

LEX HELIUS: THE LAW OF SOLAR ENERGY
—Monetizing the “Green” in Green Power:
Renewable Energy Certificates—

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I. Introduction. This chapter explains the basics of Renewable Energy Certificates or “RECs.” It discusses the different types of markets to which a solar power developer might sell its RECs, examines criteria that may affect the eligibility of your facility to sell its RECs, and explains verification and tracking, and how they can lead to maximizing the value from your REC sales.

II. How RECs Help Finance Your Renewable Energy Project. Financing is usually the biggest challenge facing independent developers of solar energy projects. A profitable solar energy project typically relies on multiple sources of revenue. Electricity sales are obviously the most important, but state and federal incentives, including tax benefits, are important revenue streams as well. In addition to the revenues from electricity sales and the various governmental incentives, RECs can be an important stream of revenue for a solar energy project. Investors require long-term certainty to give maximum credit to the cash flows from incentive programs. Because REC markets are volatile, investors and lenders prefer to finance a contracted cash flow. Therefore lenders or investors will generally not rely on revenue projections from REC sales absent a long-term REC sale agreement.

III. Introduction to Renewable Energy Certificates. Renewable energy consists of two distinct commodities that may be sold together or separately. These two commodities are (i) electricity and (ii) environmental attributes. The environmental attributes (*i.e.*, the “green” in green power) include the emissions benefits associated with the renewable energy source (*e.g.*, the reduced emission of greenhouse gases) and the renewable fuel source (*e.g.*, solar power, wind power, etc.).

Because there are two commodities, it is possible to

- Sell the electricity with the environmental attributes,
- Sell the environmental attributes separate from the electricity, or
- Bundle the environmental attributes with so-called “brown power” and resell them as green power.

Because of this ability to unbundle the environmental attributes from the electricity, the buyer of the REC may be different from the buyer of electricity. As will be discussed below, this can present both challenges and opportunities.

Although there is no universal definition of a REC, a REC typically represents the environmental attributes from one megawatt hour (“MWh”) of electricity from a renewable energy source, and includes the reporting rights to the greenness of that MWh of electricity. In most cases, a contract between the seller of the RECs (*e.g.*, the power producer or an aggregator) and the buyer of the RECs will define the environmental attributes. If RECs and electricity are unbundled, it is also necessary to define the environmental attributes in a power purchase agreement to ensure that the buyer of the electricity knows that it is not obtaining the environmental attributes as well.

IV. An REC by Any Other Name. The market for RECs has been around for less than a decade. Thus it is not too surprising that although there is general agreement about the concept of selling the environmental attributes separately, there is less agreement on what those attributes should be called. RECs are also referred to as:

- Environmental Attributes
- Green Tags
- Renewable Energy Credits
- Green Tickets
- Tradable Renewable Energy Certificates
- Tradable Renewable Certificates
- Green Certificates

V. Types of Markets for RECs. REC prices are determined by market forces. In general, there are two markets for RECs: compliance markets and voluntary markets.

A. Compliance (or Mandatory) Markets. Many states have passed laws requiring certain utilities to include a minimum amount of renewable energy in the portfolio of generating resources serving the utility's load. These laws are referred to as Renewable Portfolio Standards or "RPS." Most state RPS programs allow the utilities subject to the RPS to comply, at least in part, through the purchase of RECs. This means that the buyers of RECs in a compliance market are generally utilities, and the utilities are purchasing the RECs to meet these state law requirements. The markets for RECs in RPS states are generally strong, and RECs that qualify for the various RPS programs will usually fetch the highest prices in these states.

At this time there is no federal RPS, and the RPS requirements differ significantly from state to state. Each state RPS program determines whether RECs are tradable and defines what constitutes a REC that will satisfy its own particular standards. As a result, the buyer's specifications for RECs will be defined by the state standards. Some states specify that the generation source must be located within the state or a particular region. Some states require the electricity to be delivered to the state or a nearby region to meet the state standard. Some states require their utilities to purchase the electricity and REC together. Knowing your state's RPS, if it has one, and the RPS of nearby states will be important in valuing your RECs.

In most cases, RECs will fetch the highest prices in states with an RPS that permits tradable RECs and that has what is known as a "solar carve-out." A solar carve-out is an RPS requirement that a certain percentage of the electricity acquired by utilities subject to the RPS be generated by a solar energy resource. Colorado, New Mexico, Nevada, and New Jersey currently have solar carve-outs.

In compliance markets, buyers tend to care only about whether the source of renewable generation meets the state RPS requirements. In some cases, the structure of a compliance market may limit the flexibility of sellers. For example, the state RPS may specify a certain geographic area, or state policies may favor certain types of generation. In addition, utilities making long-term purchases of RECs may impose credit requirements on sellers

in the form of a letter of credit, a corporate guaranty, or other arrangement, as utilities tend to buy RECs only from sources that will satisfy their RPS needs for the long term.

B. Voluntary Markets. The states that do not have an RPS are referred to as voluntary markets. There are also voluntary markets in states that do have an RPS among buyers who are not subject to the RPS. In these markets, sales are driven by customer demand. Voluntary buyers may be motivated by a desire to “do the right thing,” or to enhance or affirm corporate identity or environmental awareness. Buyers include marketers, brokers, businesses, nonprofit organizations, and individuals. Businesses and individuals buy RECs because more revenue drives more renewable generation into the power pool, which means less fossil fuel burned and reduced emissions of greenhouse gases.

Increasingly, marketers and brokers bundle RECs into more usable products. For example, it may be difficult for a small solar developer to get the attention of a direct consumer of RECs. A marketer or broker—a classic middleman—may have a customer who needs far more RECs than a single solar development will produce. By bundling together a large number of such small developers’ RECs, the marketer or broker will be willing to deal with the small producer in order to satisfy the large customer’s demand.

Examples of voluntary REC markets include utility “green pricing programs,” such as those offered by PacifiCorp (Blue Sky), Sacramento Municipal Utility District (Greenenergy), Portland General Electric (Clean Wind and Green Source), Puget Sound Energy (Green Power Program), and WE Energies (Energy for Tomorrow). Other voluntary markets are corporate purchasers, such as Aspen Skiing Company, HSBC-North America, Johnson & Johnson, Starbucks, and Whole Foods Market.

Voluntary markets are driven by consumer demand or state-mandated utility programs. In most cases, the prices are lower than for compliance markets. However, buyers are often less concerned about geographic location and may be more affected by the type of technology involved. This offers greater flexibility for sellers while imposing fewer credit requirements on them. However, the ambiguous rules, uncertainty of future demand, and lower prices create challenges for the REC seller in a voluntary market. In particular, because of the often short-term nature of most voluntary purchases, lenders and investors are generally unwilling to rely on voluntary demand as security for financing.

Credit requirements are often relevant to buyers in voluntary markets. It is important for the seller to know that the buyer will have the wherewithal to pay, particularly if the buyer is a marketer or broker (who may be a substantial business, or may be a person with a cell phone and an email address), or a nonprofit organization. The same requirements that a utility might impose on a seller of RECs are also germane to enhancing the credit of such buyers: letters of credit, cash deposits, or guaranties.

VI. Is Your Renewable Energy Facility Eligible to Sell RECs? A threshold issue in any REC sale is the question of whether the seller has title to the environmental attributes from the facility. Some of the factors that may disqualify the sale include whether the output from the facility is being sold to the local utility under a QF arrangement, whether the electricity is being sold to an entity that is counting this electricity for compliance purposes, whether the RECs have already been committed or sold under another agreement, and whether the environmental attributes are being used to satisfy a separate compliance requirement.

There are untested questions concerning RECs, such as what happens to a REC when a remote seller goes bankrupt, and would a REC that is sold in advance of its generation be subject to the rights of secured creditors of the generator? There is essentially no case law about RECs, and thus generators and consumers alike may be taking risks they cannot measure.

VII. Verification of RECs. A common requirement in long-term contracts is third-party verification. To be able to sell your RECs for top dollar, it is important to have them certified and verified by an independent third party. These are typically private organizations whose methods have come to be accepted in the marketplace as sufficient to ensure that the environmental attributes promised are, in fact, delivered. Third-party verification generally confirms the quantity, renewable type, and vintage of the RECs, and also that no double counting has occurred. Double counting occurs when renewable power is sold more than once (as either RECs or renewable power) or when the renewables are also used to meet a renewable portfolio standard or other federal, state, or local regulatory requirement. It is also considered double counting if emissions credits/allowances or other environmental attributes are disaggregated by the renewable power/REC supplier and sold separately. The verifiers typically charge a fee for the use of their logo as proof of their verification of the existence of the RECs and perform periodic audits (for which a fee is also charged).

VIII. Tracking. Many states with an RPS are requiring the use of a REC tracking system, such as WREGIS, NEPOOL GIS, or PJM. These electronic systems track each REC from “birth” to retirement. Each unit of generation is assigned a unique ID that includes its attributes, such as the date the energy was generated, facility location, date facility went online, type of renewable, emissions profile, and eligibility for different RPS programs. As REC trackers such as WREGIS expand, it is likely that more states will allow greater use of unbundled RECs for compliance with state RPS requirements.

IX. Conclusion. RECs can be a valuable revenue stream for a solar developer. Selling an intangible attribute into a growing and evolving market for cash is a great way to enhance the viability of a project. RECs can be particularly valuable where they can qualify utilities to satisfy RPS standards in a state, but can also be sold into voluntary markets, though those markets present credit and other challenges. The sale of RECs is subject to minimal regulation at the moment, but that should change over time. There are legal issues that might be faced as RECs become a more important part of the development of renewable energy.