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

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

Rulemaking 06-02-012
(Filed February 16, 2006)

**POST-WORKSHOP REPLY COMMENTS OF THE UNION OF CONCERNED
SCIENTISTS ON TRADABLE RENEWABLE ENERGY CREDITS**

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POST-WORKSHOP REPLY COMMENTS OF THE UNION OF CONCERNED SCIENTISTS ON TRADABLE RENEWABLE ENERGY CREDITS

I. INTRODUCTION AND SUMMARY

Pursuant to the October 16, 2007 ruling of Administrative Law Judge Simon (“ALJ Ruling”), and to the November 21, 2007 ALJ ruling revising the schedule for post-workshop comments, the Union of Concerned Scientists (“UCS”) respectfully submits these post-workshop reply comments on tradable renewable energy credits (“RECs”).

In these comments, UCS responds to parties’ opening post-workshop comments on the use of tradable RECs for Renewables Portfolio Standard (“RPS”) compliance, particularly with regard to three issues: limits on tradable REC usage, REC price caps and cost recovery, and the greenhouse gas (“GHG”) attributes of RECs. In summary, UCS’s reply comments elaborate on the following points:

- **Appropriate Limits on the Use of Tradable RECs for RPS Compliance Will Maintain the Benefits of the RPS Program and Will Not Decrease Liquidity or Raise Renewable Prices**
- **The Continued Disagreement Over the Potential Benefits of Tradable RECs Suggests that the Commission Should Adopt Appropriate Limits on Their Use**
- **The Commission Should Establish a Price Cap of \$50 Per REC or a Reasonableness Benchmark for Pre-Approval of All REC Purchases**
- **The Commission Should Determine the GHG Attributes of RECs in Parallel with Other Decisions Concerning the Design of Electric Sector GHG Regulations**

II. REPLIES TO PARTIES’ OPENING COMMENTS

- A. Appropriate Limits on the Use of Tradable RECs for RPS Compliance will Maintain the Benefits of the RPS Program and Will Not Decrease Liquidity or Raise Renewable Prices**

Several parties contend that the staff proposal's usage limits on tradable RECs will reduce liquidity and increase REC prices. For example, AReM/WPTF state that "Having fewer RECs available in the market makes the market less liquid. REC prices will be higher because of a smaller supply, and subject to more volatility."¹ SDG&E asserts that "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 financing."²

Parties that oppose setting limits on the use of tradable RECs seem to suggest that any limits will decrease REC supply and increase prices, when limits will actually accomplish the obverse. In reality, any limits that the Commission establishes to govern the use of tradable RECs will not reduce the near-term *supply* of RECs – which almost all parties acknowledge will be very small – but modest REC limits will reduce buyers' *demand* for RECs. By limiting the amount of tradable RECs that LSEs can use for compliance, the Commission will constrain demand for RECs that are likely to be expensive, at least in the near term, and manage ratepayer exposure to potentially volatile REC and conventional energy prices. UCS agrees with SCE's statement that setting limits on the use of tradable RECs for RPS compliance "is unlikely to have any adverse or chilling effect on the development of a market for RECs because of the substantial demand for RECs and the relatively limited supply."³

In its opening post-workshop comments, UCS proposed that the Commission require at least 0.75% of an LSE's prior year retail sales to be met through long-term bundled contracts or bundled contracts with new facilities as a condition for using unbundled RECs for RPS compliance.⁴ Given the shortage of RECs available to meet LSE RPS compliance obligations in the 2008-2011 timeframe, the modest limits that UCS proposes will not reduce REC supply or increase REC prices in the near term. Assuming that an LSE must increase its annual procurement of renewables by 1.5% of its retail sales per year – a conservative estimate considering that most LSEs are well short of the 20% by 2010 compliance obligation – UCS's proposed limits will enable that LSE

¹ AReM/WPTF at 17.

² SDG&E at 12.

³ SCE at 5.

⁴ UCS at 10-11.

to purchase unbundled RECs for half of its annual incremental RPS procurement. As the state gains more experience and familiarity with using tradable RECs for RPS compliance, the Commission can choose to relax limits on REC usage if it finds that doing so is consistent with meeting RPS program goals. In addition, the Commission may wish to consider establishing looser limits on REC trading for ESPs and small utilities, as these LSEs are likely to depend more heavily than large IOUs on the use of unbundled REC purchases to satisfy their RPS obligations.

By adopting UCS's proposed limits on the use of tradable RECs for RPS compliance, the Commission will ensure that the focus of the RPS program remains on developing new renewable resources while providing additional flexibility to both LSEs and renewable developers. UCS believes that tradable RECs can provide substantial benefits to the RPS program, but recommends that the Commission strengthen the REC usage limits in the staff proposal to ensure that REC trading rules do not permit LSEs to meet the vast majority of their RPS compliance obligations through unbundled REC transactions. UCS shares Calpine's view that "The minimum quota of the straw proposal is inadequate to the purpose of promoting the development of more renewable resources,"⁵ and also agrees with TURN that limits on REC trading are appropriate "so as not to reduce the motivation of LSEs (at least the IOUs) to negotiate and sign long-term contracts."⁶ Unreasonably large expenditures of LSE funds on short-term REC purchases will inevitably detract from the long-term renewables contracts that are necessary to meet RPS goals.

It bears mention that several state RPS policies that originally did not include any limits on REC trading have since established minimum long-term contract quotas to avoid overdependence on the short-term REC purchases and to drive the development of new renewable projects.⁷ Similarly, the Oregon RPS, which was passed earlier this year, limits the use of unbundled RECs to 20% of a large IOU's RPS compliance.⁸

⁵ Calpine at 9.

⁶ TURN at 10.

⁷ Connecticut, New York, and Rhode Island recently established minimum long-term contract requirements. Legislation that would establish minimum contract requirements is pending in Massachusetts. See <http://www.ucsusa.org/res> and <http://www.mass.gov/legis/bills/house/185/ht04pdf/ht04365.pdf>.

⁸ See http://www.oregon.gov/ENERGY/RENEW/docs/Oregon_RPS_Summary_Oct2007.pdf

B. The Continued Disagreement Over the Potential Benefits of Tradable RECs Suggests that the Commission Should Adopt Appropriate Limits on Their Use

UCS observes that, even after multiple sets of comments and three days of workshops on the issue, significant disagreement over the benefits of REC trading persist. Some parties, including Calpine, DRA, and TURN, appear to view RECs as useful flexible compliance mechanisms for balancing RPS supply among LSEs, but are skeptical that RECs will result in significant additional development of renewables or provide substantial prospects for merchant renewable development to serve the state. Others parties, such as Evolution Markets and IEP, insist that RECs are critical to supporting and financing new renewable development, and that the California RPS program will experience higher prices and diminished renewable development if tradable RECs are not allowed. Despite the substantial record developed on tradable RECs in this proceeding, UCS submits that the impacts of REC trading on RPS compliance costs and new renewable development are still largely unknown, particularly beyond the 2008-2011 timeframe (there appears, however, to be growing agreement that REC prices are likely to be a high-priced and limited means of RPS compliance in the 2008-2011 timeframe). Because the impacts of REC trading on the California RPS program are subject to a variety of unpredictable factors (e.g., LSE and renewable developer behavior, balance between renewable supply and demand, future cost of renewable generation relative to conventional generation), future REC prices and impacts on renewable development are to some degree inherently unpredictable.

As previously stated, UCS supports the use of tradable RECs, and believes that RECs will help California to achieve its RPS objectives. However, the lack of certainty over the price impacts of REC trading and the effects on new renewable development evinced in parties' comments suggest that reasonable limits on the use of tradable RECs for RPS compliance are justified. As a starting point, the Commission should adopt UCS's proposed change to the staff proposal's minimum quota mechanism. As the state gains more experience with REC trading, UCS would fully support relaxing the

restrictions on tradable REC usage if the Commission finds that permitting a larger share of RECs to be used for RPS compliance would further the goals of the RPS program.

C. The Commission Should Establish a Price Cap of \$50 Per REC or a Reasonableness Benchmark for Pre-Approval of All REC Purchases

UCS is concerned by some parties' arguments against imposing a price cap for REC transactions. SDG&E suggests that a price cap is not required for RECs "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."⁹ In making this claim, SDG&E appears to ignore the statutory language stating that the limit on "above-market" RPS procurement costs does not apply to unbundled REC purchases.¹⁰ As stated in its opening post-workshop comments, UCS believes that a REC price cap that is consistent with the non-compliance penalty of \$50/MWh, if adopted in combination with UCS's proposed limits on tradable REC usage, would provide greater confidence in the REC market to renewable developers while protecting energy consumers from excessive exposure to energy price and REC price volatility.¹¹

UCS is also troubled by SCE's suggestion that an LSE should be willing to pay up to \$84.99, assuming the existence of a \$35 price cap, for an unbundled REC to reduce its exposure to financial penalties by a single cent.¹² SCE apparently presumes that a price cap of \$35 signifies that \$35 of a hypothetical \$84.99 REC purchase would be recoverable in rates. UCS disputes this interpretation of the staff proposal's price cap; a \$35 price cap on REC purchases should limit LSE cost recovery of any REC purchase above \$35 to zero. To prevent the disadvantageous scenario that SCE posits, the Commission should stipulate that a REC price cap represents a hard cap on prices, not merely a cap on LSE cost recovery.

This objection notwithstanding, SCE is likely correct in noting that "establishing an *a priori* cap will necessary [sic] limit transactions to that price," at least considering

⁹ SDG&E at 17.

¹⁰ P.U. Code Sec. 399.15(d)(2)(D)

¹¹ UCS at 7.

¹² SCE at 14.

the near-term shortage of REC supply.¹³ In light of this possibility, a reasonableness benchmark of less than \$50/MWh for REC purchases might be preferable to a price cap if *all* REC purchases by LSEs over which the Commission maintains ratesetting authority are submitted to the Commission for pre-approval. UCS concurs with PG&E that “short-term REC contracts should follow the approval process established in R.06-02-012 for short-term bundled contracts.”¹⁴ If the Commission decides to allow cost recovery for “spot” LSE REC purchases without Commission pre-approval, UCS believes that a price cap should be adopted to reduce administrative burden and facilitate cost recovery of prudent REC transactions.

D. The Commission Should Determine the GHG Attributes of RECs in Parallel with Other Decisions Concerning the Design of Electric Sector GHG Emissions

UCS strongly recommends that the Commission determine the GHG attributes of RECs in conjunction with other decisions concerning the design of GHG emissions regulations for the electric sector. However, multiple parties contend that the Commission should separate GHG attributes from RECs or find that RECs do not include any GHG value. AReM/WPTF claim that bundling GHG attributes with RECs “will likely render RECs incompatible with future GHG market cap and trade systems, and result in under-valuation of the renewable resource.”¹⁵ SCE contends that “unbundled RECs used for the purposes of RPS compliance should be entirely separate from compliance with the GHG emissions reduction goals established by AB 32,” and asserts that “This approach provides the most efficient and logical solution to the difficulties associated with the authorization of RECs and the uncertainties surrounding GHG regulation.”¹⁶

UCS disagrees, and submits that any attempt to determine “the most efficient and logical solution” to the appropriate intersection of REC and GHG markets is premature at

¹³ Ibid.

¹⁴ PG&E at 15.

¹⁵ AReM/WPTF at 23.

¹⁶ SCE at 17.

this juncture. Because core decisions about the regulatory structure and market design of the AB 32 emissions cap have yet to be made, any decision regarding the GHG attributes contained in RECs risks prejudging the design of GHG regulations or creating market instruments that are inconsistent with any cap-and-trade regime that the state adopts. A Commission decision on REC attributes that is not made in parallel with decisions concerning the design of AB 32 electric sector GHG regulations could establish a regime in which the GHG benefits of renewable energy production are not properly valued or accounted for in the overall GHG market. Although UCS does not share SCE’s position on the GHG attributes of a REC, it concurs with SCE’s caution that “The Commission must be careful not to unintentionally prejudice the outcome of the regulation of GHG emissions.”¹⁷

In view of the uncertainty surrounding GHG emissions regulations, UCS maintains that it would be premature at this point for the Commission to define the GHG attributes of RECs. Instead, the Commission should advance core principles to serve as the basis for any policy decisions regarding the treatment of renewable energy in the imminent GHG regulatory program. In its opening post-workshop comments, UCS suggested the following core principles to govern how the RPS program should interact with AB 32 regulations for the electric sector:

- AB 32 regulations must recognize and account for the GHG benefits provided by the RPS program.
- Policy decisions affecting the GHG attributes of RECs and the design of AB 32 regulations should ideally be made in parallel.
- It is imperative that AB 32 regulations and REC attribute definitions avoid double-counting of GHG emissions.
- The design of any GHG market that is created pursuant to AB 32 should encourage, rather than frustrate, renewable development above the RPS-mandated level.
- The treatment of carbon emissions associated with a REC should not impose significant GHG compliance burdens on renewable generators.¹⁸

¹⁷ SCE at 18.

¹⁸ UCS at 17.

As UCS stated in its opening comments, there may exist multiple policy options to satisfy these principles.¹⁹ Some parties appear to believe that a single policy option is superior, irrespective of future decisions concerning the regulatory structure of GHG emissions limits. For instance, SCE argues that its preferred approach of separating GHG attributes from RECs is the most logical, regardless of whether the state adopts a first-seller or load-based point of GHG regulation for the electric sector.²⁰ UCS disagrees. Source-based and load-based approaches can have significantly different implications for the treatment of the GHG attributes of renewables. Under a load-based approach, it may be appropriate to include an avoided GHG emissions value in RECs, such that an LSE purchasing RECs to comply with the RPS can also partially reduce its GHG compliance obligation at the same time. If GHG attributes were not included with RECs, an LSE that relies substantially on REC purchases for RPS compliance could face greater difficulty in complying with AB 32 load-based regulations.

Even if the GHG attributes of RECs could be appropriately determined in exclusivity of the point of regulation, other pending GHG regulatory design issues might affect how the GHG attributes of renewables should be properly treated. For instance, if the state chooses to allocate allowances to renewable generators, and these allowances are not included with RECs, LSEs may in essence be required to pay twice for renewable attributes: first, to purchase a REC at a price premium for RPS compliance; and second, to purchase GHG allowances from a renewable generator to actually obtain the GHG benefits that would have otherwise accrued to the LSE had the REC included the GHG attribute in the first place. In addition, renewable generators could potentially sell any GHG allowances they are granted to entities outside of the state, which would effectively mean that some portion of the GHG emissions benefits of the RPS program are exported elsewhere. Although this scenario could potentially benefit renewable generators in California, UCS is not convinced that it represents the best policy outcome for the state.

¹⁹ Ibid.

²⁰ SCE at 17.

III. CONCLUSION

UCS appreciates the opportunity to provide these post-workshop reply comments on the potential use of tradable RECs in the California RPS program. UCS observes that there is broad-based support among parties for allowing the use of tradable RECs for RPS compliance, and recommends that the Commission authorize REC trading with the conditions proposed by UCS.

Respectfully submitted,



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Dated: December 5, 2007

CERTIFICATE OF SERVICE

I, Jennifer Boynton, certify that I have, on this date, caused the foregoing POST-WORKSHOP REPLY COMMENTS OF THE UNION OF CONCERNED SCIENTISTS ON TRADABLE RENEWABLE ENERGY CREDITS to be served by electronic mail, or for any party for which an electronic mail address has not been provided, by U.S. Mail on the parties listed on the Service List for the proceeding in California Public Utilities Commission Docket Nos. R.06-02-012, R.06-05-027, R.06-03-004, and R.06-04-009.

I declare under penalty of perjury, pursuant to the laws of the State of California, that the foregoing is true and correct.

Executed on December 5, 2007 in Berkeley, California.

/S/ JENNIFER BOYNTON

Jennifer Boynton