

RENEWABLE ENERGY CREDITS (RECS)

Renewable Energy Credits (RECs) represent a right to market characteristics associated with a “green” or environmentally friendly generating facility. They are considered a commodity separate from the actual power produced. Renewable Energy Credits are also commonly referred to as green tags, Tradable Renewable Certificates (TRCs), and environmental attributes. When RECs are traded, the entity purchasing the REC gains the right to claim such environmental benefits to itself; thus, an entity might purchase a REC to offset its own environmental impact, either because it is obligated by law or regulation to do so, or because it wishes to improve its commercial image.

The concept of a REC was formed around ten years ago in response to a number of companies looking to enter the soon-to-be-deregulated market in California. While many of these companies planned to compete on price, several of them wanted to differentiate themselves by offering a “green” product. The REC was formed to create a mechanism by which those marketing companies could accomplish their objective.

Categories of Renewables

- Photovoltaic Solar
- Wind
- Landfill gas
- Geothermal
- Biomass (e.g. wood waste, burnable animal waste, feedstock)
- Waste heat
- Tidal Power
- Hydroelectric (in limited cases)

Who Needs RECs?

There are two kinds of markets for Renewable Energy Credits: mandatory and voluntary.

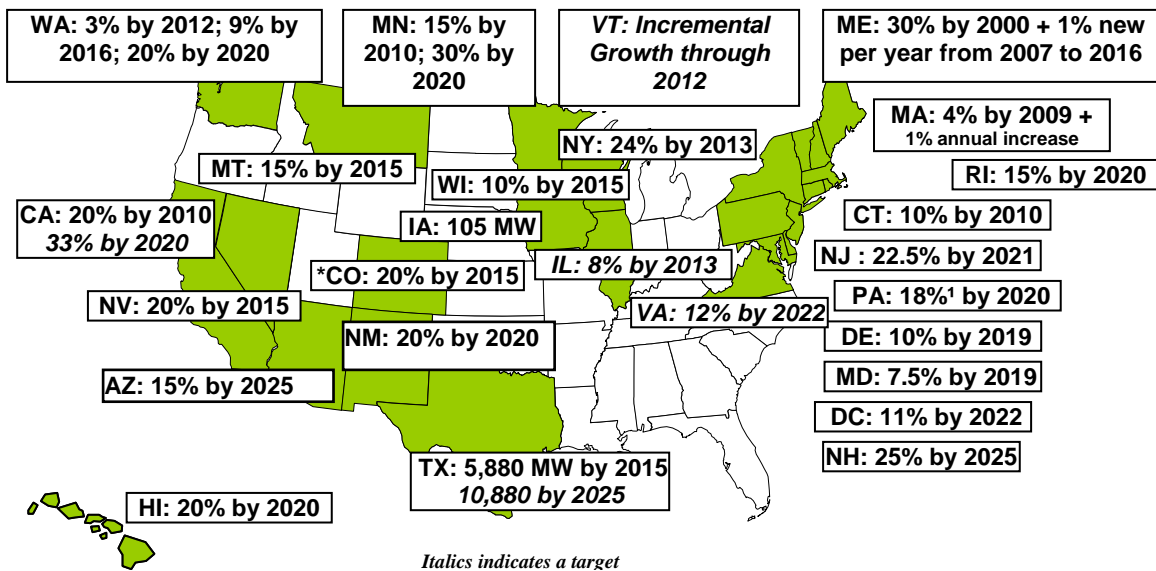
Mandatory markets are defined in states that have adopted a type of Renewable Portfolio Standard (RPS) by legislation or regulation. Renewable Portfolio Standards require a set percentage or quantity of delivered power to come from renewable resources. As of 2005, roughly twenty states have adopted a form of Renewable Portfolio Standard, and their implementations all differ on some level. The majority of states with RPS requirements permit the trading of RECs for the purpose of establishing compliance. Thus, in these states, companies that must comply with a RPS may purchase RECs as a cost-effective alternative to developing their own sources of renewable energy generation. The rules of the RPS define what constitutes a REC, delineate the parameters for REC trading, and set the standards for REC production.

Voluntary markets exist wherever businesses decide to purchase the attributes of renewable energy outside of any regulatory or statutory mandate to “green” its power usage. Voluntary markets for RECs can exist in states that have adopted Renewable Portfolio Standards as well as those that do not. Voluntary purchases are a very effective means of promoting renewable generating resources as well as implementing corporate citizenship initiatives. There are no enforceable standards for voluntary REC purchases, so the risk around these purchases can be much greater than for transactions in mandatory markets.

Regions/Markets

Renewable Portfolio Standards

(as of May 31, 2007)



REC Pricing

The price for RECs varies dramatically, both in voluntary and mandatory markets. To point out the extremes in the mandatory market, RECs that meet compliance in Maine trade for around \$0.25/REC, while solar RECs for New Jersey trade for about \$280/REC. These variations are driven by the definition that states have for factors such as geographic reach, shelf life of a REC, and eligible resources. The spread is generally not as wide in voluntary markets, and any differences are driven more by resource type rather than geography. Solar usually commands the highest premium (around \$20/REC), followed by wind (around \$3.50/REC), geothermal (around \$3.00/REC), hydro (around \$2.50/REC), and biomass (around \$2.00/REC). The vast majority of RECs traded in the voluntary markets meet the Green-e standard, which is administered by the Center for Resource Solutions.

REC Transfer

The method of transferring title to RECs is an evolving process. Until recently, RECs were transferred through forms, commonly known as attestations. These attestations are essentially a condensed version of the contract, without the price. This method can create a number of risks for both buyers and sellers, stemming either from fraud or honest mistakes. Tracking systems have begun to evolve recently, which is where an independent third party certifies the amount of RECs produced by a facility and puts these RECs in the generator's account in that system. RECs can then be transferred between accounts, and eventually account holders can retire RECs that they hold. While this doesn't eliminate all risks that currently exist in the market with regard to title, it does greatly reduce them.

Regardless of the mode of transfer (attestation or tracking system), the contracting process is still somewhat archaic. Since markets for RECs are relatively illiquid and fragmented, most transactions are done through long-form contracts. This differs from many common commodities that are more actively traded, where a master (enabling) agreement exists between two parties, and they will execute a one-page confirmation to capture each transaction between them. As the REC markets evolve, the current practice of using a long-form contract for each transaction will change.

Tax Credits and Other Subsidies

There are a few incentives for developers and owners of renewable generation projects. The largest is the Production Tax Credit, which currently exists through the end of 2008. If a renewable facility, as defined by the statute (including geothermal) is built before the deadline, then the owner will get a tax credit for each megawatt-hour of electric production by the facility over the course of ten years. For geothermal resources, the credit is \$10/MWhr. The electricity must be sold to an "unrelated person," and the plant can be depreciated over five years.

For public power and other entities that have no tax appetite, there are Clean Renewable Energy Bonds (CREBs). The government allocates these based on applications received. In 2006, there were \$800 million worth of CREBs that were allocated among 708 applicants. The government has allocated \$400 million for 2007. CREBs are no-interest bonds that allow the lenders to claim tax credits. This mechanism attempts to level the playing field for non-taxable entities that want to be involved in the development of renewable generation.

Many state and local governments also offer grants, tax incentives, and other subsidies for renewable projects. These are often resource specific, with developers of photovoltaic solar projects being the usual recipients.