



Union of Concerned Scientists

Citizens and Scientists for Environmental Solutions

November 20, 2009

Mary Nichols, Chairwoman
Mr. James Goldstene, Executive Officer
Mr. Gary Collord
California Air Resources Board

Submitted via email to: gcollord@arb.ca.gov

Subject: UCS comments on the ARB Proposed Concept Outline for the California Renewable Electricity Standard

Dear Chairwoman Nichols and Executive Officer Goldstene:

The Union of Concerned Scientists (UCS) thanks the California Air Resources Board (ARB) for this opportunity to provide comments on the Proposed Concept Outline (Concept Outline) to develop a 33 percent Renewable Electricity Standard (RES) by 2020. UCS is a science-based nonprofit working to create a healthier environment and safer world. UCS has been working on renewable energy policy development and implementation in California for over 15 years in multiple venues including the California Public Utilities Commission (CPUC), the California Energy Commission (CEC), and the California Legislature.

UCS strongly supports the development of a 33 percent by 2020 renewable energy mandate that builds upon the state's existing Renewables Portfolio Standard (RPS) to obtain 20 percent renewable energy by 2010. While UCS believes the 33 percent renewables mandate is best enshrined in statute, we are committed to working with the ARB to develop an RES that avoids uncertainty or delays in the renewable energy market. UCS urges the ARB to develop a simple rule that builds upon the existing RPS program and takes into account the analyses and accompanying stakeholder comments that have been generated at the CEC, CPUC, and California ISO on the topic of achieving 33 percent renewables in California by 2020.

UCS urges the ARB to develop the RES with the following principles in mind:

Clear mandate, timeline and planning process – California's RES should set a firm floor, not a ceiling, for the amount of renewable energy utilities are required to deliver to their customers by 2020. This floor should be at least 33 percent by 2020, should be unwavering in regards to the 2020 deadline, and should apply to virtually all utilities in the state. In the addition, California's RES should set interim procurement requirements

every two or three years that ensure continual progress towards meeting the 2020 obligation.

Strong definition of “renewable energy” – An acceptable RES policy shall *only* include technologies that are truly renewable and that do not have the potential to inflict significant environmental damage. Because the state legislature has specifically defined eligible renewable resources, UCS does not believe it is appropriate for the ARB to expand or modify the definition, which is located in Section 25741 of the Public Resources Code as limited by Section 399.12(c) of the Public Utilities Code.

Strong enforcement provisions – California’s RES shall include strong and consistent enforcement provisions. Delays in meeting interim renewable energy obligations should be minimized and allowed *only* if the regulating agency determines that all feasible steps, including the development of distributed generation and the expanded use of existing transmission lines, were taken to meet the interim requirements. Each regulated entity requesting a delay should be required to show clear and convincing evidence that they have meet all the requirements to qualify for the delay. Delays should be limited to no more than two years.

No loopholes or overly restrictive cost limitations – California’s RES should not allow loopholes, vague escape clauses- such as “good faith efforts” or “commercially reasonable efforts” - or overly restrictive cost caps to undermine the integrity of the mandate. The most expensive thing California can do is continue its irresponsible addiction to volatile fossil fuels and other forms of unsustainable and expensive energy.

Emphasis on local renewable energy – California’s RES policy should encourage cost-effective in-state renewable energy generation. Distributed generation should be emphasized and the state should adequately value the benefits of generating during peak demand periods and generating close to load centers.

Benefits of Renewable Energy

The ARB established a direct link between renewable energy and greenhouse gas (GHG) emissions reductions through its inclusion of a 33 percent renewables standard as part of its AB 32 Scoping Plan: “Increased use of renewables will decrease California’s reliance on fossil fuels, thus reducing emissions of greenhouse gases from the Electricity sector.”¹ However, transitioning to an electricity mix that replaces fossil generation with renewables will provide benefits far beyond GHG reductions and the ARB must develop the RES with these additional benefits in mind. Senate Bill 1078, which established the first RPS program in California, amended the California Public Utilities Code to acknowledge the resource diversity, public health, and economic benefits that renewables provide:

¹ Climate Change Scoping Plan, California Air Resources Board, December 2008, p.45.

(b) Increasing California's reliance on renewable energy resources may promote stable electricity prices, protect public health, improve environmental quality, stimulate sustainable economic development, create new employment opportunities, and reduce reliance on imported fuels.

(c) The development of renewable energy resources may ameliorate air quality problems throughout the state and improve public health by reducing the burning of fossil fuels and the associated environmental impacts.²

Applicability of the RES

The RES should include a clear and firm mandate of 33 renewables by 2020 applied to all load serving entities that the Concept Outline calls "regulated entities": electrical corporations, electric service providers, community choice aggregators, electrical cooperatives, and local publicly owned utilities. UCS believes that it is reasonable to give the smallest regulated entities additional compliance flexibility, but at this time UCS sees no compelling reason to completely exempt any regulated entity from helping the state achieve its renewable energy and climate goals. Instead, UCS suggests that ARB establish a threshold below which utilities are given extra compliance flexibility, such as allowing several regulated entities to pool renewable energy procurement obligations or allowing these entities to purchase a larger amount of unbundled Renewable Energy Credit (REC) or "REC-only" contracts to satisfy RES compliance obligations.

Eligible Resources

The technologies which are currently considered renewable in California are clearly defined in Public Resources Code Section 25741 and the Public Utilities Code Section 399.12(c). UCS believes that given the environmental and market implications of expanding or modifying the definition of eligible renewable resources, as well as the tight timeline established in Executive Order S-21-09, it is neither necessary nor appropriate for the ARB to change the existing definitions of eligible resources.³ UCS believes any consideration to modify the definition of eligible renewable energy resources, based on the availability of new technologies for example, should be thoroughly analyzed at the California Energy Commission and followed by legislative action. In addition, UCS concurs with the Concept Outline that the RES should not extend eligibility to nuclear and large hydropower (anything over 30 MW) facilities. UCS also points out that ARB has erroneously listed biodiesel as a currently eligible fuel, and it should be removed from consideration as well.

Purchase and Use of Renewable Energy Credits (RECs)

UCS supports using a carefully designed array of compliance tools to meet the RES mandate, including power purchase agreements (PPAs) that bundle energy and RECs together into a delivered product, REC-only contracts in which renewable attributes have

² Senate Bill 1078, Section Public Utilities Code Section 399.11(b)&(c).

³ Executive Order S-21-09 directs the ARB to establish a 33 percent renewables by 2020 standard by July 31, 2010.

been unbundled from their underlying energy and sold separately, as well as renewable generation owned by regulated entities. UCS agrees with the Concept Outline that facilities eligible for RES credit should be located within the Western Electricity Coordinating Council (WECC) and their generation should be tracked by the Western Renewable Energy Generation Information System (WREGIS).

UCS believes that renewable energy generation provides emission reduction benefits regardless of whether the facility is located in California or another state. However, when the facility is located in California or when the renewable generation is delivered into the California grid in a way that displaces fossil generation, that renewable energy provides the state and its ratepayers with additional air quality and resource diversity benefits. With a possible exception for only the smallest regulated entities, the RES rule should *not* allow regulated entities to rely entirely upon the purchase of REC-only contracts to satisfy RES compliance.

A REC unbundled from its underlying energy does not reduce a utility's need to procure energy generation for its customers. Even with aggressive investments in energy efficiency, load serving entities will still have to procure actual energy deliveries to serve customer load. Therefore, heavy reliance upon REC-only transactions may do very little to change the energy resource mix in California. For this reason, a balance of delivered renewable energy renewable and REC-only contracts needs to be struck. UCS believes the allowing a regulated entity to satisfy up to 25 percent of its RES compliance obligation with REC-only contracts strikes an appropriate balance between the flexibility that REC-only contracts provide and the additional benefits of procuring renewables from facilities that will delivery energy directly into the California grid.

UCS acknowledges the sizeable amount of confusion and controversy surrounding the question of how to define delivered renewable energy. While it is not possible to track green electrons across the California border, UCS believes the current definition of delivery, as explained in the CEC RPS Eligibility Guidebook, should be tightened to only classify as delivered contracts in which both the RECs and the energy underlying them are bundled together into the same transaction to comply with the California RES.

The CEC Guidebook describes three examples of contracts that would meet its current delivery requirement.⁴ Example number three describes a scenario in which a regulated entity could buy energy and RECs from a renewable developer, sell the energy back to the facility, and “match” the RECs with an energy delivery into California from a second PPA or with imports under a pre-existing PPA. In this case, the developer is left to find a second buyer for its now null and intermittent power. UCS believes that this type of transaction should be classified as a REC-only contract. Contracts which obligate

⁴ Renewables Portfolio Standard Eligibility Guidebook, California Energy Commission, January 2008, CEC-300-2007-006-ED3-CMF, pp.23-24. Available at: <http://www.energy.ca.gov/2007publications/CEC-300-2007-006/CEC-300-2007-006-ED3-CMF.PDF>

developers to engage in additional transactions to sell their energy, which has now been stripped of its green value or REC, present a higher level of risk to the renewable developer and a lower value to Californians because the energy underlying the REC purchased for RES compliance is not likely to displace any fossil generation in California. UCS maintains that both bundled and REC-only transactions have a role to play in the California renewable energy compliance market, but should be classified accurately and treated separately due to the levels of value they provide the renewable energy market and California ratepayers.

RES Compliance

UCS believes the most simple and efficient way to measure RES compliance is to establish obligations based on a percentage of the regulated entity's retail sales. Measuring RES compliance in energy generated (MWh) as a percentage of retail sales creates consistency with the existing RPS program, which means that regulated entities and renewable developers already understand the rules and will not have to change the way power purchase agreements are developed and transacted. UCS believes that the proposal to measure RES compliance with a GHG-reduced metric is unnecessarily complicated and will delay efforts sign contracts for more renewable energy in California. Delays will occur because power purchase agreement practices will have to be amended, but more importantly stakeholders will have to spend time deciding how to accurately assign each MWh of renewable energy generation a GHG reduction value. This is a complicated calculation that depends on the type of renewable energy, its location, and time of generation. Yet to create a workable RES in the timeline established by Executive Order S-21-09, the ARB will have to prescribe GHG reduction factors for various resource types, which will likely grossly oversimplify the issue and could inadvertently benefit some resources over others. To avoid confusion and delay to the program, ARB should measure RES compliance in energy generated (MWh) as a percentage of retail sales.

Excluded Load

The current RPS program calculates renewable energy procurement obligations as a percentage of retail sales. To maintain consistency in the renewable energy market, the ARB should not change this calculation. The Concept Outline explores the idea of excluding the combined heat and power (CHP) and net-metered distributed generation (DGnet) from the retail sales baseline calculation. This would effectively reduce the amount of renewable energy a regulated entity would need to procure to meet its RES requirements. UCS supports increasing the state's use of clean and efficient CHP in lieu of conventional fossil resources and believes there are more efficient and direct ways to encourage CHP generation rather than enticing utilities to sign more CHP contracts because doing so will reduce their RES obligations. Moreover, the ARB AB 32 Scoping Plan relies upon a 33 percent renewables standard in addition to aggressive CHP procurement to meet the state's GHG reduction goals. Allowing renewable procurement obligations to decrease as CHP generation included in retail sales increases will result in a lower amount of emission reductions than expected in the AB 32 Scoping Plan.

Currently, an IOU is not able to claim renewable compliance credit under the RPS program for generation from DGnet installed under the Million Solar Roofs Initiative because the residential customers that own the photovoltaic systems also own the RECs. The ownership of these RECs was decided by a CPUC decision in 2005.⁵ Once a REC is able to be unbundled from its underlying energy, customers will have the ability to sell these RECs to regulated entities to satisfy renewable procurement obligations. But allowing a utility to reduce its RES baseline calculation by the DGnet in its service territory *and* allowing the residential customers to retain the RECs could create double counting, should the customers exercise their rights to sell the RECs.

Compliance Period Targets and Schedules

In addition to a clear and firm mandate of 33 percent renewables in 2020, UCS believes the RES program should contain enforceable procurement obligations in the interim. The RES rule should adopt a policy to achieve the benefits of renewable energy as soon as possible, and establishing interim procurement obligations is an important mechanism to ensure regulated entities are making necessary investments in transmission and other electricity grid infrastructure to support larger levels of renewable energy in the future. UCS believes it is important for regulated entities to report on compliance progress on a yearly basis, but enforceable interim procurement obligations should occur every two or three years to provide for the “lumpiness” of procurement and transmission line development.

Federal and State REC Interactions

A national renewable energy standard is likely to be adopted by the federal government in the coming years. Both bills in the U.S. Senate and House of Representatives that would establish a national RES create a scenario where each MWh of renewable energy generated would yield two RECs- a federal REC for federal RES compliance and a state REC for state compliance. Many states, including California, will likely have RES standards that are higher than the federal standard. Unless regulated entities in the states with higher RES standards are obliged to retire a federal REC every time a state REC is retired, they will end up with a surplus of federal RECs. They could in turn sell these surplus federal RECs to entities in other states to meet federal RES obligations. This is essentially double counting a renewable MWh because it has already been retired for a state compliance obligation. To ensure that renewable energy investments used for California RES compliance are not doubly counted to reduce other states’ federal RES obligations, the ARB should adopt a rule that obliges regulated entities to simultaneously retire a federal REC every time a state REC is retired for state RES compliance.

REC Banking

UCS supports the ability of regulated entities to bank excess RECs, but believe that each REC should be banked for no more than three years following the date of its creation.

⁵ California Public Utilities Commission Decision 05-05-011 clarified that DG system owners own the RECs associated with the renewable electricity generated from those facilities. Decision available at: http://docs.cpuc.ca.gov/PUBLISHED/FINAL_DECISION/46213.htm

Monitoring and Verification

UCS supports developing the RES rule in a way that utilizes existing monitoring, verification, and reporting infrastructure as possible as much as possible to avoid confusion, delay and double-counting.

Compliance and Enforcement

UCS believes that reporting requirements for IOUs in the RES program should be consistent with, and integrated into RPS reporting requirements to the fullest extent possible. Reporting for POUs should build upon the existing requirements at the CEC. UCS also believes it is reasonable for full compliance with RES obligations to begin on January 1, 2013. Compliance with RES interim procurement obligations and the final 33 percent obligation in 2020 should be expected for all regulated entities, whether or not they have reached 20 percent renewables of retail sales by the time the RES program begins.

Penalties for Non-Compliance

UCS believes that unless the RES rule incorporates a strong and consistently applied penalty provision, renewable energy obligations become merely loose goals, which is clearly not the intent of Executive Order S-21-09 or AB 32. UCS is unclear on what the ARB means when the Concept Outline refers to a “sliding scale” penalty schedule and cautions against any enforcement approach that leaves the extent of enforcement up to a future determination in lieu of a straightforward monetary fine per MWh of failed procurement. In addition, UCS strongly believes that a regulated entity should only be able to escape a penalty for non-compliance by procuring enough renewable energy to erase its deficit. Other GHG reduction measures, such as investments in energy efficiency or purchasing offsets, are not appropriate compliance tools and should not be used by regulated entities to escape non-compliance penalties.

Compliance Shortfalls

The RES rule should only allow renewable energy procurement shortfalls to be carried forward and added to subsequent compliance obligations in situations that are limited, clearly defined, and subject to a strong burden of proof on the regulated entity. Otherwise, inaction or poor procurement planning by the regulated entity could result in compliance deficits becoming unwieldy. For example, ARB could allow a compliance deficit to be carried forward a maximum of two years only if the regulated entity can demonstrate that the following conditions will prevent timely compliance:

- There is inadequate transmission capacity to allow for sufficient electricity to be delivered from proposed eligible renewable energy resource projects using the current operational protocols of the Independent System Operator (ISO). The ARB and other relevant agencies shall consult with the ISO in making its findings relative to the existence of this condition. In making its findings relative to the

existence of this condition with respect to a retail seller that owns transmission lines, the commission shall consider both of the following:

- Whether the regulated entity has undertaken all reasonable measures to develop and construct new transmission lines or upgrades to existing lines in a timely fashion.
- Whether the regulated entity has taken all reasonable operational measures, as verified by the ISO, to maximize deliveries of electricity from eligible renewable energy resources in advance of transmission availability.
- The renewable developer or regulated entity has experienced unanticipated permitting or interconnection delays for procured eligible renewable energy resource projects. In making this finding, the ARB should consider whether the regulated entity has prudently managed portfolio risks, relied on sufficient viable projects, sought to develop its own eligible renewable energy resources, and procured an appropriate minimum margin of procurement above the minimum procurement level necessary to comply with the RES to for foreseeable delays or insufficient supply.

Any continuation of a compliance deficit without penalty should only be granted once the regulated entity has demonstrated it has taken all reasonable measures to procure cost-effective distributed generation and available renewable energy credits. Furthermore, the ARB should not approve the continuation of a compliance deficit until the regulated entity has presented clear and convincing evidence that it has made material progress in reducing its compliance deficit and has identified and taken all reasonable actions under its control to pursue additional options to comply with the delayed interim procurement obligation and remove impediments that are related to its delay.

Thank you for the opportunity to provide these comments. If you have any questions, please do not hesitate to contact Laura Wisland at lwisland@ucsusa.org or 510-809-1565.

Sincerely,



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