Renewable Energy Marketers Association

Date: November 20, 2008

To: California Air Resources Board

From: Gabe Petlin, REMA President
3Degrees, Director of Regulatory Affairs and Carbon Markets

Re: CARB Proposed Scoping Plan – Voluntary Renewable Energy

The Renewable Energy Marketers Association has reviewed the Air Resources Board's Proposed Scoping Plan and offers the following comments with respect to the role of renewable energy in achieving AB 32 emission reduction goals. These comments are in addition to our earlier comments submitted August 1, 2008.

The Renewable Energy Marketers Association (REMA) represents the collective interests of both for-profit and nonprofit organizations that sell or promote renewable energy products through voluntary markets, including renewable electricity, renewable energy certificates (RECs), and on-site solar PV to individuals, companies and institutions throughout North America.

REMA appreciates the many references in the Proposed Scoping Plan (PSP) to renewable energy and the role it could play in reducing greenhouse gas emissions, but the PSP attributes emission reductions only to an expansion of the RPS to 33%. Voluntary markets for renewable energy—which are currently equal to demand created by RPS mandates—are not accounted for by the Proposed Plan. Unfortunately, many people assume that because renewable energy is emission-free, it will automatically reduce emissions. However, emission reduction policies and programs may fail to produce real greenhouse gas emission reductions from all renewables unless policies are designed to explicitly take into account both voluntary and mandatory demand for renewable energy.

REMA urges the ARB to establish, as part of the cap-and-trade program, an allowance set-aside for voluntary renewable energy purchases to reduce greenhouse gas emission below the cap. A portion of allowances could be reserved in an administrator's account to be retired by ARB on behalf of voluntary purchases by California customers of qualifying renewable energy. This would encourage individuals, businesses and organizations to continue purchasing renewable energy voluntarily above and beyond the RPS renewable energy mandates, and enable purchasers to make environmental claims about emissions reductions—a factor critical to their motivation.

REMA accepts that the Scoping Plan is a general document not intended to describe details of various programs. Acknowledging intent to include a set-aside of allowances for voluntary renewable energy purchases is not a detail, however. **REMA urges ARB to indicate clearly in the Scoping Plan the desirability of allowing voluntary renewable energy to create emission reductions under the cap-and-trade program**. If guidance is not provided in the Scoping Plan, then we believe there is great risk that the requested support for the voluntary renewable energy market will not be included in the subsequent rules development. REMA agrees that precisely how to implement the set-aside should be left to the rulemaking process.

ARB should support the ability of voluntary purchases of renewable energy to reduce greenhouse gas emissions

The ARB's choice of emissions allowance allocation method under the proposed cap-and-trade program will have a direct impact on the sale of renewable energy products through voluntary markets. Accordingly, REMA's members are directly affected by the Board's decision as are thousands of green power customers across California.

REMA's primary objective is to ensure that any cap-and-trade program supports the ability of voluntary renewable energy demand to reduce GHG emissions. To accomplish this objective, voluntary demand for renewable energy must result in either retirement of allowances or in lowering of the cap. To be additional, emission reductions from voluntary sales can not be double counted by both the customer and the utility.

Our concern is that carbon regulations that prevent green power purchases from affecting GHG emissions levels may be adopted, undermining the environmental objectives of customers who voluntarily purchase renewable energy. A robust market for renewable electricity, RECs and distributed renewable energy generation (wherein renewable distributed generators own the RECs) already operates in California. Without an explicit provision for allowance allocation recognizing the GHG reduction benefits from renewable energy purchases under the proposed AB32 cap-and-trade program, California's voluntary renewable energy market may cease to exist because the leading market driver – the ability to make a difference in reducing GHG emissions through consumer choice tied to market forces – will have been eliminated. We believe this is contrary to the intent of AB 32.

Not supporting the ability of voluntary renewable energy purchases to reduce emissions would negate an ability that currently exists in the market

The ability to claim real emissions reductions is extremely important to REMA and to our many customers. It was established years ago that the primary motivation for businesses in purchasing renewable energy is to support organizational values, specifically those that exhibit a strong and pervasive commitment to public health and the environment. [1] In the

[1] E. Holt, R. Wiser, M. Fowlie, R. Mayer and S. Innes. *Understanding Non-Residential Demand for Green Power*. Prepared for the American Wind Energy Association and the National Wind Coordinating Committee. 2000. http://www.nationalwind.org.

intervening years, climate change has begun to dominate those environmental goals, with many high profile companies citing reducing emissions as the benefit of their purchases, as illustrated in the following corporate statements.[2]

> **IBM:** "The purchase of RECs demonstrates IBM's continued commitment to taking action on climate change and support for the development of renewable energy. IBM recognizes that global climate change is an important environmental and business issue. The company has taken voluntary actions to conserve its energy use and to reduce the emissions of greenhouse gases associated with its energy use and operations." http://www.ibm.com/ibm/environment/news/rec_2005.shtml (accessed December 13, 2006)

> **Staples:** "We are committed to reducing the effects of our energy use on climate through an integrated approach including conservation, the adoption of renewable energy technologies where financially viable and the purchase of certified renewable-energy certificates… Through the purchase of certified RECs from landfill gas and wind energy projects, we offset the environmental impacts of more than 53 megawatt-hours of conventional electricity with renewably generated electricity, resulting in a savings more than 46,000 metric tons of carbon dioxide equivalents ($mtCO_2e$) in 2005. Since 2001, we have decreased our net GHG emissions per square foot across all properties by more than 22%." http://www.staples.com/sbd/img/content/soul/pdf/staples_2005_corporate_responsibility_report.pdf (accessed December 13, 2006) see p. 39

> **Johnson & Johnson:** "As indicated in our Next Generation Goals, adopted in 2000, it is the responsibility of each Company/Business Unit to meet our greenhouse gas reduction goal of 4% reduction by 2005 and a 7% reduction by 2010, in absolute terms with 1990 as a base year. The pathways for a climate friendly energy policy include five elements: energy efficiency improvements in all of our operations; cogeneration; on-site renewable energy that produces no CO_2 emissions; renewable electricity purchases; and carbon trading and sequestration." http://www.jnj.com/community/environment/policies/climate_friendly.htm (accessed December 13, 2006)

REMA notes that in the California Public Utilities Commission's (CPUC) opinion on greenhouse gas regulatory strategies, the CPUC acknowledged that the voluntary market for renewable energy would be affected by the adoption of a cap-and-trade program: "Once pollutants in the electricity sector are subject to a cap, purchases of voluntary renewables do not contribute to further reductions because the cap determines the allowable levels of emissions. In other words, once a cap is instituted, new renewables would not reduce emissions; instead, the replacement of fossil-based generation by renewables would free up allowances to be used elsewhere in the capped sectors." [3]

REMA is urging ARB to address this reality. The fact that the voluntary purchase of renewables by retail customers would no longer reduce emissions would be devastating to this voluntary market—no one would make such voluntary purchases because they would not reduce emissions, and consequently no environmental claims of the sort

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[2] The following excerpts, among others, are quoted in L. Bird, E. Holt and G. Carroll, *Implications of Carbon Regulation for Green Power Markets*. Golden, Colo: National Renewable Energy Laboratory, 2007. http://apps3.eere.energy.gov/greenpower/resources/pdfs/41076.pdf.

[3] CPUC, Rulemaking 06-04-009, Final Opinion on Greenhouse Gas Regulatory Strategies, Proposed Decision of Commissioner Peevey, September 12, 2008.

illustrated above could be supported. It is an outcome that is both unnecessary and easily avoided.

Allowances should be retired by the cap-and-trade administrator on behalf of voluntary market demand for renewable energy

This proposal is similar to the approach taken by the RGGI states. If allowances are allocated only to emitting generators, the allocation design could include explicit provision to retire allowances for voluntary renewable energy demand *before* the remainder is distributed. This approach works with either an auction of allowances, free distribution of allowances, or a combination of the two.

Prior to each compliance period, the Air Resources Board would estimate the anticipated volume of voluntary renewable energy purchases from all eligible renewable energy facilities for an upcoming compliance period and retire the appropriate number of emissions allowances on behalf of the voluntary renewable energy market before allocating the remainder.[4]

After the end of each compliance period, entities (including generators, retail marketers, certifying organizations and purchasers) would report the total volume of their eligible voluntary renewable energy market sales to end use customers located in California, to the ARB. ARB could rely upon the WREGIS tracking system to verify renewable generator eligibility and to avoid double-counting.[5]

At the end of the compliance period, the regulatory agency would "true up" the difference between the total volume of estimated voluntary renewable energy market sales and the total volume of actual voluntary renewable energy sales from eligible renewable energy facilities by adjusting the deduction for the voluntary renewable energy market for the next compliance period accordingly.

In this way, the renewable generators are not issued allowances at all, but the regulatory agency would retire allowances based on retail purchases, thus enabling the purchasers to make a difference with their renewable power purchases and to make claims about reducing greenhouse gas emissions as a direct result of their actions.

This approach could also work well for other entities, such as smokestack industries, with an emissions compliance obligation. In this case, such covered entities would be motivated to purchase renewable electricity or RECs as long as such purchases result in retirement of allowances. In this way renewable energy can become a true compliance strategy integral to the cap-and-trade program. If the rules were written correctly, the

[4] Eligible renewable energy could be defined by reference to RPS definitions, and could include a generator vintage threshold to encourage the purchase of energy from newer facilities. In some RGGI states, rather than the cap-and-trade administrator making the estimate, the rules call for the state PUC or energy agency to provide the administrator with the estimate.

[5] Renewable energy used to satisfy the requirements of the California RPS would not be eligible because the voluntary demand must be incremental to make a difference, and because the mandatory demand of the RPS is already taken into account in the Proposed Scoping Plan.

covered entities could demonstrate compliance without actually owning the allowances if they were retired on their behalf.

Retiring allowances on behalf of voluntary renewable energy purchases will not raise allowance prices

Capped entities may be concerned that retiring allowances on behalf of voluntary renewable energy purchases will increase the price of allowances because there will be fewer allowances in circulation. This concern fails to recognize the offsetting cost *reduction* that results from the fact that renewable energy displaces emitting generation on the margin, thus reducing the need for allowances. If the administrative retirement of allowances reduces supply but also reduces demand by an equal and offsetting amount, there should be little or no effect on allowance prices.

In the long run, the increased development of renewable energy supported by the voluntary market will speed the rate in which the electric sector is transformed into a cleaner sector, reducing compliance costs to ratepayers and the public.

The voluntary market for renewable energy is significant

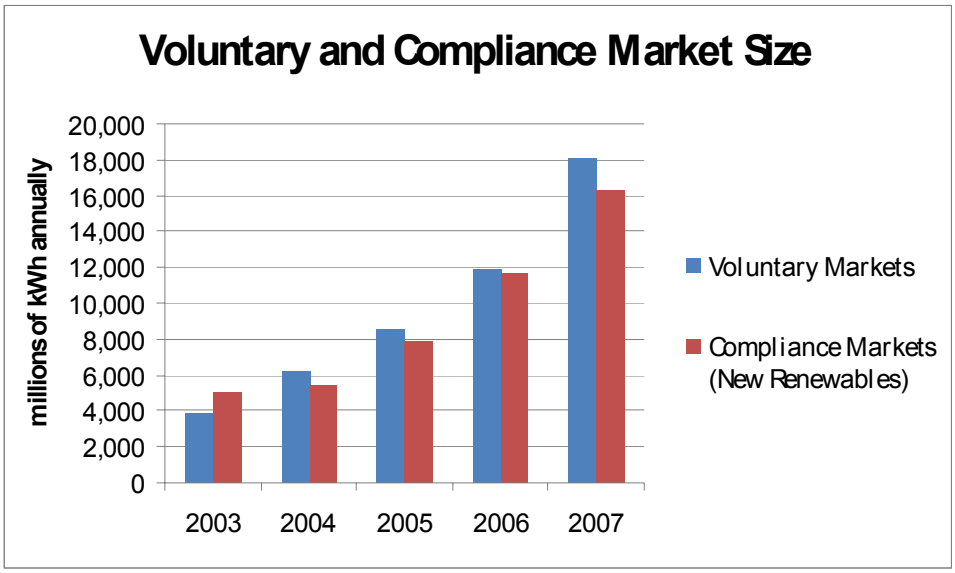
According to the National Renewable Energy Laboratory (NREL), there are some 55 marketers actively selling to small and large customers, and a dozen environmental brokers that facilitate REC transactions between buyers and sellers across the U.S. These providers are in addition to utilities that sell renewable electricity differentiated from standard electricity. Presently, there are nine utility green pricing programs within the state of California.[6] Of these programs, six rank in the Top 10 for one or more categories nationwide according to NREL. There are also thousands of photovoltaic (PV) providers in the U.S. who sell PV systems and associated RECs directly to end-use customers.

The market for green power (renewable electricity and RECs sold independently of electricity) is strong and growing. This information is updated since our August 1, 2008 comments. The voluntary market grew by 62% in 2004, 37% in 2005, 41% in 2006, and 53% in 2007.[7] In 2007, U.S. consumers made voluntary purchases of renewable energy totaling about 18.1 million MWh. Currently, the voluntary demand for new renewable energy is greater than RPS demand for new renewables on an MWh-basis, as shown in Figure 1.[8] If the voluntary market continues to grow at an annual rate of 40% (based on recent experience), it will reach nearly 50 million MWh by 2010. Those 50 million MWh of renewable generation would result in a reduction of 39 million metric tons of

[6] These are Anaheim Public Utilities, Burbank Water and Power, Los Angeles Department of Water and Power, PacifiCorp (Pacific Power), Palo Alto Utilities, Pasadena Water & Power, Roseville Electric, Sacramento Municipal Utility District, and Silicon Valley Power.
[7] Bird, Lori, Claire Kreycik and Barry Friedman. Green Power Marketing in the United States: A Status Report (11th Edition). Golden, CO: National Renewable Energy Lab, October 2008.
[8] Bird, Lori. Presentation at National Renewable Energy Marketing Conference, Denver, October 27, 2008.

CO_2.[9] These data demonstrate that the voluntary market for renewable energy is larger than most people recognize.

Figure 1.



Source: Lori Bird, NREL

Not everyone wants or has access to a utility-sponsored renewable energy option; some customers choose to purchase renewable power outside the utility offerings. This is particularly true for large customers. There is a large voluntary market for RECs unbundled from electricity and for on-site customer-owned renewable power driven by a commitment to renewable power development and a commitment to GHG reduction. In this regard, many businesses and an unknown number of residential consumers buy RECs separate from electricity, or invest in on-site renewable power. California has more corporate customers of voluntary renewable energy enrolled in the U.S. EPA Green Power Partnership than any other state with the exception of Texas. Of the approximately 950 organizations that participate in the EPA's Green Power Partnership, the California-based Partners represent 113 organizations or 11.9%.

In California alone, we estimate that voluntary purchases accounted for 1,690,000 MWh in 2007, based on data from Green-e and the National Renewable Energy Laboratory. Sixty percent of this demand is served by unbundled RECs, purchased to a large extent by non-residential customers.

If this market is allowed to shrink, it will mean not only less renewable energy purchased, but also less manufacturing, less design and installation, less O&M, and ultimately fewer green jobs for the state of California.

[9] Based on EPA's e-GRID data for the national average CO_2 emissions resulting from electric generation (0.78 metric tons/MWh). See http://epa.gov/cleanenergy/energy-resources/egrid/index.html.

The Regional Greenhouse Gas Initiative (RGGI) provides an example of retiring allowances on behalf of voluntary renewable energy

The RGGI Model Rule provides an example of how to implement REMA's recommended treatment of voluntary purchases of renewable energy, and nine of the ten RGGI states have implemented it. RGGI calls it a voluntary renewable energy set-aside. If California adopts the set-aside approach for voluntary purchases of renewable energy, it would not be the first to do so, or the first to have to figure out how to implement it.

In its recommendations to ARB on Greenhouse Gas Regulatory Strategies, the CPUC noted the policy option to create a set-aside of allowances for the voluntary market. "Rather than sell the allowances, ARB could retire allowances from the set-aside reserve at some rate for each MWh sold (or REC retired) in the voluntary market. By this mechanism, voluntary purchases of renewable energy would reduce emissions essentially by ratcheting down the cap: ARB would retire allowances rather than issue them for use by an emitting source." [10]

In its Opinion, the CPUC voiced its support for continuing opportunities for voluntary reductions, but hesitated to recommend the creation of a set-aside "at this time," citing several questions that need to be answered. These include the types of RECs that would count under a set-aside, whether RECs from capped and uncapped electricity markets should count, how to assign emission reduction values to the RECs, and how this would work in a regional cap-and-trade system.

Although we believe that the details of how to implement the set-aside should be left to the rulemaking process, we provide answers to these and other related questions in Appendix A.

Conclusions

The ability of voluntary purchasers of renewable energy to claim emission reductions is extremely important to the continued viability of the voluntary market.

Omitting support for this strong and growing market will remove a key motivation that currently exists for purchasers of renewable energy, because such voluntary demand would not have the effect that customers desire. Even if some customers nevertheless continue to purchase renewable energy, they will be paying a disproportionate share of the cost of compliance with the cap—an unfair redistribution of costs that should rightfully fall on the obligated entities.

ARB should signal such support in the Scoping Plan by identifying either an output-based allocation to renewable energy generation, or by including a set-aside for the voluntary renewable energy market. ARB should recommend the set-aside concept in the Scoping Plan to ensure that it is taken up in the rulemaking process.

[10] CPUC, Rulemaking 06-04-009, Final Opinion on Greenhouse Gas Regulatory Strategies, Proposed Decision of Commissioner Peevey, September 12, 2008. Quotation from Opinion at 5.4.3.2.

Not including a set-aside provision (even in concept form) would *de facto* deny support to the voluntary renewable energy market because without a recommendation in the Scoping Plan, staff and stakeholders will argue there is no authority or direction to create rules for the approach.

Questions about how a set-aside would operate may be deferred to rulemaking, but the mechanics of operating the set-aside are really quite easy, and there are clear models and precedents among the states participating in RGGI.

We believe that the ability of customer choice to meaningfully contribute to GHG reductions is at stake without an allocation to account for voluntary renewable energy purchases. The importance of allowing individuals, private companies, local government and non-profits the ability to take pro-active measures to stem the threat and consequences of global climate change cannot be overstated. We are at a historic moment in time and all viable, cost-effective options to reduce GHG emissions should be encouraged. Voluntary renewable energy markets offer citizens and businesses the power of choice—a fundamental value in our society – and leverage market forces to encourage technology innovation and improvement. We believe it is essential to encourage individuals and organizations to make meaningful choices about their electricity supply, and in so doing, to help address climate change, reduce air pollution, and support the transition to a cleaner energy future.

Thank you for your consideration.

Respectfully submitted,

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The views expressed by REMA in this regulatory filing do not necessarily represent the views of each individual member company.

Appendix A: Implementing a Voluntary Renewable Energy Set-Aside

It is important that ARB recognizes that the Regional Greenhouse Gas Initiative (RGGI) has already dealt with questions of implementing a voluntary renewable energy set-aside. Although California need not take the same approach, the RGGI experience is certainly informative. In the questions that follow, we first answer in terms of a California-only cap-and-trade program, and then expand the answer by considering the question in a regional context.

1. What renewable energy would be eligible for the set-aside?

Renewable resource types that are eligible for the California RPS should be eligible for the set-aside. Eligibility should also include a generator vintage requirement consistent with how California has defined new renewables. The reason for this vintage requirement is to ensure that voluntary purchases are leading to new or additional emission-free generation.

For a regional cap-and-trade program, the participating states and provinces could write a standard definition, so that eligibility is harmonized. RGGI did this, and some of the states used the standard eligibility definition while others used a pre-existing (RPS) state definition. Uniformity is easier and simpler, but is not required. Again, a generator vintage eligibility date should be included to support the development of new resources.

2. What requirements would be placed on generator location?

For a stand-alone state program, the ARB should require that the renewable generator be located in California, or if the generator is located outside the state, the ARB should require that the renewable generating unit deliver energy into the California ISO in an amount equal to the RECs purchased by a California voluntary customer. The energy delivery requirement ensures that the purchase of RECs from these out-of-state facilities offsets emissions within the state. It is true that if a California resident purchases RECs from an uncapped state, global emission s will be reduced, but we presume that California policy intends that emission reductions be linked to the California electricity system.

For a regional cap-and trade system, RECs purchased by California electricity customers should be accepted from renewable generators located in any of the WCI Participant jurisdictions, without a requiring that energy be delivered into California. This recommendation is based on reciprocity among all Participant jurisdictions. Since the WCI Design Recommendations place the obligation on the First Deliverer of energy into a Participant jurisdiction, WCI clearly anticipates the possibility of importing some energy from outside the region. In the case of such energy imports, RECs from those facilities would count for the set-aside, assuming other eligibility criteria are met. In a regional program, it should be sufficient to deliver the imported energy into any of the participating jurisdictions, not necessarily to the California ISO.

In both situations, the general rule should be that generators should be located in capped jurisdictions, with the exception that they may be located outside capped jurisdictions as long as energy is delivered from the renewable generating unit (not just generic energy) into the capped region.

3. Does it matter who purchases the RECs?

If a consumer located outside the capped state purchases RECs from a renewable generator located with the capped state, that purchaser would have an equal effect on emissions as an in-state purchaser. Both would reduce emissions in the capped state. However, tracking and reporting of these out-of-state purchases may be more challenging, especially if the purchaser is served by a different REC tracking system. RECs would have to be exported from WREGIS into another tracking system, and retired in that system. It is possible, but the import-export protocols among the tracking systems are not well-developed. REMA therefore recommends that allowance retirements from the set-aside be based on purchases by electricity customers within California.

A regional cap-and-trade program would operate the same way. Each WCI Participant jurisdiction would have its own voluntary renewable energy set-aside account, and would retire allowances on behalf of purchases by electricity customers located in that jurisdiction. Allowance retirements in each jurisdiction would be tied directly to voluntary purchases within that jurisdiction. This is how the RGGI program works.

4. What emission reduction values would be assigned to the voluntarily purchased RECs?

In a California state program, the ARB should use the same methodology that it now uses to determine CO2 reductions from RPS renewables. There is no need to reinvent the wheel.

In a regional program, REMA recommends that each WCI Participant jurisdiction use the annual average marginal CO_2 emissions factor for the control area where the electricity represented by the sale was generated. This is similar to the RGGI approach. If this factor is not readily available (for example, if small control areas do not regularly track and report this figure), then the NERC subregion emission factors, as reported by US EPA, could be used. The principle is that the emissions factor should reflect the region where the generator is located.

5. How would this process work administratively?

By a date certain prior to the start of each allocation year, the ARB would estimate, with assistance from the Energy Commission, the volume of voluntary purchases of renewable energy by California customers. The ARB would reserve an equivalent number of allowances in the set-aside account.

By a date certain following the end of each allocation year, “any person” (per the RGGI Model Rule) desirous of supporting emission reduction claims based on a voluntary

purchase of renewable energy would report to the ARB final purchases by customers in California. The claiming entity might be a corporation that purchased a large volume of RECs, but it would more likely be a retail marketer that has sold RECs to California customers. The ARB would evaluate these claims and the documentation provided, and by a date certain would retire the equivalent number of allowances using the agreed conversion factor(s).

The set-aside and the actual purchases would then undergo a true-up. If actual purchases exceed the allocation to the set-aside account for the prior year, the difference would be added to the estimated purchases for the following allocation year. If actual purchases are less than the amount allocated to the set-aside, the difference would be subtracted from the projection for the following year.

The same process would be followed by each jurisdiction in a regional program.

6. What documentation of the purchase would be required?

California should require that documentation be provided by reports from the Western Renewable Energy Generation Information System (WREGIS). WREGIS is a certificate tracking system that includes information about the generator resource type, capacity, generator vintage, geographic location, and direct emissions, among other attributes or characteristics. [11] All of the attributes necessary to judge whether a generating unit is eligible for retiring allowances in the set-aside account are present and part of each certificate.

The required documentation should include:

a. Quantity of RECs (MWh) purchased by retail consumers in the state, by customer class, during the previous year.
b. Documentation of procurement.
c. Facility name, generator ID, fuel type and jurisdiction (geographic location) where the RECs were generated.
d. When the RECs were generated.
e. Any additional information required to demonstrate that these RECs are not being used or claimed in more than one participating jurisdiction, and are not being used for compliance with any requirement or mandate.

California could work with WREGIS to ensure that each certificate includes information about the annual average marginal CO_2 emission rate for electricity generation as most recently reported by the regional transmission organization or the entity that oversees electricity transmission in areas with no RTO. This would take care of the question of the emissions factor.

[11] The CPUC is considering a proposed order by an Administrative Law Judge to unbundle RECs for RPS compliance, but unbundled RECs are already in wide use for the voluntary market.

For a regional cap-and-trade program, the documentation should be the same except that reports from other recognized certificate tracking systems would be accepted—for example, the Midwest Renewable Energy Tracking System, or the APX North American Renewables Registry, depending on where the generator producing the RECs is located.