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11-13-07
04:59 PM

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)

RESPONSE OF ECOSECURITIES TO THE ADMINISTRATIVE LAW JUDGE'S RULING REQUESTING POST-WORKSHOP COMMENTS ON TRADABLE RENEWABLE ENERGY CREDITS AND REQUEST FOR PARTY STATUS

November 13, 2007

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1. Request for Party Status

EcoSecurities Inc. (USA) respectfully requests party status to R.06-02-012 in accordance with Rule 1.4(a)(2)) of the CPUC Rules of Practice and Procedures.

EcoSecurities structures and guides projects to create emission reduction credits that reduce emissions of greenhouse gases (GHGs), through agriculture and urban waste management, industrial efficiency, forestry, etc. EcoSecurities also works with companies to assist them in either meeting their greenhouse gas emission compliance targets or fulfilling their voluntary emission reduction objectives. We have a network of offices and representatives in more than 20 countries on 5 continents (2 of these are located in California), and manage the industry's largest and most diversified portfolio of emission reduction projects in the world. We have also been involved in the development of many of the global carbon market's most important milestones, including developing the world's first CDM project to be registered under the Kyoto Protocol and the first to receive issued credits.

As a leader in the international and domestic market for project based GHG emission reductions, decisions affecting the definition of tradable renewable energy credits (RECs) and their associated GHG claims are of paramount importance to EcoSecurities. Such decisions have the potential to directly affect the claims that can be associated with our product, the credibility of the carbon market, and our ability to continue pursuing certain business opportunities in the state of California. For these

reasons, and based on our significant experience dealing with the interactions between renewable energy markets and GHG emission reduction claims both domestically and abroad, EcoSecurities asserts that the contentions set forth in the document below will be significantly pertinent to the issues already presented and the questions raised for post-workshop comments in R. 06-02-012.

2. Introduction and Summary

On October 16, 2007, the Administrative Law Judge (ALJ) requested post-workshop comments on specific questions regarding tradable renewable energy credits (RECs). A REC is typically defined as representing 1 MWh of energy generation from a qualifying renewable energy facility. RECs are a convenient way to promote renewable energy generation without having to make a physical transfer of electrons. Some definitions of RECs include environmental attributes such as associated environmental health benefits and GHG reductions. However, with regards to their ability to represent GHG reductions, RECs can denote only an *indirect* quantification of CO_2 displacement of fossil fueled grid energy. In contrast, a carbon credit generated from an emission reduction project is conceptually different from a REC because it represents a direct action that prevents the emission (or causes the destruction or sequestration) of a ton of CO_2e[1]. Tradable renewable energy credits (RECs) can be an important tool for promoting renewable resources in California, however, their underlying purpose and intention should be acknowledged.

With this background as a foundation, EcoSecurities' response to the ALJ's request primarily addresses two main issue areas: 1) the importance of any tradable REC system being developed in harmony with GHG regulation under AB 32, and 2) the need for clarity and precision when defining a REC and its associated environmental attributes (particularly in the case of the "cow manure hypothetical"). On issue one (see points 3.1 and 3.2), we respond to general guiding principles outlined in the document and contend with one factual description of the status of AB 32 regulation. On issue two, we use the questions explicitly outlined by the ALJ as a framework for our response.

[1] CO_2 equivalent, reflecting the existence of several key greenhouse gases and the use of CO_2e as a common metric.

3. EcoSecurities' Response to General Guiding Principles and Status of AB 32

3.1. As reflected in the sixth guiding principle outlined in the "General Themes" section of the ALJ's request, "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 [and regional] programs for GHG reduction." (Page 3)

EcoSecurities applauds the PUC for acknowledging the importance of this goal. We would encourage the PUC to continue working closely with the ARB and CEC to ensure that all rules, guidelines, and policies that may impact the goals of AB 32 be designed with administrative simplicity for government and private participants, minimal administrative costs, and a clear, streamlined compliance path in mind.

To this end, we would recommend that the PUC consider waiting to make significant rulemaking on the issue of tradable RECs—insofar as such rulemaking impacts the issue of GHG emission reductions—until the ARB has finished outlining the Scoping Plan for AB 32[2]. This would not constitute an unreasonable delay in the process of establishing a tradable REC market in California since, pursuant to § 399.16(a)(1) of SB 107, a tracking system established by the Energy Commission (WREGIS) must be established *before* RECs are adopted for RPS compliance anyway. Waiting until the tracking system is established before promulgating rules would be the best means of achieving the PUC's goal (as reflected in principle 6) of establishing a tradable REC system with consideration for implementation AB 32, the Western Climate Initiative, and other potential regional and federal GHG programs. Such delay would also not preclude rulemaking on aspects of a REC program not related to GHG emissions.

3.2. Clarification of Footnote 9 in the "Staff Straw Proposal."

Footnote 9 in the "Staff Straw Proposal" section states, "Commenters should bear in mind that no decisions have been made by the Commission, the California Energy Commission (CEC), or the Air Resources Board (ARB) about the ultimate design of the

[2] The deadline for the Scoping Plan is January 1, 2009.

AB 32 compliance framework… Further, no decision has been made regarding the point of regulation, *e.g.*, whether such a system would be load-based or source-based. Nor has any decision been made as to what types of credits and offsets would be eligible for trading, or how emission allowances would be distributed." (Page 9)

This statement is only partially correct because the ARB has already approved a project protocol for forestry emission reduction projects, and approval for a similar protocol for manure management is currently pending. A protocol for landfill gas capture is also under development. These protocols, which have been developed in coordination with the California Climate Action Registry (CCAR), establish a system of GHG emission reduction credits that are eligible for trading. While such projects are admittedly voluntary and therefore not currently part of the *official* compliance framework, the ARB itself notes (with specific regards to manure) that: "Manure management strategies and manure management protocols are part of the State's strategy for achieving GHG reductions under AB 32."[3] As such, these protocols have been promoted by the ARB to encourage early, project-based emission reductions that have the potential to significantly support and enable the achievement of California's goal of returning to 1990 GHG emissions levels by 2020. Therefore, decisions that have been made or put into motion with regards to these tradable GHG credits for forestry, manure management, landfill gas, etc., should be acknowledged as predating any potentially conflicting decision by the PUC regarding tradable RECs in California.

4. EcoSecurities' Responses to Specific Questions in the ALJ Ruling

4.1. 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?

Biogas is produced in an anaerobic digester project as a result of capturing the methane gas from the anaerobic digestion of organic waste products. The capture of methane in the production of the biogas has been recognized by many international regulatory bodies as eligible for certified emission reductions. GHG emission reductions

[3] From: http://www.arb.ca.gov/ag/manuremgmt/manuremgmt.htm.

from biogas are twofold: there is a direct emission reduction from the capture of methane through an anaerobic digester, and a potential claim for indirect emission reductions from displacement of fossil-fueled grid energy if the biogas is used to generate power. While the latter could reasonably be included in any environmental attributes associated with a REC, the former could (and should) not. By including methane capture benefits in the definition of a biogas REC, a huge and unprecedented wealth transfer would be created by giving utilities GHG rights for free that they would otherwise be required to buy or make under AB 32. Such reductions are currently quantified and monetized separately through emission reduction projects such as those established through protocols like those being developed through CCAR, and therefore have a clear separate quantification approach and value that should not be included in the definition of a California REC.

CCAR GHG emission reduction project protocols, currently used to quantify direct GHG emission reductions, include prescriptive quantification methodologies which are required to assure real, quantifiable, permanent and surplus GHG emission reduction. It is generally accepted in the scientific community that the quantification of indirect GHG emissions and emission reductions is a less precise exercise than the quantification of direct GHG emissions and emission reductions. As stated above, RECs can be used for quantifying indirect GHG emission reductions associated with the displacement of fossil fuel generated electricity, but the various and complicated GHG emission reduction quantification issues (ownership, additionality, uncertainty, leakage, etc.) which are dealt with in GHG reduction project protocols (like those developed by CCAR) are not addressed in the explanation of Green Attributes associated with RECs.

In addition to this basic distinction, there are three clear detailed arguments against the inclusion of methane gas capture benefits in the environmental attributes of a REC. These are: (a) the existing definition of a REC under California law which explicitly excludes such benefits, (b) logical comparison of REC attributes included in other types of renewable resources with those of biogas, and (c) existing regulatory precedent per a comparable decision by the PUC regarding REC ownership and Distributed Generators (DGs).

(a) *The definition of a REC pursuant to Senate Bill 107 expressly excludes "any credits…associated with the reduction of solid waste and treatment benefits created by the utilization of biomass or biogas fuel."*

Senate Bill (SB) 107 (Simitian), 2006 Stats. ch. 464, provides (in the section now codified at Pub. Util. Code § 399.12(g)(2)) the working definition of REC attributes. In D.07-02-011, as modified by D.07-05-057, the Commission addresses aspects of the standard terms and conditions for RPS contracts related to environmental attributes. Additional information on Environmental Attributes can be found in Appendix A to D.04-06-014 (at pp. A-2—A-3).

According to SB 107, "a 'Renewable energy credit' in the state of California includes all renewable and environmental **attributes associated with the production of electricity from the eligible renewable energy resource**, **except for an emissions reduction credit issued pursuant to Section 40709 of the Health and Safety Code and any credits or payments associated with the reduction of solid waste and treatment benefits created by the utilization of biomass or biogas fuels** [emphasis added]." The language in SB 107 is clear in that RECs are not associated with the capture of methane in biogas but only with the production of electricity. This definition should be upheld by the PUC.

Furthermore, in the definition of Green Attributes, modified by Decision 07-05-057, the CUPC now treats Renewable Energy Credits and avoided emissions of methane as two separate and distinct green attributes.

Finally, the Intergovernmental Panel on Climate Change (IPCC) and all other domestic and international stakeholders working on similar policies clearly delineate GHG reductions associated with fossil fuel replacement with those associated with avoided methane emission. As such, entitling a utility to the methane avoidance GHG reductions when they purchase a REC in California would deviate from industry and international standards.

(b) *In addition to the existing definition of a REC, logical comparison of REC attributes included in other types of renewable resources to those of biogas further*

establishes that the benefits of methane gas capture should be excluded from the environmental attributes of a REC.

As previously mentioned, GHG emission reductions can result both "directly" from the capture of methane through an anaerobic digester, and potentially "indirectly," from the displacement of fossil-fueled grid energy. With other renewable energy resources (including wind, solar, geothermal, hydrological, etc.) only the displacement of fossil-fueled grid energy is included as an environmental attribute in a REC (if environmental attributes are included at all). Including the direct emissions associated with the project would be akin to including the "lifecycle emissions" of the renewable energy resources in the REC attributes. Lifecycle emissions in this case would be the GHG emissions and/or emission reductions associated with the entire lifecycle of each electricity generator at a renewable generation facility. While including such emissions for biogas would be a net benefit for the REC owner, accounting for them for other renewable energy types could actually detract from or negate some of the overall environmental attributes if the construction and maintenance of the resource and the resultant GHG emissions were considered.

For example, when a MWh of renewable energy is produced via wind power, the REC that is generated does **not** include the direct GHGs that were emitted or sequestered in the process of harnessing the wind or building the related infrastructure, i.e. the construction, operation or production of the turbine, associated equipment, and maintenance. Lifecycle analysis is simply not a part of determining the GHG attributes of a wind REC, or any other REC, for that matter. Given that lifecycle analysis is not a part of determining the GHG attributes of any other kind of REC, it is neither logical nor consistent to require it for a biogas credit. Unless such analyses are to be executed for all renewable energy sources and incorporated into their associated attributes, it is illogical to single out biogas-based RECs as the only renewable energy resource where this is required.

(c) *There is a strong parallel precedent against inclusion of methane capture benefits in a REC, per a comparable decision by the PUC regarding REC ownership for DGs.*

The ownership of RECs produced by DG owners was originally established in Decision 05-05-011, *supra* note 72, at 11 (order no. 2). However, DG REC ownership was questioned because of concerns that ratepayers could be double-charged for environmental benefits associated with DG (by subsidizing the purchase of renewable DG, and then by paying for utility purchases of RECs from those same DG systems). It was suggested that RECs be divided and apportioned between DGs and utilities (on behalf of ratepayers). The CPUC resolved this ownership debate by finding that renewable DG RECs should not be divided or apportioned between the DG system owner and the utility based on the aforementioned concerns.

The issue of DG REC ownership is similar to the issue of methane capture benefits inclusion in the definition of a REC. In the DG example, as in the biogas case, ownership of certain environmental benefits associated with renewable energy is being contested by utilities that do not currently have rights to their full ownership. As mentioned before, including methane capture benefits in the definition of a biogas REC would essentially give ownership of that GHG emission reduction to the utility. Such reductions are currently quantified and monetized separately through emission reduction projects such as those established through CCAR and other GHG protocols, and therefore have a clear separate quantification approach and value. Allowing utilities to assume ownership of these emission reductions would undermine existing incentives to invest in new manure management projects for GHG benefits, would create ownership issues for existing methane gas capture projects that generate renewable energy and sell RECs and/or emission reduction credits, and would be oppositional to the long-term goal of achieving significant GHG emission reductions in California. Given that the development of current anaerobic digester (AD) projects in California is largely dependent on economic returns from GHG sales, allowing those credits to be freely taken by the utility would essentially make AD projects uneconomical.

4.2. 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?

The last sentence of the Green Attributes definition in Attachment D-2 states, "If Seller's Unit(s) is a biomass or landfill gas facility and Seller receives any tradable Green Attributes based on the greenhouse gas reduction benefits or other emission offsets *attributed to its fuel usage*, it shall provide Buyer with sufficient Green Attributes to ensure that there are zero net emissions *associated with the production of electricity* from such facility." There is a lack of clarity as to what *fuel usage* refers to in this clause. Methane emissions avoidance by capturing methane to produce biogas is not really related or attributable to fuel usage at the facility. If fuel here is referring to the biogas, and fuel usage means using the biogas to generate electricity, then this latter process is clearly separate and distinct from the capture of methane gas to produce biogas. This clause therefore should not be applicable to methane capture for the production of the biogas fuel.

However, fuel usage may also be interpreted to include energy that goes into running the technology to capture the methane and therefore this clause should also be applicable to the capture of methane and the production of biogas. The benefits and credits derived from methane avoidance are not only calculated based on the usage of fuel to produce the biogas. The latter is incorporated only as part of the equation to ensure that the generation of biogas (and not the generation of electricity) has zero net emissions associated with the production of the biogas. To consider only the fuel usage component for the production of biogas is not sufficient for the issuance of credits based on current approved methodologies under any trading scheme. For the above reasons, fuel usage here most likely does not contemplate fuel usage for the production of biogas or for that matter, the methane capture.

4.3. 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?

Determining that a tradable REC includes avoided carbon emissions will inherently require consideration of whether it will then be permissible to convert those indirect reductions from MWh to tCO_2e. We recommend against such convertibility, since it would equate direct emissions reductions that are subject to robust additionality requirements and multiple levels of oversight, with indirect reductions that are not subject to additionality, certification, verification, etc. In addition, it would unnecessarily complicate both the REC market and the emission reduction market by implicitly linking the prices of these dissimilar financial instruments. This could encourage gaming and other market manipulation based on the price dynamics between the two. Another consideration is the fact that carbon emission factors differ by geography. For example, a REC in Minnesota (.82 CEF) and one in San Diego (.399 CEF) would be drastically different in terms of their GHG value. Excluding the avoided carbon emissions from the definition of a tradable REC could avoid these complications and more clearly define RECs as a tool intended to support renewable energy proliferation instead of climate change mitigation. It could also promote more significant GHG reductions from AB 32 (since reductions associated with a REC could not be used for AB 32 compliance).

5. Conclusion

A REC is typically defined as representing 1 MWh of energy generation from a qualifying renewable energy facility; some definitions of RECs include associated environmental attributes such as associated environmental health benefits and GHG reductions. However, with regards to their ability to represent GHG reductions, RECs can at best represent only an *indirect* quantification of CO_2 displacement of fossil fueled grid energy. Further, the amount of GHG reduced in a given REC will depend on the GHG intensity of the fossil fuel derived MWh that is displaced. Tradable renewable energy credits (RECs) can be an important tool for promoting renewable resources in California, however, their underlying purpose and use should be clearly defined so as not to inhibit the implementation of AB 32's GHG reduction goals. To this end, the PUC should acknowledge the project protocols already approved by the ARB to achieve GHG emission reductions, and the rights to ownership of certain environmental attributes which they confer. The PUC should also consider the potential for future conflicts on the

issue of GHG ownership as additional GHG project protocols are developed by ARB and CCAR.

In particular, the case of the "cow manure hypothetical" requires special consideration. GHG emission reductions from biogas projects can result both directly from the capture of methane through an anaerobic digester, and indirectly, from the displacement of fossil-fueled grid energy if the biogas is used to generate power. While the latter could reasonably be included in the environmental attributes of a REC, the former is (and should) not be. By including methane capture benefits in the definition of a biogas REC, the PUC would essentially facilitate a wealth transfer from the biogas owner (a farmer, landfill owner, project developer, etc.) to the purchasing entity—e.g. a utility. However, these GHG benefits are already being quantified and monetized through separate emission reduction projects such as those established through the CCAR protocol and therefore have a clear and distinct value that should not be included in the definition of a REC. The exclusion of methane gas capture benefits from the environmental attributes of a REC is further justified by the existing definition of a REC in California, logical comparison of REC attributes included in other types of renewable resources with those of biogas, and existing regulatory precedent per a comparable decision by the PUC regarding RECs for DG. EcoSecurities respectfully submits these comments the PUC to aid in their consideration of a tradable renewable energy credit system in California.

Dated: November 13, 2007

Respectfully Submitted,

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CERTIFICATE OF SERVICE

I hereby certify that I have this day served a copy of the **"RESPONSE OF ECOSECURITIES TO THE ADMINISTRATIVE LAW JUDGE'S RULING REQUESTING POST-WORKSHOP COMMENTS ON TRADABLE RENEWABLE ENERGY CREDITS AND REQUEST FOR PARTY STATUS" in the matter of R. 06-02-012** to all known parties of record in this proceeding by delivering a copy via email or by mailing a copy properly addressed with first class postage prepaid.

Executed on November 13, 2007 at Claremont, California.

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