Date: February 1, 2008

To: Western Climate Initiative
Electricity Subcommittee

From: Renewable Energy Marketing Association

Re: Comments on Summary Table Comparing Different Approaches to Electric Sector Cap-and-Trade

The Renewable Energy Marketers Association (REMA) is pleased to submit the following comments to the Western Climate Initiative (WCI) Electricity Subcommittee on the question of cap-and-trade models. 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 and renewable energy certificates (RECs), to individuals, companies and institutions throughout North America.

The market for green power (renewable electricity and RECs sold independently of electricity) is strong and growing. In 2005, U.S. consumers made voluntary purchases of renewable energy totaling about 8.5 million MWh, and 2006 purchases are estimated to total about 12 million MWh. The voluntary market grew by 62% in 2004, 37% in 2005, and 40% in 2006. Currently, the voluntary market represents nearly one-fifth of the overall renewable energy demand from both compliance and voluntary markets on a MWh-basis. If the voluntary market continues to grow at a rate of 35% annually, it will reach about 40 million MWh by 2010 and represent about one-quarter of the total U.S. demand from voluntary and compliance markets.[1]

Depending on how it is implemented, a greenhouse gas cap can have a significant impact on voluntary renewable energy sales. Specifically, the treatment of renewable energy under a cap-and-trade program could undermine the voluntary green power market. A primary motivation for voluntary renewable energy purchases is to reduce the buyer's GHG footprint. This benefit—the ability to reduce electric sector emissions—would be eliminated if voluntary market sales of renewable electricity and RECs are not somehow linked to the retirement of allowances or the reduction of the cap.

[1]Bird, L., Lokey, E.. ***Interaction of Compliance and Voluntary Renewable Energy Markets*** Golden, CO: National Renewable Energy Lab, October 2007.

Therefore, with respect to the design of carbon cap-and-trade programs, REMA's primary objective is to ensure that any cap-and-trade program supports the ability of voluntary renewable energy demand to reduce emissions. To accomplish this objective, voluntary demand for renewable energy must result in either retirement of allowances or in lowering of the cap.

If because of the design of the cap-and-trade regime, no direct reduction in GHG allowances can be attributed to new clean renewable generation sold to voluntary buyers, it is not only retailers of RECs, but also developers and owners of renewable energy facilities, whose effect on emission reductions would be ignored. Eliminating the role of voluntary renewable markets in reducing emissions is an unnecessary casualty of a poorly designed cap and trade system and represents a missed opportunity for non-covered entities (renewable energy generators) to lower the overall level of the cap through voluntary action.

A well-designed cap and trade regime can insure a "best of both worlds" outcome where voluntary markets are additive to compliance targets. This is desirable since not all actors in the economy will be covered by the cap and it respects the voluntary choice of corporations and individuals to reduce GHG emissions below the level of the cap.

REMA has reviewed the summary table comparing different approaches to electric sector cap-and-trade. In general, these options are not described in sufficient detail for us to say whether they would meet our objective, but most of them could be designed to support consumer, business and government and institutional demand for renewable energy to reduce carbon in the atmosphere. The following examples illustrate how this could be done.

Under a generator-based approach:

Allowances could be allocated to generators (including renewable generators) based on their proportion of total MWh generated (output-based allocation). For voluntary renewable energy sales, renewable generators could sell the allowances with the RECs, and the allowance could be retired on behalf of the ultimate retail purchaser of the RECs and allowances.

Alternatively, if allowances are allocated only to emitting generators (whether freely or by auction), the generator-based approach could include explicit rules to retire allowances for voluntary renewable energy demand *before* the remainder is distributed, similar to what most RGGI states will do. The regulatory agency would estimate the anticipated volume of voluntary renewable energy market sales from all eligible renewable energy facilities located in the geographic area under the cap 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.

Each year, entities (including generators, marketers, certifying organizations and purchasers) would report the total volume of their voluntary renewable energy market

sales or purchases from eligible renewable energy facilities located in the region under the cap, using documentation from a certified REC tracking system such as WREGIS to avoid double-counting. 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 located within the region by adjusting the deduction for the voluntary renewable energy market for the next compliance period accordingly.

Under a load-based approach with allowance trading:

When electricity from an eligible renewable energy facility is sold separately from the associated RECs, the underlying electricity has no "green" attributes (and is sometimes called null power), yet it must have emissions attributes to be properly accounted for under a load-based cap. The electricity cannot continue to carry the same attributes as the REC because that would be double-counting the effects of the renewable generation. Instead, each MWh of electricity without a REC should be assigned the same emissions that the renewable energy is credited with reducing. The negative emissions value of the REC should be balanced by an equal but positive emissions value assigned to the null power.

The regulatory agency would establish a method for determining the emissions reduction value of one MWh from renewable electricity, expressed in tons of CO_2-equivalent per MWh. When electricity from an eligible renewable energy facility is sold to an LSE without associated RECs, the regulatory agency would assign to the electricity an amount of greenhouse gas emissions equivalent to the emissions reduction value credited to the renewable energy.

For purposes of compliance with the load-based cap, LSEs would be required to report, at the end of each year, the amount of null power purchased from eligible renewable energy facilities, and would be required to report that electricity as having the greenhouse gas emissions attributes as described above.

Under the CO2 Reduction Credit Trading approach:

This model would not issue allowances; instead, regulators would establish a minimum number of emission reductions that would be required to be obtained by the obligated entities. We do not see how the voluntary market would be supported under this approach. The effect of voluntary demand for renewable energy on emissions reductions would be ambiguous, and therefore we would remove this model from further consideration.

Under hybrid approaches:

Just as these approaches combine elements of both a generator and load-based approach, so too could they be designed with the ability for voluntary renewable energy demand to reduce emissions through allowance retirements or cap reductions. They might require a

combination of the methods described above to maintain a vibrant voluntary market for renewable energy.

Given the lack of specificity at this stage in the process, it is impossible for us to state a preference for one approach over another. However, we do have a few specific comments in response to the Subcommittee's questions below.

Section 3. What do proponents consider are the key advantages of each program approach? What disadvantages have been noted for each approach?

Regarding CO2 Reduction Credit Trading, there are disadvantages unique to this approach, not captured in the table.

First, this approach requires picking a base year against which reductions will be measured. Choice of the year will create winners and losers because each generating unit that had low emissions in the base year will argue extenuating circumstances for why upward adjustments in emissions should be made.

Second, basing the scheme on emission reduction credits raises a huge issue about who owns the credits—is it the emission-free generator that displaced the fossil generator, or the emitting generator that backed down without any investment in efficiency?

If an investment in renewable energy leads to emission-free power on the grid, the effect is to cause a more expensive generator (usually one with higher operating costs, such as gas, coal or oil) to reduce output. The emission reduction, in our view, should be credited to the renewable generator, but under the credit trading approach, this would be contended by the fossil generator.

Crediting emission reductions thus sets up a competition among generating resources. When they are in competition in the bid stack, generating units with low operating costs or "must run" plants bid low, while units with high operating costs bid high. The control area operator dispatches units with the lowest operating costs first, until all load is served. Generating units with high operating costs don't get dispatched unless peak demand is very high. Generating units that don't get dispatched because of high costs should not be rewarded with a credit—it will just make fossil plants more cost-effective, enabling them to compete more effectively.

As stated above, we do not see a good solution to this ambiguity. Program rules could declare that renewable energy generators (or a certain class of them, say, those built since 2000) will be granted the emission reduction credits, but it would be impossible to sort out fossil generator emission reductions that have been credited to renewable generators and those that have not. For example, suppose renewable generation created an emissions reduction of 100 tons. Within the electric system, six fossil fuel generators each reduced emissions by 20 tons, for a total of 120 tons. The reduction of 100 tons was caused by the renewable energy generation, but a reduction of 20 tons was caused by the higher cost of

operation. Determining which of the fossil plants reduced emissions voluntarily and which were "crowded out" would be problematic.

Third, if emission reduction credits are given to any generator throughout the western interconnection, and assuming they are tradable like RECs, then there could be a significant imbalance between excess supply in the larger region and the demand within the smaller WCI region. This would depress prices and lower the incentive to reduce emissions.

Add to disadvantages of the CO2 Reduction Credit Trading:
The table should note the above disadvantages of this approach:

- Base year is subject to gaming.
- Ownership of credit is uncertain, leading to dispute.
- Supply of credits in the western interconnect may greatly exceed demand within the smaller WCI region.

7. Does the model present specific issues related to the allocation of emissions allowances?

As pointed out in response to #3, the CO2 Reduction Credit Trading model does not allocate allowances, but does pose a critical question of who gets the rights to the reduction, the clean generator that displaced the emitting generator, or the emitting generator. For the other models that all rely on allowances, allocation of allowances is an issue. For REMA, which is trying to ensure a continuing vibrant market for voluntary purchases of green power—which is motivated in large part by the ability to affect emission reductions—it is critical that such voluntary purchases of emission-free renewable energy result in the retirement of allowances so that buyers can continue to reduce emissions. This could occur in one of two ways: (1) by allocating allowances to renewable energy generators based on MWh output, or (2) by the program administrator retiring allowances on behalf of voluntary renewable energy demand, as is the case with RGGI. The latter approach would require that before allowances are distributed (whether free or via auction), the administrator provide a window during which renewable energy marketers or others could apply for allowances equal to estimated demand, for the budget period. The administrator would retire equivalent allowances prior to further allocation. At the end of the budget period, the administrator would require proof of the voluntary sales or purchases, and make any necessary adjustments to the estimated demand for the next budget period. We will provide further comments on this to the Allocations Subcommittee.

9. What are the key practical challenges specific to design and implementation of each model?

The current draft notes that new tracking systems will be required for several models, but does not mention the generator-based model or for the first seller (or deliverer) model. We believe that all of the models will require new tracking systems. All of those that would allocate and trade allowances (Allowance Trading, Generator-Based, Load-

Generator Hybrid, and First Seller (or Deliverer) will require a system to issue allowances and track their ownership and retirement. The CO2 Reduction Credit Trading would be different because allowances are not issued, but would nevertheless require a tracking system of some kind to measure and award emission reduction credits, track their transfer and ultimately their retirement.

In closing, we would like to thank the Electricity Committee for the opportunity to comment. Voluntary renewable energy markets offer citizens and businesses the power of choice—a fundamental value in our society. We believe it is essential to leave open the opportunity for individuals and organizations to make meaningful choices about their electricity supply, and in so doing, help address climate change, reduce air pollution, and support the transition to a cleaner energy future.

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