contracts and TRECs should be as interchangeable as possible; creating different rules for each will complicate the market. Further, as stated above, the Commission should refrain from this sort of market interference and attempts to control TREC prices. Instead, the Commission should rely on the market itself to find the appropriate equilibrium. If TRECs become expensive relative to long-term contracts, then LSEs will seek to source renewable supply from long-term contracts thus reducing the demand for TRECs.

(3) In order to evaluate the cost recovery section of the straw proposal, please comment on whether, if authorized by the Commission, an unbundled REC market for RPS compliance should be viewed as a commodity market, in which prices converge and each unit does not have a different intrinsic value?

RESPONSE: Yes. TRECs should be considered a commodity and should be subject to cost recovery rules and processes that are as similar as possible in regulatory structure to the rules governing conventional power.

If yes:

- What factor(s) influence the commodity market price?

RESPONSE: The structure of the market that determines supply and demand will influence the commodity price. RPS regulations, borrowing and banking rules, limitations placed on the use of TRECs by the Commission and the Legislature, and long-term contracting will all influence the demand for TRECs. Assuming banking and borrowing are in place, the supply curve will depend on the overall cost of the renewable and not just the operating cost. The supply curve will consist of a stack of RECs first with excess renewable power offered by LSEs and then by technology that is uncommitted, with wind/biomass at the bottom, geothermal in the middle and solar at the top. In times of greatest demand, the market price will rise so that RECs from the most expensive technologies clear the market. It is likely that higher cost resources will be under long-term contract to get built and will only participate in REC trading if they have small un-contracted volumes, or after contract expiration.

- What methodologies can be used to evaluate the reasonableness of a REC price from the ratepayer's perspective?

RESPONSE: The Commission's review of TREC transactions should be based upon: 1) benchmarking of any TREC price paid to a market index for renewable attributes, including broker quotes or RFO results, and 2) a strong showing by the LSE of how it evaluated the REC value (as through a mark-to-model).

- Could the Commission practically implement the above proposed methodology? If not, what is the next best alternative approach?

(4) Please identify any aspects of the straw proposal that you consider unnecessary or duplicative, and briefly explain the basis of your views.

RESPONSE: The following are unnecessary:

The minimum long-term contracting requirement. The Commission has adopted a proposal that requires LSEs to enter into a threshold percentage of long-term contracts in order to make use of short-term contracts and RECs. As SDG&E explains in its response to Question 2 above, this is unnecessary.

Rules associated with use of TRECs from the 1st year of bundled contracts. As SDG&E establishes in its response to Question 1 above, the rules are inconsistent for earmarking.

Price Cap. As described in SDG&E's response to Question 1 above, the price cap is counterproductive to the goal of establishing market liquidity and is ineffective when short-term bundled power can trade without a cap. Moreover, the cap is unnecessary in the limited instance of TRECs because ratepayers are protected by an overall cap on the cost of renewables that is set by the Legislature and the Commission based upon the Market Price Referent and Supplemental Energy Payments.

(5) What elements, if any, in addition to those identified in the straw proposal would be necessary to create a market for tradable RECs and administer an RPS program that included tradable RECs, while advancing the goals of the RPS program and complying with the requirements of § 399.16? Please be specific and explain why each additional element would be necessary.

RESPONSE: The Commission is not creating a market for TRECs; that market exists today, as was discussed at the REC workshop. TRECs are another means of getting more generation developed through innovative contracting and deal structuring.

All of the elements required to allow for TREC trading will be in place once the WREGIS system is operational. Enhancements, as discussed elsewhere, would include: 1) modification of the in-state delivery requirement set forth in SB 107; 2) a formal recognition by the Commission that the GHG environmental attribute is a separate product from a renewable attribute; and 3) revision of the proposals regarding price caps, earmarking and the minimum long-term contracting requirement.

(6) As noted in the Amended Scoping Memo, after a workshop on REC trading for RPS compliance, the parties will then have the opportunity to “comment on the desirability, or lack thereof, of adopting a system like one of those developed through the workshop process, or be able to make another proposal that could be contrasted in some detail with the previous possibilities.” (pp. 4-5.)

(a) If the straw proposal were adopted as set forth in Attachment E, would you recommend that the Commission authorize REC trading as a compliance tool for RPS compliance?

RESPONSE: Yes, with the changes to the proposal described in the response to question 5 above.

(b) If you would not recommend that the Commission authorize a REC trading regime as outlined in the straw proposal, please either develop an alternative REC trading proposal, or state and explain that your view that no REC trading regime would be satisfactory.

3. REC Attributes

Taking into account these documents, the requirements of Pub. Util. Code § 399.16, and the pending implementation of AB 32 (with the caveats and uncertainties expressed in footnote 9, above), please comment on the following issues.

(1) With respect to biogas that is an RPS-eligible resource, should the benefits of capturing methane in the production of the biogas be included in the attributes of the REC associated with the biogas?

RESPONSE: No. As stated above, the GHG environmental attribute is separate from the REC attribute and should trade separately. If traded separately, biogas methane capture is not an issue.

(2) How should the "net zero emissions" requirement in the last sentence of the Green Attributes definition in Attachment D-2 be applied to the capture of methane to produce RPS-eligible biogas?

RESPONSE: Sufficient GHG credits must accompany the biogas to offset any GHG production from combustion of the gas to produce electricity.

(3) Should a REC include avoided carbon emissions associated with conventional generation displaced by the renewable generation giving rise to the REC? As a policy matter, why or why not? Please include all factual information necessary to support the policy choice expressed. Identify any assumptions or predictions about AB 32 that are related to the policy

preference expressed (*e.g.*, “In a load-based regulatory framework in which emissions reductions from RPS compliance are included in the cap...”) Please also make clear what definition of “avoided emissions” is being used in the response.

RESPONSE: The GHG issue raised needs to be addressed in the context of the various efforts underway to implement AB 32. Under the GHG cap-and-trade mandatory reporting framework adopted by the CPUC, null power from renewable energy is treated as unspecified power. Therefore, the GHG credit for TRECs for displaced fossil generation should be applied to offset emissions of LSE purchases of unspecified power.

(4) In view of the current uncertainties associated with the implementation of AB 32, what are the potential pitfalls, if any, both for the RPS program itself and the interaction of RPS with potential GHG regulatory methods, of determining that a tradable REC used for compliance with the California RPS includes avoided carbon emissions? Of determining that a REC does not include avoided carbon emissions?

RESPONSE: Declaring that the GHG and renewable attributes are bundled will lead to the awkward result of existence of multiple classes of GHG allowances, as described above. Separate trading and tracking of the GHG attribute from the REC will make GHG trading easier, assuring that a ton is a ton, and will increase the ease of developing wide geographic markets for GHG trading.

(5) Are there any potential legal impediments to or uncertainties about the implementation of the policy preferences you expressed in response to questions 1-4? What are they? How might they be overcome? Please explain in detail.

RESPONSE: Yes. SB 107 would require modification in order to allow for delivery of renewable power anywhere in the WECC. The elimination of the in-state delivery requirement would implement the objective that is implied through the creation of WREGIS, and has been made express by the Governors of the Western states in promoting WREGIS: that there should be a regional market for the trading of renewable credits. The current restriction on delivery to California would frustrate the development of this market and would frustrate the expansion of renewables in the West. This is also inconsistent with the State's goals to reduce GHG emissions. By limiting markets for renewables, and thereby limiting the growth of renewables by arbitrary market restrictions, California encourages the further development of fossil fuels out of state, and the growth of GHG emissions. Additionally, the language of current law, added by SB 107, is arguably vague on whether it is intended to bundle the GHG attribute with the renewables attribute. Since it is the Commission's responsibility to interpret this provision, the CPUC should interpret it consistent with a philosophy that it was not intended to pre-judge the treatment of greenhouse gases, and, therefore, that the GHG attribute is not required to be bundled. If the Commission declines to do this it would create a potential legal impediment that would need to be repaired legislatively.

(6) Would particular decisions about the implementation of AB 32 alter your views about the issues discussed in Questions 1-5, above? What decisions would have an impact? What impact would they have? Why?

RESPONSE: Yes. If the Legislature determines that AB 32's GHG limitation would expand the renewables energy market sufficiently, it is possible that the state RPS mandates could be replaced by the AB 32 GHG cap. Further, all renewables could be assigned a zero emissions profile. In that case, the REC could morph into a zero GHG resource. There would be no additional attribute apart from the GHG attribute associated with the REC.

4. Standard terms and conditions

(1) What changes, if any, should be made in the standard terms and conditions set forth in Attachment D-2 to reflect and/or accommodate the policy preference and legal analysis set forth in your responses to questions 1-6 in Section 3?

RESPONSE: In establishing the TREC market, SDG&E submits that the Commission should take this opportunity to clarify that RECs and emissions offsets are two separate products - not a single bundled product - that can trade separately. The definition of Green Attributes should reflect this by removing references to emissions offsets and Green Tags. It is important that the WREGIS enabled West-wide REC market trade a single fungible product to promote liquidity. To that end, the definition of "Green Attribute" should be consistent with the product traded in the WREGIS enabled REC market so that when a California REC is bought or sold in the West, no more or less is conveyed than RECs from other jurisdictions. Please see the edits to the definition of Green Attributes below (additions shown in bold font).

"Green Attributes" means any and all credits, benefits, ~~emissions reductions, offsets, and allowances, howsoever entitled, attributable to the generation from the Project, and its displacement of conventional Energy generation.~~ Green Attributes include but are not limited to: Renewable Energy Credits. **Green Attributes do not include, as well as:** (1) any avoided emissions of pollutants to the air, soil or water such as sulfur oxides (SOx), nitrogen oxides (NOx), carbon monoxide (CO) and other pollutants; (2) any avoided emissions of carbon dioxide (CO2), methane (CH4), nitrous oxide, hydrofluorocarbons, perfluorocarbons, sulfur hexafluoride and other greenhouse gases (GHGs) that have been determined by the United Nations Intergovernmental Panel on Climate Change, or otherwise by **law**, to contribute to the actual or potential threat of altering the Earth's climate by trapping heat in the atmosphere; **and** (3) the reporting rights to

these avoided emissions such as Green Tag Reporting Rights. ~~[and Renewable Energy Credits].~~ Green Tag Reporting Rights are the right of a Green Tag Purchaser to report the ownership of accumulated Green Tags in compliance with federal or state law, if applicable, and to a federal or state agency or any other party at the Green Tag Purchaser's discretion, and include without limitation those Green Tag Reporting Rights accruing under Section 1605(b) of The Energy Policy Act of 1992 and any present or future federal, state, or local law, regulation or bill, and international or foreign emissions trading program. Green Tags are accumulated on a **MWh** basis and one Green Tag represents the **Green** Attributes associated with one (1) MWh of Energy. **Green** Attributes do not include (i) any energy, capacity, reliability or other power attributes from the Project, (ii) production tax credits associated with the construction or operation of the Project and other financial incentives in the form of credits, reductions, or allowances associated with the project that are applicable to a state or federal income taxation obligation, (iii) fuel related subsidies or "tipping fees" that may be paid to Seller to accept certain fuels, or local subsidies received by the generator for the destruction of particular preexisting pollutants or the promotion of local environmental benefits, or (iv) emission reduction credits encumbered or used by the Project for compliance with local, state, or federal operating and/or air quality permits. If the Project is a biomass or landfill gas facility and Seller receives any tradable **reporting rights Green** Attributes based on the greenhouse gas reduction benefits or other emission offsets attributed to its fuel usage, it shall provide Buyer with sufficient **reporting rights Green** Attributes to ensure that there are zero net emissions associated with the production of electricity from the Project.

3.4 Green Attributes. Seller hereby provides and conveys all Green Attributes from the Unit(s) to Buyer as part of the Product being delivered, as such term is described in the applicable Transaction confirmation for the period set forth in such confirmation. Seller represents and warrants that Seller holds the rights to all Green Attributes from the Unit(s), and Seller agrees to convey and hereby conveys all such Green Attributes to Buyer as included in the delivery of the Product from the Unit(s).

(2) What changes, if any, should be made to the standard terms and conditions to accommodate the use of tradable RECs for RPS compliance, even if you think no other changes are required in response to the questions in Section 3, above?

RESPONSE: None.

(3) What changes, if any, should be made to the standard terms and conditions to conform to Pub. Util. Code § 399.14(a)(2)(D), which provides in part that “A contract for the purchase of electricity generated by an eligible renewable energy resource shall, at a minimum, include the renewable energy credits associated with all electricity generation specified under the contract.”

RESPONSE: There is no need to make any changes. If a project has sold off its RECs, then it becomes a “null power” source and would not be considered an eligible renewable resource so the cited section of statute would not apply since the electricity being purchased is from a “null power” source, (notwithstanding the fact that the RECs that were created and sold from the project are RPS eligible).

(4) If any changes at all should be made to the standard terms and conditions, how should the RECs be treated that are associated with energy delivered under contracts using (a) the standard terms and conditions set forth in Attachment D-1, or (b) the standard terms and conditions set forth in Attachment D-2?

RESPONSE: The Buyer under these existing contracts owns two separate products: (1) the RECs; and (2) any tradable reporting rights associated with emissions offsets. Since WREGIS is a policy neutral system that will verify compliance with various RPS programs, RECs would be traded through WREGIS and used to satisfy California’s RPS requirements. If a separate mandatory reporting framework is established for emissions offsets, the Buyer would be able to utilize any emissions offsets associated with these existing contracts.

Evidentiary Hearings

RESPONSE: SDG&E does not feel that evidentiary hearings are required to address the issues described in this phase of the proceeding. The Commission is considering merely whether to enable the use of RECs for compliance – it is not creating the market with all of the rules necessary to set up a new trading regime. This policy question and the issue of how TRECs fit within existing and contemplated reporting and compliance schemes can be resolved without the need for hearings.

**III.
CONCLUSION**

SDG&E strongly supports development of a system of tradable RECs and encourages the Commission to move forward with implementation of this important RPS compliance option.

Respectfully submitted this 13th day of November, 2007.

/s/ Aimee M. Smith

AIMEE M. SMITH

101 Ash Street, HQ-12

San Diego, California 92101

Telephone: (619) 699-5042

Facsimile: (619) 699-5027

amsmith@sempra.com

Attorney for

SAN DIEGO GAS & ELECTRIC COMPANY

CERTIFICATE OF SERVICE

I hereby certify that a copy of **POST-WORKSHOP COMMENTS OF SAN DIEGO GAS & ELECTRIC COMPANY (U 902 E) CONCERNING TRADABLE RENEWABLE ENERGY CREDITS** has been electronically mailed to each party of record of the service list in R.06-02-012. Any party on the service list who has not provided an electronic mail address was served by placing copies in properly addressed and sealed envelopes and by depositing such envelopes in the United States Mail with first-class postage prepaid.

Copies were also sent via Federal Express to Administrative Law Judges Anne E. Simon and Burton Mattson and Commissioner Michael R. Peevey.

Executed this 13th day of November, 2007 at San Diego, California.

 /s/ Jenny Tjokro
Jenny Tjokro



CPUC Home

CALIFORNIA PUBLIC UTILITIES COMMISSION

Service Lists

**PROCEEDING: R0602012 - CPUC - PG&E, SDG&E,
 FILER: CPUC - PG&E, SDG&E, EDISON, ESPS, SMALL & MULTI-JURISDICTIONAL UTILITIES, CITY OF
 CHULA VISTA, CCSF
 LIST NAME: LIST
 LAST CHANGED: NOVEMBER 9, 2007**

[DOWNLOAD THE COMMA-DELIMITED FILE
 ABOUT COMMA-DELIMITED FILES](#)

[Back to Service Lists Index](#)

Parties

ENERGY AMERICA, LLC
 ONE STAMFORD PLAZA, 8TH FLOOR
 263 TRESSER BLVD.
 STAMFORD, CT 06901

WILLIAM CRONIN
 ENERGY AMERICA, LLC
 ONE STAMFORD FPLAZA, 8TH FLOOR
 263 TRESSER BLVD.
 STAMFORD, CT 06901

DANIEL V. GULINO
 RIDGEWOOD POWER MANAGEMENT, LLC
 947 LINWOOD AVENUE
 RIDGEWOOD, NJ 07450

PRAXAIR PLAINFIELD, INC.
 2711 CENTERVILLE ROAD, SUITE 400
 WILMINGTON, DE 19808

KEITH MC CREA
 ATTORNEY AT LAW
 SUTHERLAND, ASBILL & BRENNAN
 1275 PENNSYLVANIA AVENUE, NW
 WASHINGTON, DC 20004-2415

CAROL A. SMOOTS
 PERKINS COIE LLP
 607 FOURTEENTH STREET, NW, SUITE 800
 WASHINGTON, DC 20005

RHONE RESCH
 SOLAR ENERGY INDUSTRIES ASSOCIATION
 805 FIFTEENTH STREET, N.W., SUITE 510
 WASHINGTON, DC 20005

LARRY F. EISENSTAT
 DICKSTEIN SHAPIRO LLP
 1825 EYE STREET, NW
 WASHINGTON, DC 20006

RICHARD LEHFELDT
 DICKSTEIN SHAPIRO LLP

LISA M. DECKER
 CONSTELLATION ENERGY GROUP, INC.

1825 EYE STREET, NW
WASHINGTON, DC 20006

111 MARKET PLACE, SUITE 500
BALTIMORE, MD 21202

GARSON KNAPP
FPL ENERGY, LLC
770 UNIVERSE BLVD.
JUNO BEACH, FL 33408

OCCIDENTAL POWER SERVICES, INC.
5 GREENWAY PLAZA, SUITE 110
HOUSTON, TX 77046

APS ENERGY SERVICES COMPANY, INC.
400 E. VAN BUREN STREET, SUITE 750
PHOENIX, AZ 85004

JENINE SCHENK
APS ENERGY SERVICES
400 E. VAN BUREN STREET, SUITE 750
PHOENIX, AZ 85004

NEW WEST ENERGY
ISB665
BOX 61868
PHOENIX, AZ 85082-1868

RASHA PRINCE
SOUTHERN CALIFORNIA GAS COMPANY
555 WEST 5TH STREET, GT14D6
LOS ANGELES, CA 90013

DAVID L. HUARD
ATTORNEY AT LAW
MANATT, PHELPS & PHILLIPS, LLP
11355 WEST OLYMPIC BOULEVARD
LOS ANGELES, CA 90064

RANDALL W. KEEN
ATTORNEY AT LAW
MANATT PHELPS & PHILLIPS, LLP
11355 WEST OLYMPIC BLVD.
LOS ANGELES, CA 90064

CONSTELLATION NEW ENERGY, INC.
TWO CALIFORNIA PLAZA
350 SOUTH GRAND AVENUE, SUITE 3800
LOS ANGELES, CA 90071

3 PHASES ENERGY SERVICES
2100 SEPULVEDA BLVD., SUITE 37
MANHATTAN BEACH, CA 90266

MICHAEL MAZUR
CHIEF TECHNICAL OFFICER
3 PHASES RENEWABLES, LLC
2100 SEPULVEDA BLVD., SUITE 37
MANHATTAN BEACH, CA 90266

SUSAN MUNVES
ENERGY AND GREEN BLDG. PROG. ADMIN.
CITY OF SANTA MONICA
1212 5TH STREET, FIRST FLOOR
SANTA MONICA, CA 90401

DANIEL W. DOUGLASS
ATTORNEY AT LAW
DOUGLASS & LIDDELL
21700 OXNARD STREET, SUITE 1030
WOODLAND HILLS, CA 91367

GREGORY S. G. KLATT
DOUGLASS & LIDDELL
21700 OXNARD STREET, SUITE 1030
WOODLAND HILLS, CA 91367-8102

AMERICAN UTILITY NETWORK
10705 DEER CANYON DRIVE
ALTA LOMA, CA 91737

PAUL DELANEY
AMERICAN UTILITY NETWORK (A.U.N.)
10705 DEER CANYON DRIVE
ALTA LOMA, CA 91737

CATHY A. KARLSTAD
SOUTHERN CALIFORNIA EDISON COMPANY
2244 WALNUT GROVE AVE.
ROSEMEAD, CA 91770

WILLIAM V. WALSH
ATTORNEY AT LAW
SOUTHERN CALIFORNIA EDISON
2244 WALNUT GROVE AVE.
ROSEMEAD, CA 91770

SOCAL WATER/BEAR VALLEY ELECTRIC
630 EAST FOOTHILL BLVD.
SAN DIMAS, CA 91773

KEITH SWITZER
VP REGULATORY AFFAIRS
GOLDEN STATE WATER COMPANY
630 EAST FOOTHILL BLVD.
SAN DIMAS, CA 91773-9016

ANN MOORE
CITY OF CHULA VISTA
276 FOURTH AVENUE
CHULA VISTA, CA 91910

STRATEGIC ENERGY, LTD.
7220 AVENIDA ENCINAS, SUITE 120
CARLSBAD, CA 92009

AIMEE M. SMITH
ATTORNEY AT LAW
SEMPRA ENERGY
101 ASH STREET HQ13
SAN DIEGO, CA 92101

FREDERICK M. ORTLIEB
OFFICE OF CITY ATTORNEY
CITY OF SAN DIEGO
1200 THIRD AVENUE, SUITE 1100
SAN DIEGO, CA 92101

SEMPRA ENERGY SOLUTIONS
101 ASH STREET, HQ09
SAN DIEGO, CA 92101-3017

THEODORE ROBERTS
ATTORNEY AT LAW
SEMPRA GLOBAL
101 ASH STREET, HQ 13D
SAN DIEGO, CA 92101-3017

CORAL POWER, LLC
4445 EASTGATE MALL, SUITE 100
SAN DIEGO, CA 92121

REID A. WINTHROP
PILOT POWER GROUP, INC.
8910 UNIVERSITY CENTER LANE, SUITE 520
SAN DIEGO, CA 92122

THOMAS DARTON
PILOT POWER GROUP, INC.
SUITE 520
8910 UNIVERSITY CENTER LANE
SAN DIEGO, CA 92122

PILOT POWER GROUP, INC.
9320 CHESAPEAKE DRIVE, SUITE 112
SAN DIEGO, CA 92123

JOHN W. LESLIE
ATTORNEY AT LAW
LUCE, FORWARD, HAMILTON & SCRIPPS, LLP
11988 EL CAMINO REAL, SUITE 200
SAN DIEGO, CA 92130-2592

GLORIA BRITTON
ANZA ELECTRIC COOPERATIVE, INC.
58470 HWY 371
PO BOX 391909
ANZA, CA 92539

WILL PLAXICO
HELIOS ENERGY, LLC
31897 DEL OBISPO ST. SUITE 220
SAN JUAN CAPISTRANO, CA 92675

AOL UTILITY CORP.
12752 BARRETT LANE
SANTA ANA, CA 92705

KERRY EDEN
DEPARTMENT OF WATER
CITY OF CORONA DEPT. OF WATER & POWER
730 CORPORATION YARD WAY
CORONA, CA 92880

TAMLYN M. HUNT
ENERGY PROGRAM DIRECTOR
COMMUNITY ENVIRONMENTAL COUNCIL
26 W. ANAPAMU ST., 2/F
SANTA BARBARA, CA 93101

JOSEPH LANGENBERG
CENTRAL CALIFORNIA POWER
949 EAST ANNADALE AVE., A210
FRESNO, CA 93706

DAVID ORTH
KINGS RIVER CONSERVATION DISTRICT
4886 EAST JENSEN AVENUE
FRESNO, CA 93725

JANE H. TURNBULL
LEAGUE OF WOMEN VOTERS OF CALIFORNIA
64 LOS ALTOS SQUARE
LOS ALTOS, CA 94022

JANIS C. PEPPER
CLEAN POWER MARKETS, INC.
PO BOX 3206
LOS ALTOS, CA 94024

MARCEL HAWIGER
ATTORNEY AT LAW
THE UTILITY REFORM NETWORK
711 VAN NESS AVENUE, SUITE 350
SAN FRANCISCO, CA 94102

STEPHEN A. S. MORRISON
ATTORNEY AT LAW
CITY & COUNTY OF SAN FRANCISCO
OFFICE OF THE CITY ATTORNEY
CITY HALL. SUITE 234
SAN FRANCISCO, CA 94102

GRETCHEN T. DUMAS
CALIF PUBLIC UTILITIES COMMISSION
LEGAL DIVISION
ROOM 4300
505 VAN NESS AVENUE
SAN FRANCISCO, CA 94102-3214

NOEL OBIORA
CALIF PUBLIC UTILITIES COMMISSION
LEGAL DIVISION
ROOM 4107
505 VAN NESS AVENUE
SAN FRANCISCO, CA 94102-3214

THERESA L. MUELLER
ATTORNEY AT LAW
SAN FRANCISCO CITY ATTORNEY
CITY HALL, ROOM 234
SAN FRANCISCO, CA 94102-4682

MICHAEL A. HYAMS
POWER ENTERPRISE-REGULATORY AFFAIRS
SAN FRANCISCO PUBLIC UTILITIES COMM
1155 MARKET ST., 4TH FLOOR
SAN FRANCISCO, CA 94103

EVELYN KAHL
ATTORNEY AT LAW
ALCANTAR & KAHL, LLP
120 MONTGOMERY STREET, SUITE 2200
SAN FRANCISCO, CA 94104

ROD AOKI
ATTORNEY AT LAW
ALCANTAR & KAHL, LLP
120 MONTGOMERY STREET, SUITE 2200
SAN FRANCISCO, CA 94104

ARTHUR L. HAUBENSTOCK
PACIFIC GAS AND ELECTRIC COMPANY
77 BEALE STREET, B30A
SAN FRANCISCO, CA 94105

CHARLES MIDDLEKAUFF
ATTORNEY AT LAW
PACIFIC GAS AND ELECTRIC COMPANY
77 BEALE STREET
SAN FRANCISCO, CA 94105

WILLIAM H. CHEN
DIRECTOR, ENERGY POLICY WEST REGION
CONSTELLATION NEW ENERGY, INC.
SPEAR TOWER, 36TH FLOOR
ONE MARKET STREET
SAN FRANCISCO, CA 94105

BRIAN CRAGG
ATTORNEY AT LAW
GOODIN, MAC BRIDE, SQUERI, RITCHIE & DAY
505 SANSOME STREET, SUITE 900
SAN FRANCISCO, CA 94111

JAMES D. SQUERI
ATTORNEY AT LAW
GOODIN MACBRIDE SQUERI DAY & LAMPREY
505 SANSOME STREET, SUITE 900
SAN FRANCISCO, CA 94111

JOSEPH F. WIEDMAN
ATTORNEY AT LAW
GOODIN MACBRIDE SQUERI DAY & LAMPREY LLP
505 SANSOME STREET, SUITE 900
SAN FRANCISCO, CA 94111

KAREN E. BOWEN
WINSTON & STRAWN LLP
101 CALIFORNIA STREET, 39TH FLOOR

MICHAEL B. DAY
ATTORNEY AT LAW
GOODIN MACBRIDE SQUERI DAY & LAMPREY LLP

SAN FRANCISCO, CA 94111

505 SANSOME STREET, SUITE 900
SAN FRANCISCO, CA 94111

JOSEPH M. KARP
ATTORNEY AT LAW
WINSTON & STRAWN LLP
101 CALIFORNIA STREET
SAN FRANCISCO, CA 94111-5802

JEFFREY P. GRAY
ATTORNEY AT LAW
DAVIS WRIGHT TREMAINE, LLP
505 MONTGOMERY STREET, SUITE 800
SAN FRANCISCO, CA 94111-6533

STANDISH O'GRADY
FRIENDS OF KIRKWOOD ASSOCIATION
31 PARKER AVENUE
SAN FRANCISCO, CA 94118

MATHEW A. FOGELSON
PACIFIC GAS AND ELECTRIC COMPANY
PO BOX 7442, MC B30A-2487
SAN FRANCISCO, CA 94120-7442

SARA STECK MYERS
LAW OFFICES OF SARA STECK MYERS
122 28TH AVE.
SAN FRANCISCO, CA 94121

GABE PETLIN
3DEGREES
PRESIDIO OF SAN FRANCISCO
6 FUNSTON AVENUE
SAN FRANCISCO, CA 94129

JANICE G. HAMRIN
CENTER FOR RESOURCE SOLUTIONS
PRESIDIO BUILDING 97
PO BOX 29512
SAN FRANCISCO, CA 94129

EVELYN C. LEE
ATTORNEY
PACIFIC GAS AND ELECTRIC COMPANY
MAIL CODE B30A
PO BOX 770000
SAN FRANCISCO, CA 94177

JENNIFER CHAMBERLIN
STRATEGIC ENERGY, LLC
2633 WELLINGTON CT.
CLYDE, CA 94520

JOHN DUTCHER
VICE PRESIDENT - REGULATORY AFFAIRS
MOUNTAIN UTILITIES
3210 CORTE VALENCIA
FAIRFIELD, CA 94534-7875

WILLIAM H. BOOTH
ATTORNEY AT LAW
LAW OFFICE OF WILLIAM H. BOOTH
1500 NEWELL AVE., 5TH FLOOR
WALNUT CREEK, CA 94556

LINDA Y. SHERIF
ATTORNEY AT LAW
CALPINE CORPORATION
3875 HOPYARD ROAD, SUITE 345
PLEASANTON, CA 94588

JEREMY D. WEINSTEIN
ATTORNEY AT LAW
LAW OFFICES OF JEREMY D. WEINSTEIN
1512 BONANZA STREET
WALNUT CREEK, CA 94596

JODY S. LONDON
JODY LONDON CONSULTING
PO BOX 3629
OAKLAND, CA 94609

CLIFF CHEN
UNION OF CONCERNED SCIENTIST
2397 SHATTUCK AVENUE, STE 203
BERKELEY, CA 94704

GREGORY MORRIS
GREEN POWER INSTITUTE
2039 SHATTUCK AVE., SUITE 402
BERKELEY, CA 94704

NEAL DE SNOO
ENERGY OFFICE
CITY OF BERKELEY
2180 MILVIA AVENUE
BERKELEY, CA 94704

CLYDE MURLEY
1031 ORDWAY STREET
ALBANY, CA 94706

JP ROSS
VP STRATEGOC RELATIONSHIPS
SUNGEVITY
1625 SHATTUCK AVE., STE 210
BERKELEY, CA 94709

R. THOMAS BEACH
PRINCIPAL CONSULTANT
CROSSBORDER ENERGY
2560 NINTH STREET, SUITE 213A
BERKELEY, CA 94710-2557

L. JAN REID
COAST ECONOMIC CONSULTING
3185 GROSS ROAD
SANTA CRUZ, CA 95062

JOHN R. REDDING
ARCTURUS ENERGY CONSULTING
44810 ROSEWOOD TERRACE
MENDOCINO, CA 95460

JAMES WEIL
DIRECTOR
AGLET CONSUMER ALLIANCE
PO BOX 37
COOL, CA 95614

CAROLYN KEHREIN
ENERGY MANAGEMENT SERVICES
1505 DUNLAP COURT
DIXON, CA 95620-4208

JUDITH SANDERS
CALIFORNIA ISO
151 BLUE RAVINE ROAD
FOLSOM, CA 95630

JOHN DALESSI
NAVIGANT CONSULTING, INC.
3100 ZINFANDEL DRIVE, SUITE 600
RANCHO CORDOVA, CA 95670-6078

WILLIAM W. WESTERFIELD III
ATTORNEY AT LAW
ELLISON, SCHNEIDER & HARRIS L.L.P.
2015 H STREET
SACRAMENTO, CA 95814

ANDREW B. BROWN
ATTORNEY AT LAW
ELLISON, SCHNEIDER & HARRIS, LLP
2015 H STREET
SACRAMENTO, CA 95814

DAN L. CARROLL
ATTORNEY AT LAW
DOWNEY BRAND LLP
555 CAPITOL MALL, 10TH FLOOR
SACRAMENTO, CA 95814

DOUGLAS K. KERNER
ATTORNEY AT LAW
ELLISON, SCHNEIDER & HARRIS, LLP
2015 H STREET
SACRAMENTO, CA 95814

GREGGORY L. WHEATLAND
ELLISON, SCHNEIDER & HARRIS, L.L.P.
2015 H STREET
SACRAMENTO, CA 95814

JAN MCFARLAND
AMERICANS FOR SOLAR POWER
1100 11TH STREET, SUITE 323
SACRAMENTO, CA 95814

STEVEN KELLY
POLICY DIRECTOR
INDEPENDENT ENERGY PRODUCERS ASSN
1215 K STREET, SUITE 900
SACRAMENTO, CA 95814

DONALD N. FURMAN
SENIOR VICE PRESIDENT
PPM ENERGY, INC.
1125 NW COUCH STREET, SUITE 700
PORTLAND, OR 97209

RYAN FLYNN
ATTORNEY
PACIFICORP
825 NE MULTNOMAH, SUITE 1800
PORTLAND, OR 97232

KAREN MCDONALD
POWEREX CORPORATION
1400,
666 BURRAND STREET
VANCOUVER, BC V6C 2X8
CANADA

Information Only

SEAN J. FINNERTY
SR. VICE PRESIDENT
COMPETITIVE POWER VENTURES, INC.
35 BRAINTREE HILL OFFICE PARK, SUITE 400
BRAINTREE, MA 02184

DANIEL M. HECHT
ASSOCIATE GENERAL COUNSEL
SEMPRA ENERGY TRADING CORP.
58 COMMERCE ROAD
STAMFORD, CT 06902

WILLIAM P. SHORT
RIDGWOOD POWER MANAGEMENT, LLC
947 LINWOOD AVENUE
RIDGWOOD, NJ 07450

STEVEN S. SCHLEIMER
DIRECTOR, COMPLIANCE & REGULATORY AFFAIRS
BARCLAYS BANK, PLC
200 PARK AVENUE, FIFTH FLOOR
NEW YORK, NY 10166

AMY C. ROMA
HOGAN & HARTSON, LLP
555 THIRTEENTH STREET, N.W.
WASHINGTON, DC 20004

MARK L. PERLIS
DICKSTEIN SHAPIRO LLP
1825 EYE STREET, NW
WASHINGTON, DC 20006

MARY ANNE SULLIVAN
HAGAN & HARTSON, LLP
555 THIRTEENTH STREET, NW
WASHINGTON, DC 20006

CHRISTOPHER O'BRIEN
SHARP SOLAR
VP STRATEGY AND GOVERNMENT RELATIONS
3808 ALTON PLACE NW
WASHINGTON, DC 20016

VENKAT SURAVARAPU
ASSOCIATES DIRECTOR
CAMBRIDGE ENERGY RESEARCH ASSOCIATES
1150 CONNECTICUT AVENUE NW, STE. 201
WASHINGTON, DC 20036

KEVIN PORTER
EXETER ASSOCIATES, INC.
SUITE 310
5565 STERRETT PLACE
COLUMBIA, MD 21044

TODD JAFFE
ENERGY BUSINESS BROKERS AND CONSULTANTS
3420 KEYSER ROAD
BALTIMORE, MD 21208

RALPH E. DENNIS
DIRECTOR, REGULATORY AFFAIRS
FELLON-MCCORD & ASSOCIATES
CONSTELLATION NEWENERGY-GAS DIVISION
9960 CORPORATE CAMPUS DRIVE, STE 2000
LOUISVILLE, KY 40223

SAMARA MINDEL
REGULATORY AFFAIRS ANALYST
FELLON-MCCORD & ASSOCIATES
9960 CORPORATE CAMPUS DRIVE, SUITE 2000
LOUISVILLE, KY 40223

CATHY S. WOOLLUMS
MIDAMERICAN ENERGY HOLDINGS COMPANY
106 EAST SECOND STREET
DAVENPORT, IA 52801

STEVEN SIEGEL
STAFF ATTORNEY
CENTER FOR BIOLOGICAL DIVERSITY
3421 PARK PLACE
EVANSTON, IL 60201

JASON ABIECUNAS
BLACK & BEATCH GLOBAL RENEWABLE ENERGY
RENEWABLE ENERGY CONSULTANT
11401 LAMAR
OVERLAND PARK, KS 66211

ANN HENDRICKSON
COMMERCE ENERGY, INC.
222 WEST LAS COLINAS BLVD., SUITE 950E
IRVING, TX 75039

ROY D. MCCOY
MANAGER, REGULATORY SUPPORT & REPORTING
ELECTRIC RELIABILITY COUNCIL OF TEXAS
2705 W. LAKE DRIVE
TAYLOR, TX 76574

JOHN SNIFFEN
VICE PRESIDENT
ELEMENT MARKETS
1 SUGARCREEK BLVD., 201
SUGARLAND, TX 77478

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

STACY AGUAYO
APS ENERGY SERVICES
400 E. VAN BUREN STREET, SUITE 750
PHOENIX, AZ 85004

DAVID SAUL
PACIFIC SOLAR & POWER CORPORATION
2850 W. HORIZON RIDGE PKWY, SUITE 200
HENDERSON, NV 89052

SUSAN G. TRAUTMANN
SIERRA PACIFIC POWER COMPANY
6226 WEST SAHARA AVENUE
LAS VEGAS, NV 89151

CHRISTOPHER HILEN
ASSISTANT GENERAL COUNSEL
SIERRA PACIFIC POWER COMPANY
6100 NEIL ROAD
RENO, NV 89511

ELENA MELLO
SIERRA PACIFIC POWER COMPANY
6100 NEIL RD.
RENO, NV 89511

TREVOR DILLARD
SIERRA PACIFIC POWER COMPANY
PO BOX 10100
6100 NEIL ROAD, MS S4A50
RENO, NV 89520

JOE GRECO
CAITHNESS OPERATING COMPANY
9590 PROTOTYPE COURT, SUITE 200
RENO, NV 89521

ELIZABETH DOUGLASS
STAFF WRITER
LOS ANGELES TIMES
202 WEST FIRST STREET
LOS ANGELES, CA 90012

HARVEY EDER
PUBLIC SOLAR POWER COALITION
1218 12TH ST., 25
SANTA MONICA, CA 90401

STEVE CHADIMA
ENERGY INNOVATIONS, INC.
130 WEST UNION STREET
PASADENA, CA 91103

JACK MCNAMARA
ATTORNEY AT LAW
MACK ENERGY COMPANY
PO BOX 1380
AGOURA HILLS, CA 91376-1380

DAVID TOWNLEY
18 BASSWOOD AVENUE
OAK PARK, CA 91377

CASE ADMINISTRATION
SOUTHERN CALIFORNIA EDISON COMPANY
2244 WALNUT GROVE AVENUE
ROSEMEAD, CA 91770

FRANK W. HARRIS
REGULATORY ECONOMIST
SOUTHERN CALIFORNIA EDISON
2244 WALNUT GROVE
ROSEMEAD, CA 91770

GARY L. ALLEN
SOUTHERN CALIFORNIA EDISON
2244 WALNUT GROVE AVENUE
ROSEMEAD, CA 91770

JAMES B. WOODRUFF

LIZBETH MCDANNEL

SOUTHERN CALIFORNIA EDISON COMPANY
2244 WALNUT GROVE AVENUE, SUITE 342, G01
ROSEMEAD, CA 91770

2244 WALNUT GROVE AVE., QUAD 4D
ROSEMEAD, CA 91770

RONALD MOORE
GOLDEN STATE WATER/BEAR VALLEY ELECTRIC
630 EAST FOOTHILL BOULEVARD
SAN DIMAS, CA 91773

DAN PERKINS
ENERGY SMART HOMES
983 PHILLIPS ST.
VISTA, CA 92083

DANIEL A. KING
SEMPRA ENERGY
101 ASH STREET, HQ 12
SAN DIEGO, CA 92101

LINDA WRAZEN
SEMPRA ENERGY REGULATORY AFFAIRS
101 ASH STREET, HQ16C
SAN DIEGO, CA 92101

THOMAS P. CORR
SEMPRA ENERGY GLOBAL ENTERPRISES
101 ASH STREET, HQ16C
SAN DIEGO, CA 92101

YVONNE GROSS
REGULATORY POLICY MANAGER
SEMPRA ENERGY
101 ASH STREET, HQ08C
SAN DIEGO, CA 92101

DONALD C. LIDDELL, P.C.
DOUGLASS & LIDDELL
2928 2ND AVENUE
SAN DIEGO, CA 92103

MICHAEL SHAMES
ATTORNEY AT LAW
UTILITY CONSUMERS' ACTION NETWORK
3100 FIFTH AVENUE, SUITE B
SAN DIEGO, CA 92103

SCOTT J. ANDERS
RESEARCH/ADMINISTRATIVE DIRECTOR
UNIVERSITY OF SAN DIEGO SCHOOL OF LAW
5998 ALCALA PARK
SAN DIEGO, CA 92110

MARCIE MILNER
CORAL ENERGY RESOURCES, L P
4445 EASTGATE MALL, SUITE 100
SAN DIEGO, CA 92121

CENTRAL FILES
SAN DIEGO GAS & ELECTRIC
8330 CENTURY PARK COURT, CP31E
SAN DIEGO, CA 92123

DESPINA NIEHAUS
SAN DIEGO GAS AND ELECTRIC COMPANY
8330 CENTURY PARK COURT, CP32H
SAN DIEGO, CA 92123-1530

BILL MASON
SENIOR ASSET ADMINISTRATOR
ENXCO, INC.
PO BOX 581043
N. PALM SPRINGS, CA 92258

CARL STEEN
BAKER & HOSTETLER LLP
600 ANTON BLVD., SUITE 900
COSTA MESA, CA 92626

JUDE LEBLANC
BAKER & HOSTETLER LLP
600 ANTON BLVD., SUITE 900
COSTA MESA, CA 92626

MICHAEL J. GILMORE
INLAND ENERGY
SOUTH TOWER SUITE 606
3501 JAMBOREE RD
NEWPORT BEACH, CA 92660

HAROLD M. ROMANOWITZ
OAK CREEK ENERGY SYSTEMS, INC.
14633 WILLOW SPRINGS ROAD
MOJAVE, CA 93501

MARC D. JOSEPH
ATTORNEY AT LAW
ADAMS, BROADWELL, JOSEPH & CARDOZO
601 GATEWAY BLVD., STE. 1000

SOUTH SAN FRANCISCO, CA 94080

BILLY BLATTNER
 CPUC RELATIONS MANAGER
 SAN DIEGO GAS & ELECTRIC COMPANY
 601 VAN NESS AVENUE, SUITE 2060
 SAN FRANCISCO, CA 94102

DIANE I. FELLMAN
 ATTORNEY AT LAW
 FPL ENERGY, LLC
 234 VAN NESS AVENUE
 SAN FRANCISCO, CA 94102

NINA SUETAKE
 ATTORNEY AT LAW
 THE UTILITY REFORM NETWORK
 711 VAN NESS AVE., STE. 350
 SAN FRANCISCO, CA 94102

ROBERT FINKELSTEIN
 ATTORNEY AT LAW
 THE UTILITY REFORM NETWORK
 711 VAN NESS AVE., SUITE 350
 SAN FRANCISCO, CA 94102

DAN ADLER
 DIRECTOR, TECH AND POLICY DEVELOPMENT
 CALIFORNIA CLEAN ENERGY FUND
 5 THIRD STREET, SUITE 1125
 SAN FRANCISCO, CA 94103

BILL GOLOVE
 CHEVRON ENERGY SOLUTIONS
 345 CALIFORNIA STREET, 18TH FLOOR
 SAN FRANCISCO, CA 94104

DEVRA WANG
 NATURAL RESOURCES DEFENSE COUNCIL
 111 SUTTER STREET, 20TH FLOOR
 SAN FRANCISCO, CA 94104

DOUGLAS E. COVER
 ENVIRONMENTAL SCIENCE ASSOCIATES
 225 BUSH STREET, SUITE 1700
 SAN FRANCISCO, CA 94104

JAMES STACK
 FREEMAN, SULLIVAN & CO.
 101 MONTGOMERY ST. 15TH FLOOR
 SAN FRANCISCO, CA 94104

KAREN TERRANOVA
 ALCANTAR & KAHL, LLP
 120 MONTGOMERY STREET, STE 2200
 SAN FRANCISCO, CA 94104

SEEMA SRINIVASAN
 ATTORNEY AT LAW
 ALCANTAR & KAHL, LLP
 120 MONTGOMERY STREET, SUITE 2200
 SAN FRANCISCO, CA 94104

SETH D. HILTON
 STOEL RIVES
 111 SUTTER ST., SUITE 700
 SAN FRANCISCO, CA 94104

SNULLER PRICE
 ENERGY AND ENVIRONMENTAL ECONOMICS
 101 MONTGOMERY, SUITE 1600
 SAN FRANCISCO, CA 94104

ASHLEE M. BONDS
 THELEN REID BROWN RAYSMAN&STEINER LLP
 SUITE 1800
 101 SECOND STREET
 SAN FRANCISCO, CA 94105

EDWARD V. KURZ
 ATTORNEY AT LAW
 PACIFIC GAS AND ELECTRIC COMPANY
 77 BEALE ST., B30A
 SAN FRANCISCO, CA 94105

GRAIG COOPER
 55 2ND STREET, SUITE 525
 SAN FRANCISCO, CA 94105

LENNY HOCHSCHILD
 EVOLUTION MARKETS, LLC
 RENEWABLE ENERGY MARKETS
 425 MARKET STREET, SUITE 2200
 SAN FRANCISCO, CA 94105

MELANIE FALLS
 COMPETITIVE POWER VENTURES, INC.
 55 SECOND STREET, SUITE 525
 SAN FRANCISCO, CA 94105

PETER V. ALLEN
THELEN REID BROWN RAYSMAN & STEINER
101 SECOND STREET, SUITE 1800
SAN FRANCISCO, CA 94105

REGULATORY FILE ROOM
PACIFIC GAS AND ELECTRIC COMPANY
77 BEALE STREET, B30A
SAN FRANCISCO, CA 94105

SHERIDAN J. PAUKER
WILSON SONSINI GOODRICH & ROSATI
SPEAR TOWER, SUITE 3300
ONE MARKET ST
SAN FRANCISCO, CA 94105

VALERIE WINN
PROJECT MANAGER
PACIFIC GAS & ELECTRIC
77 BEALE STREET, B9A
SAN FRANCISCO, CA 94105

NIELS KJELLUND
PACIFIC GAS AND ELECTRIC COMPANY
77 BEALE STREET, MAIL CODE B9A
SAN FRANCISCO, CA 94105-1814

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

CALIFORNIA ENERGY MARKETS
517-B POTRERO AVE.
SAN FRANCISCO, CA 94110-1431

JANINE L. SCANCARELLI
ATTORNEY AT LAW
FOLGER, LEVIN & KAHN, LLP
275 BATTERY STREET, 23RD FLOOR
SAN FRANCISCO, CA 94111

JUDY PAU
DAVIS WRIGHT TREMAINE LLP
505 MONTGOMERY STREET, SUITE 800
SAN FRANCISCO, CA 94111-6533

ROBERT B. GEX
ATTORNEY AT LAW,
DAVIS WRIGHT TREMAINE LLP
505 MONTGOMERY STREET, SUITE 800
SAN FRANCISCO, CA 94111-6533

LISA WEINZIMER
ASSOCIATE EDITOR
PLATTS MCGRAW-HILL
695 NINTH AVENUE, NO. 2
SAN FRANCISCO, CA 94118

LAW DEPARTMENT FILE ROOM
PACIFIC GAS AND ELECTRIC COMPANY
PO BOX 7442
SAN FRANCISCO, CA 94120-7442

ARNO HARRIS
RECURRENT ENERGY, INC.
220 HALLECK ST., SUITE 220
SAN FRANCISCO, CA 94129

ED LUCHA
CASE COORDINATOR
PACIFIC GAS AND ELECTRIC COMPANY
PO BOX 770000, MAIL CODE B9A
SAN FRANCISCO, CA 94177

GRACE LIVINGSTON-NUNLEY
ASSISTANT PROJECT MANAGER
PACIFIC GAS AND ELECTRIC COMPANY
PO BOX 770000 MAIL CODE B9A
SAN FRANCISCO, CA 94177

KATE BEARDSLEY
PG&E
MAILCODE B9A
PO BOX 770000
SAN FRANCISCO, CA 94177

MAGGIE CHAN
PG&E
MAILCODE B9A
PO BOX 770000
SAN FRANCISCO, CA 94177

STEPHANIE LA SHAWN
PACIFIC GAS AND ELECTRIC COMPANY

ROBIN J. WALTHER
1380 OAK CREEK DRIVE, NO. 316

PO BOX 770000, MAIL CODE B9A
SAN FRANCISCO, CA 94177

PALO ALTO, CA 94304-2016

NICOLAS PROCOS
ALAMEDA POWER & TELECOM
2000 GRAND STREET
ALAMEDA, CA 94501-0263

KEITH WHITE
931 CONTRA COSTA DRIVE
EL CERRITO, CA 94530

JACK PIGOTT
OPTISOLAR, INC
31302 HUNTSWOOD AVENUE
HAYWARD, CA 94544

ANDREW J. VAN HORN
VAN HORN CONSULTING
12 LIND COURT
ORINDA, CA 94563

RICK C. NOGER
PRAXAIR PLAINFIELD, INC.
2678 BISHOP DRIVE
SAN RAMON, CA 94583

AVIS KOWALEWSKI
CALPINE CORPORATION
3875 HOPYARD ROAD, SUITE 345
PLEASANTON, CA 94588

KEVIN DUGGAN
CALPINE COPRORATION
3875 HOPYARD ROAD, SUITE 345
PLEASANTON, CA 94588

PETER W. HANSCHEN
ATTORNEY AT LAW
MORRISON & FOERSTER, LLP
101 YGNACIO VALLEY ROAD, SUITE 450
WALNUT CREEK, CA 94596

PATRICIA THOMPSON
SUMMIT BLUE CONSULTING
2920 CAMINO DIABLO, SUITE 210
WALNUT CREEK, CA 94597

RYAN PLETKA
RENEWABLE ENERGY PROJECT MANAGER
BLACK & VEATCH
2999 OAK ROAD, SUITE 490
WALNUT CREEK, CA 94597

PHILIPPE AUCLAIR
11 RUSSELL COURT
WALNUT CREEK, CA 94598

WILLIAM F. DIETRICH
ATTORNEY AT LAW
DIETRICH LAW
2977 YGNACIO VALLEY ROAD, 613
WALNUT CREEK, CA 94598-3535

NELLIE TONG
KEMA, INC.
492 NINTH STREET, SUITE 220
OAKLAND, CA 94607

RAMONA GONZALEZ
EAST BAY MUNICIPAL UTILITY DISTRICT
375 ELEVENTH STREET, M/S NO. 205
OAKLAND, CA 94607

PAUL D. HUNT
4929 WEBSTER STREET
OAKLAND, CA 94609-2116

PAUL FENN
LOCAL POWER
4281 PIEDMONT AVE.
OAKLAND, CA 94611

MRW & ASSOCIATES, INC.
1814 FRANKLIN STREET, SUITE 720
OAKLAND, CA 94612

BARRY H. EPSTEIN
FITZGERALD, ABBOTT & BEARDSLEY, LLP
1221 BROADWAY, 21ST FLOOR
OAKLAND, CA 94612

CYNTHIA WOOTEN
LUMENX CONSULTING, INC.
1126 DELAWARE STREET
BERKELEY, CA 94702

REED V. SCHMIDT
BARTLE WELLS ASSOCIATES
1889 ALCATRAZ AVENUE
BERKELEY, CA 94703-2714

ERIC LARSEN
ENVIRONMENTAL SCIENTIST
RCM INTERNATIONAL, L.L.C.
PO BOX 4716
BERKELEY, CA 94704

JANICE LIN
MANAGING PARTNER
STRATEGEN CONSULTING LLC
146 VICENTE ROAD
BERKELEY, CA 94705

BRENDA LEMAY
DIRECTOR OF PROJECT DEVELOPMENT
HORIZON WIND ENERGY
1600 SHATTUCK, SUITE 222
BERKELEY, CA 94709

NANCY RADER
CALIFORNIA WIND ENERGY ASSOCIATION
2560 NINTH STREET, SUITE 213A
BERKELEY, CA 94710

RYAN WISER
BERKELEY LAB
MS-90-4000
ONE CYCLOTRON ROAD
BERKELEY, CA 94720

BRAD BAUER
MP2CAPITAL
1101 FIFTH AVENUE, SUITE 360
SAN RAFAEL, CA 94901

MICHAEL LAINE
MP2CAPITAL
1101 5TH AVENUE, STE. 360
SAN RAFAEL, CA 94901

WHITNEY BARDWICK
MP2 CAPITAL
1101 5TH AVENUE, SUITE 360
SAN RAFAEL, CA 94901

BRIAN C. FRECKMANN
C/O FOUNDATION PARTNERS
100 DRAKES LANDING ROAD NO. 125
GREENBRAE, CA 94904

DAI OWEN
607 VIA CASITAS
GREENBRAE, CA 94904

LYNN M. ALEXANDER
LMA CONSULTING
129 REDWOOD AVENUE
CORTE MADERA, CA 94925

C. SUSIE BERLIN
MCCARTHY & BERLIN LLP
100 PARK CENTER PLAZA, STE. 501
SAN JOSE, CA 95113

DAVID OLIVARES
ELECTRIC RESOURCE
MODESTO IRRIGATION DISTRICT
PO BOX 4060
MODESTO, CA 95352

THOMAS S KIMBALL
MODESTO IRRIGATION DISTRICT
1231 11TH STREET
MODESTO, CA 95352-4060

JOY A. WARREN
ATTORNEY AT LAW
MODESTO IRRIGATION DISTRICT
1231 11TH STREET
MODESTO, CA 95354

BARBARA R. BARKOVICH
BARKOVICH & YAP, INC.
44810 ROSEWOOD TERRACE
MENDOCINO, CA 95460

RICHARD MCCANN
M.CUBED
2655 PORTAGE BAY ROAD, SUITE 3
DAVIS, CA 95616

DAVID MORSE
1411 W, COVELL BLVD., SUITE 106-292
DAVIS, CA 95616-5934

LEGAL AND REGULATORY DEPARTMENT
CALIFORNIA ISO
151 BLUE RAVINE ROAD
FOLSOM, CA 95630

GRANT A. ROSENBLUM
STAFF COUNSEL
CALIFORNIA ISO
151 BLUE RAVINE ROAD
FOLSOM, CA 95630

SAEED FARROKHPAY
FEDERAL ENERGY REGULATORY COMMISSION
110 BLUE RAVINE RD., SUITE 107
FOLSOM, CA 95630

DENNIS W. DE CUIR
ATTY AT LAW
A LAW CORPORATION
2999 DOUGLAS BLVD., SUITE 325
ROSEVILLE, CA 95661

KEVIN DAVIES
SOLAR DEVELOPMENT INC.
2424 PROFESSIONAL DR.
ROSEVILLE, CA 95661-7773

DAVID OLIVER
NAVIGANT CONSULTING
3100 ZINFANDEL DRIVE, SUITE 600
RANCHO CORDOVA, CA 95670

KIRBY DUSEL
NAVIGANT CONSULTING, INC.
3100 ZINFANDEL DRIVE, SUITE 600
RANCHO CORDOVA, CA 95670

ERIN RANSLow
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

DOUG DAVIE
DAVIE CONSULTING, LLC
3390 BEATTY DRIVE
EL DORADO HILLS, CA 95762

JEDEDIAH J. GIBSON
ELLISON SCHNEIDER & HARRIS LLP
2015 H STREET
SACRAMENTO, CA 95811

BRUCE MCLAUGHLIN
ATTORNEY AT LAW
BRAUN & BLAISING, P.C.
915 L STREET SUITE 1420
SACRAMENTO, CA 95814

DANIELLE MATTHEWS SEPERAS
CALPINE CORPORATION
1127 11TH STREET, SUITE 242
SACRAMENTO, CA 95814

PATRICK STONER
PROGRAM DIRECTOR
LOCAL GOVERNMENT COMMISSION
1303 J STREET, SUITE 250
SACRAMENTO, CA 95814

RYAN BERNARDO
BRAUN & BLAISING, P.C.
915 L STREET, SUITE 1270
SACRAMENTO, CA 95814

SCOTT BLAISING
ATTORNEY AT LAW
BRAUN & BLAISING, P.C.
915 L STREET, SUITE 1420
SACRAMENTO, CA 95814

LYNN M. HAUG
ATTORNEY AT LAW
ELLISON, SCHNEIDER & HARRIS, LLP

ROB ROTH
SACRAMENTO MUNICIPAL UTILITY DISTRICT
6201 S STREET MS 75

2015 H STREET
SACRAMENTO, CA 95814-3512

SACRAMENTO, CA 95817

MARCO LEMES
SMUD
6201 S STREET MS B257
SACRAMENTO, CA 95817-1899

MICHAEL DEANGELIS
SACRAMENTO MUNICIPAL UTILITY DISTRICT
6201 S STREET
SACRAMENTO, CA 95817-1899

VIKKI WOOD
SACRAMENTO MUNICIPAL UTILITY DISTRICT
6301 S STREET, MS A204
SACRAMENTO, CA 95817-1899

RICH LAUCKHART
GLOBAL ENERGY
SUITE 200
2379 GATEWAY OAKS DR.
SACRAMENTO, CA 95833

KAREN LINDH
LINDH & ASSOCIATES
7909 WALERGA ROAD, NO. 112, PMB 119
ANTELOPE, CA 95843

CATHIE ALLEN
CA STATE MGR.
PACIFICORP
825 NE MULTNOMAH STREET, SUITE 2000
PORTLAND, OR 97232

KYLE L. DAVIS
PACIFICORP
825 NE MULTNOMAH ST., SUITE 2000
PORTLAND, OR 97232

CLARE BREIDENICH
224 1/2 24TH AVE. EAST
SEATTLE, WA 98112

DONALD SCHOENBECK
RCS, INC.
900 WASHINGTON STREET, SUITE 780
VANCOUVER, WA 98660

TIMOTHY CASTILLE
LANDS ENERGY CONSULTING, INC.
18109 SE 42ND STREET
VANCOUVER, WA 98683

PETER BREHM
INFINIA CORPORATION
6811 OKANOGAN PLACE
KENNEWICK, WA 99336

State Service

AMANDA C. BAKER
CALIF PUBLIC UTILITIES COMMISSION
ENERGY RESOURCES BRANCH
AREA 4-A
505 VAN NESS AVENUE
SAN FRANCISCO, CA 94102-3214

ANDREW SCHWARTZ
CALIF PUBLIC UTILITIES COMMISSION
EXECUTIVE DIVISION
ROOM 5217
505 VAN NESS AVENUE
SAN FRANCISCO, CA 94102-3214

ANNE E. SIMON
CALIF PUBLIC UTILITIES COMMISSION
DIVISION OF ADMINISTRATIVE LAW JUDGES
ROOM 5024
505 VAN NESS AVENUE
SAN FRANCISCO, CA 94102-3214

ANNE GILLETTE
CALIF PUBLIC UTILITIES COMMISSION
ENERGY RESOURCES BRANCH
AREA 4-A
505 VAN NESS AVENUE
SAN FRANCISCO, CA 94102-3214

BETH MOORE

BRIAN D. SCHUMACHER

CALIF PUBLIC UTILITIES COMMISSION
ELECTRICITY RESOURCES & PRICING BRANCH
ROOM 4103
505 VAN NESS AVENUE
SAN FRANCISCO, CA 94102-3214

CALIF PUBLIC UTILITIES COMMISSION
ENERGY DIVISION
AREA 4-A
505 VAN NESS AVENUE
SAN FRANCISCO, CA 94102-3214

BURTON MATTSON
CALIF PUBLIC UTILITIES COMMISSION
DIVISION OF ADMINISTRATIVE LAW JUDGES
ROOM 5104
505 VAN NESS AVENUE
SAN FRANCISCO, CA 94102-3214

CATHLEEN A. FOGEL
CALIF PUBLIC UTILITIES COMMISSION
ENERGY RESOURCES BRANCH
AREA 4-A
505 VAN NESS AVENUE
SAN FRANCISCO, CA 94102-3214

CHERYL LEE
CALIF PUBLIC UTILITIES COMMISSION
ENERGY DIVISION
AREA 4-A
505 VAN NESS AVENUE
SAN FRANCISCO, CA 94102-3214

DONALD R. SMITH
CALIF PUBLIC UTILITIES COMMISSION
ELECTRICITY RESOURCES & PRICING BRANCH
ROOM 4209
505 VAN NESS AVENUE
SAN FRANCISCO, CA 94102-3214

DOROTHY DUDA
CALIF PUBLIC UTILITIES COMMISSION
DIVISION OF ADMINISTRATIVE LAW JUDGES
ROOM 5109
505 VAN NESS AVENUE
SAN FRANCISCO, CA 94102-3214

ELLEN S. LEVINE
CALIF PUBLIC UTILITIES COMMISSION
LEGAL DIVISION
ROOM 5028
505 VAN NESS AVENUE
SAN FRANCISCO, CA 94102-3214

JACLYN MARKS
CALIF PUBLIC UTILITIES COMMISSION
EXECUTIVE DIVISION
ROOM 5306
505 VAN NESS AVENUE
SAN FRANCISCO, CA 94102-3214

JULIE A. FITCH
CALIF PUBLIC UTILITIES COMMISSION
DIVISION OF STRATEGIC PLANNING
ROOM 5119
505 VAN NESS AVENUE
SAN FRANCISCO, CA 94102-3214

JULIE HALLIGAN
CALIF PUBLIC UTILITIES COMMISSION
CONSUMER PROTECTION AND SAFETY DIVISION
ROOM 2203
505 VAN NESS AVENUE
SAN FRANCISCO, CA 94102-3214

LOUIS M. IRWIN
CALIF PUBLIC UTILITIES COMMISSION
ELECTRICITY RESOURCES & PRICING BRANCH
ROOM 4209
505 VAN NESS AVENUE
SAN FRANCISCO, CA 94102-3214

MARK R. LOY
CALIF PUBLIC UTILITIES COMMISSION
ENERGY COST OF SERVICE & NATURAL GAS BRA
ROOM 4205
505 VAN NESS AVENUE
SAN FRANCISCO, CA 94102-3214

PAUL DOUGLAS
CALIF PUBLIC UTILITIES COMMISSION
ENERGY RESOURCES BRANCH
AREA 4-A
505 VAN NESS AVENUE
SAN FRANCISCO, CA 94102-3214

SARA M. KAMINS
CALIF PUBLIC UTILITIES COMMISSION
ENERGY RESOURCES BRANCH
AREA 4-A
505 VAN NESS AVENUE
SAN FRANCISCO, CA 94102-3214

SEAN A. SIMON
CALIF PUBLIC UTILITIES COMMISSION
ENERGY RESOURCES BRANCH
AREA 4-A
505 VAN NESS AVENUE
SAN FRANCISCO, CA 94102-3214

SUZANNE KOROSEC
CALIFORNIA ENERGY COMMISSION
MS-31
1516 9TH STREET
SACRAMENTO, CA 95184

JAMES MCMAHON
SENIOR ENGAGEMENT MANAGER
NAVIGANT CONSULTING, INC.
3100 ZINFANDEL DRIVE, SUITE 600
RANCHO CORDOVA, CA 95670-6078

CLARE LAUFENBERG
CALIFORNIA ENERGY COMMISSION
1516 NINTH STREET, MS 46
SACRAMENTO, CA 95814

HEATHER RAITT
CALIFORNIA ENERGY COMMISSION
1516 9TH STREET, MS 45
SACRAMENTO, CA 95814

KATE ZOCCHETTI
CALIFORNIA ENERGY COMMISSION
1516 9TH STREET, MS-45
SACRAMENTO, CA 95814

ROSS MILLER
CALIFORNIA ENERGY COMMISSION
1516 9TH STREET
SACRAMENTO, CA 95814

BILL KNOX
CALIFORNIA ENERGY COMMISSION
1516 NINTH STREET, MS 45
SACRAMENTO, CA 95814-5504

HOLLY B. CRONIN
STATE WATER PROJECT OPERATIONS DIV
CALIFORNIA DEPARTMENT OF WATER RESOURCES
3310 EL CAMINO AVE., LL-90
SACRAMENTO, CA 95821

[TOP OF PAGE](#)
[BACK TO INDEX OF SERVICE LISTS](#)