

# A Comprehensive Guide For Managing Complex Solar REC Activities

Robust SREC trading has already led to many relatively standardized market practices and contractual terms.

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Many states seeking to promote and expand the use of renewable energy have adopted renewable portfolio standards (RPS), which require electricity providers to obtain a specified percentage of their power from renewable sources of energy by a certain date.

Twenty-six states and the District of Columbia have adopted RPS policies, and three other states have established non-binding goals for statewide renewable energy use. Other states, such as Florida, are developing RPS.

State RPS targets range from California's aggressive 20% by 2010 (and possible 33% by 2030, if a current bill in the California Legislature is approved) to Arizona's more moderate 15% by 2025. All told, states with RPS represent more than half of all electricity sales in the U.S., and Congress is currently considering a national RPS that, if passed, could expand this further.

## Solar set-asides

Some states have sought to create still greater incentives for the generation of solar energy. RPS in at least

11 states and the District of Columbia include either solar set-asides (in which a minimum percentage of the RPS requirement must be met with solar power) or multipliers (in which energy from solar projects generates a greater quantity of renewable energy certificates (RECs) than a typical megawatt-hour would).

For example, Pennsylvania's standard requires each electricity supplier to generate 18% of its electricity from alternative energy resources by 2020, with 0.5% to be generated from solar energy projects.

Other states with solar set-asides or multipliers include Arizona, Colorado, Delaware, the District of Columbia, Maryland, Nevada, New Jersey, New Mexico, New York, Texas and Washington.

## Tradable SRECs

To facilitate compliance with RPS requirements, many states have adopted a system of tradable RECs. A REC typically represents 1 MWh of electricity generated from a renewable source. Renewable energy providers will generate energy for the grid, but can then unbundle the renewable attributes of that power - selling those attributes as RECs, and selling the resulting energy as "brown" power.

Rather than requiring electricity providers to directly source the renewable energy, utilities can purchase and use these RECs to meet their RPS requirements, creating a much more liquid market and a lower cost of compliance.

There is also an active voluntary REC market, where buyers purchase the certificates to help promote the adoption of renewable energy or to fulfill corporate social responsibility or environmental goals.

As these and other financial incentives have helped spur the development of solar energy projects, the solar REC (SREC) has become a hot commodity in renewable energy markets, especially given the relative abundance of RECs generated from wind, landfill gas, biomass and other types of renewable projects.

SRECs typically trade at a significant markup compared to other RECs. Solar set-asides are accompanied by penalties for failing to meet this set-aside that are much higher than the penalties incurred by failing to meet the rest of the RPS requirement. These policies recognize the fact that solar capacity is generally far more expensive to build than other forms of renewable energy. This structure results in an SREC price that can be an order of magnitude higher than prices for standard RECs, helping to increase the incentive for solar supply.

## Overlaps

Because the generation of renewable energy may be said to displace fossil fuel combustion, RECs are sometimes sought by voluntary buyers as carbon offset credits. However, buyers should be aware that the use of RECs as carbon offsets raises a

number of concerns, including the risk of double counting and whether renewable power generation meets additionality criteria under carbon offset standards.

Double counting occurs when a REC is sold to two different buyers - as a pure REC to a compliance or voluntary buyer and as a carbon offset to another buyer on the voluntary carbon market. Double counting can create risk for buyers and is undesirable from a public policy standpoint.

Some states - including Arizona, California, Colorado, New York and Washington - have explicitly required that any greenhouse gas emission reduction associated with a REC count toward RPS compliance. Other states do the opposite, specifically stating that the REC is defined only to include renewable attributes and no other "green attributes," like carbon.

Clear definitions reduce the risk of double counting. But other state RPS rules are often ambiguous on this point, creating a risk for buyers who purchase a REC as a carbon offset, only to later find that the offset they thought they had purchased was legally part of a REC sold to another party.

The lack of additionality for the carbon-reduction element of a REC created pursuant to an RPS is another, perhaps more important, concern for buyers seeking to make claims of carbon neutrality.

All robust carbon offset standards require that the project generating the offset be additional - in other words, not something that would have occurred in the business-as-usual case. Renewable energy projects developed specifically to meet RPS requirements have difficulty meeting additionality criteria. Even in jurisdictions without an RPS, the availability of investment and production tax credits and other financial incentives raises questions about whether renewable energy projects could ever demonstrate additionality, thus creating doubt about

whether any greenhouse gas-related claim could be made about the REC.

### Trading SRECs

SRECs are typically traded between parties under purchase and sale agreements that are negotiated bilaterally between the buyer/utility and the seller/generator. Aggregators and brokers are also active as SREC market participants.

SRECs are also typically traded for physical delivery via a REC registry or tracking system that provides a reliable and transparent method to track and certify ownership of RECs. REC tracking systems have evolved out of the regional power pools.

For example, the Generation Attribute Tracking System (GATS), owned and operated by PJM Environmental Information Services Inc., registers RECs generated in parts of the Midwest and the Mid-Atlantic regions. The Western Regional Energy Generation Information System (WREGIS) registers RECs generated in several Western states.

Buyers and sellers open electronic accounts with the tracking system, through which SRECs can be transferred. Many state RPS require trading through a particular tracking system, which also assists the state with tracking compliance.

In the voluntary market or in states where no tracking system exists, buyers and sellers will often transfer title by means of a transfer certificate. A transfer certificate specifically describes the quantity of SRECs being traded, the contract price, and when and where the SRECs were generated. The seller signs the transfer certificate indicating that it intends to transfer all legal and beneficial title to the SRECs to the buyer, free and clear of any encumbrances.

### Pricing

As previously noted, SRECs typically command prices much higher than those garnered by other types of RECs. Prices tend to be higher in compliance

markets - especially those with solar set-asides - than in voluntary markets. Many states set a separate alternative compliance payment (ACP) as a penalty for non-compliance with the solar set-asides that is much higher than the general ACP.

For example, Maryland's solar ACP in 2009 is \$400 per SREC, while the standard ACP is only \$15 to \$20 per REC. New Jersey's current ACP for solar is \$711, while the standard ACP is \$50 per REC.

In compliance markets, the ACP serves as an effective cap on the price of SRECs; a buyer would not buy SRECs in the market to satisfy its compliance obligation if it were cheaper to simply pay the ACP. In fact, the ACP is sufficiently tied to pricing so that SRECs are sometimes priced at a percentage of the ACP in effect for the applicable year.

Few state RPS require that specific contractual terms be included in SREC purchase and sale agreements. However, some states set requirements aimed at protecting or favoring sellers that are small companies or residential owners of solar power systems in contracts with more sophisticated buyers.

For instance, the Maryland RPS states that when the seller is the owner of a small residential system, the contract term must be at least 15 years, and payment must be made up front. However, most contractual terms are left to agreement between the buyer and the seller.

SREC purchase and sale agreements generally fall into two categories:

- spot contracts, or agreements to buy and sell a certain quantity of SRECs that will be delivered and paid for at one time, usually in the immediate future; and

- term contracts to buy and sell a certain number of SRECs over a period of time, typically one to 15 years, with deliveries and payments at regular intervals, either quarterly or annually.

The quantity of SRECs to be sold may be expressed as a firm or guaranteed quantity, a unit-contingent quantity that will depend on the volume generated by the solar facility, or some combination of the two. Some parties prefer to set minimum or maximum quantities when contracting for a unit contingent quantity to bind their delivery and purchase obligations. These act, in effect, as put or call options.

### **Delivery and payment**

Delivery of SRECs is completed between the buyer's and seller's accounts on a registry, such as GATS or WREGIS, or by delivery of a transfer certificate from seller to buyer. Payment is generally made after delivery.

Under a spot contract, one delivery date or deadline is specified in the near future, with payment required soon thereafter. Under a term contract, specific regular delivery deadlines are set, typically annually or quarterly.

A standard delivery deadline would be a date within a month or two following the end of a state's compliance year, but before the date, the utility must demonstrate to the state that it meets its RPS compliance obligations. An alternative delivery deadline might be 30 calendar days after the end of a calendar year quarter.

For compliance trades, delivery deadlines are scheduled around the energy or compliance year for the state RPS and are designed to give the buyer enough time to compensate for any delivery failure before the deadline to prove compliance with the RPS.

Responsibility for any taxes or fees transfers to the buyer upon delivery, along with all ownership rights to the SREC. A credit may be bought and sold any number of times but may be owned by only one party at a time.

The rules and regulations that affect SREC trading and compliance are subject to change at any time, as states

continue to amend their existing RPS and other states institute new RPS. In addition, it is widely anticipated that a federal RPS will be implemented over the next several years.

The prospect that current state rules could either change radically or be preempted by a federal program holds serious implications for parties contracting for SRECs now, both in the voluntary and the compliance markets.

To guard against and allocate these risks, many parties include detailed provisions in SREC purchase and sale agreements governing how potential changes in the markets will affect the agreement. Typical provisions state that, in case of such a change in law, the parties will work together to mitigate the effects of the change in law by modifying the existing agreement or negotiating a replacement agreement that would replicate the original commercial benefits among the parties.

Some contracts specifically detail the remedy to be undertaken, depending on whether the tracking system rules change, the state program changes or the state program is preempted, and will govern how costs to deal with these changes are allocated between the buyer and the seller. If mitigation is impossible, impracticable or illegal, many agreements allow for termination of the agreement with or without some level of compensation.

In some deals, in which the seller/generator is relying on the contract to finance the solar project, the buyer will more typically bear the risk of a change in law on the assumption that the utility or aggregator buyer is better positioned to handle the consequences and also because the buyer is better suited to influence such changes in law in its favor in the first place.

### **Early termination**

In addition to possible termination for a change in law, SREC agreements may be terminated before the end of

the contract term upon the occurrence of an event of default.

Typical events of default include a breach of a representation or warranty (representations and warranties generally include statements that the agreement is valid and enforceable, that the seller has good and marketable title to the SRECs, that the SRECs are free of any liens or other encumbrances, and that the SRECs meet the requirements of the compliance system); a failure to perform a material obligation under the agreement or to make a payment under the agreement that is not cured within a certain period of time; and insolvency.

When an agreement is terminated for an event of default, the defaulting party is typically required to pay a settlement amount to the non-defaulting party. The settlement amount is intended to include any costs incurred by the non-defaulting party, which would encompass, in part, the marked-to-market value of the contract.

Therefore, if the buyer defaults, it will be required to pay the seller any positive difference obtained by subtracting the market price of an SREC from the contract price, multiplied by the quantity of SRECs that the buyer would have been required to purchase over the remaining term of the agreement, plus the seller's costs and expenses resulting from the default.

If the seller defaults, the settlement amount would be any positive difference obtained by subtracting the contract price from the market price for an SREC, multiplied by the quantity of SRECs that the seller would have been required to sell to the buyer over the remaining term of the agreement, plus the buyer's costs and expenses resulting from the default. The settlement amount, including other amounts owed under the agreement to either party, would be paid upon termination.

Although delivery and acceptance of SRECs are material terms of any SREC purchase and sale agreement, failure to deliver or to accept SRECs

in long-term contracts (as opposed to spot contracts) is typically carved out of the list of events of default and treated separately.

Rather than enabling a termination of the contract for a failure to accept or deliver in a certain year, the party at fault is required to make the other party whole by paying the other party's replacement cost.

Therefore, in the event of a delivery failure, the seller may either deliver the SRECs within a certain grace period or pay the buyer the positive difference (if any) between the market price of an SREC on the relevant delivery deadline and the contract

price, multiplied by the number of SRECs that it failed to deliver, plus interest for the period of time between the missed delivery deadline and the date of payment.

In the event of a failure to accept, the buyer must pay the seller the positive difference (if any) between the contract price and the market price of an SREC on the relevant delivery deadline, multiplied by the number of SRECs that it failed to accept, plus interest for the period of time between the relevant delivery deadline and the date of payment.

This resolution is beneficial to both parties because it keeps the agree-

ment alive, ensuring future deliveries in a market that is not particularly liquid. Because damages are calculated to reflect the upside or downside of seeking a better deal in the market, these provisions also remove any incentive either party would have to intentionally default and to seek better terms. ☞

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