

# Renewable Energy Certificates

Ethics and Vintages

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## Carbon Solutions Group Background

Carbon Solutions Group is an environmental asset management, trading and development firm founded in 2006. Carbon Solutions Group is headquartered in Chicago, Illinois and has offices in San Francisco; and Lima, Peru. Our staff consists of financial traders, business/policy analysts, and environmental consultants. These diverse backgrounds enable Carbon Solutions Group to deliver well-rounded solutions within our specific core competencies of environmental asset valuation, trading, and risk management.

Carbon Solutions Group has been in the voluntary Renewable Energy Certificate market since early 2007. Our primary focus is working with LEED clients to obtain Renewable Energy Certificates (RECs) for their green building projects. Since 2007, the voluntary market has fluctuated widely in price and quantity of RECs. Concurrently, Carbon Solutions Group has remained steadfast in its stance on Renewable Energy Certificates, especially regarding ethics and vintages.

## Renewable Energy Certificate Background

According to the World Resources Institute, Renewable Energy Certificates (RECs) are:

“Tradable instruments which can be used to meet voluntary renewable energy targets as well as to meet compliance requirements for renewable energy policies. A REC is a certificate that indicates the generation of one megawatt hour (MWh) of electricity from an eligible source of renewable power. Each REC denotes the underlying generation source, location of generation, and year of generation (a.k.a. “vintage”).“

*World Resources Institute (WRI) The Bottom Line on Renewable Energy Certificates – November 2008*

Many LEED Rating Systems currently encourage the purchase of RECs as a compliance path under the “Green Power” or “On-site & Off-site Renewable Energy” credit. The intent and requirements for this credit reads as follows:

“Encourage the development and use of grid-source, renewable energy technologies on a net zero pollution basis.”

“The owner and project team have the option of purchasing Green-e accredited Tradable Renewable Certificates (RECs). In this case, the team purchases a quantity of RECs equal to [a percentage] of the predicted annual electrical consumption over a two year period (which is equivalent to [double the percentage] of predicted annual electrical consumption if all of the RECs are purchased at one time).“

*USGBC LEED for New Construction Version 2.2 – pages 227-231*

According to the above quote from the USGBC, RECs must cover electricity consumption over a two year period. However, purchasing single year vintage RECs for double the annual electricity consumption is *not* equivalent to a two year contract, and does *not* meet Green-e Energy standards described in the next section.

The USGBC requires the Renewable Energy Certificates to conform to the standards of Green-e Energy, a leader in Renewable Energy standards as described below:

“Green-e Energy is the nation's leading voluntary certification program for renewable energy. For over a decade, Green-e Energy has been certifying renewable energy that meets environmental and consumer protection standards that it developed in conjunction with leading environmental, energy and policy organizations.”

*Green-e Energy Website* [http://www.green-e.org/getcert\\_re.shtml](http://www.green-e.org/getcert_re.shtml)

## Renewable Energy Certificate Vintages

Carbon Solutions Group believes that REC purchases used for LEED projects should be based on the concept of vintages. The importance of vintage based purchases is supported by World Resources Institute as stated previously, and by Green-e Energy as follows:

“The vintage of a REC is the date that the electric generation associated with the REC was measured by the system operator or utility meter at the generator site.”

*Green-e Glossary* - <http://www.green-e.org/dictionary.shtml>

“Section III B – Vintage Requirements – A Green-e Energy Certified product [i.e. REC] may include only renewables that are generated in the calendar year in which the product is sold, the first three months of the following calendar year, or the last six months of the prior calendar year.”

*Green-e National Standards Version 1.6 – 12/5/2008 – Page 6*

According to other Green Power procurement programs including the *Environmental Protection Agency's (EPA) Green Power Partnership, EPACT 2005* and *Executive Order 13423*:

“RECs purchased for a given contract year must meet REC “vintage” requirements, i.e., the energy they represent must be generated during the same defined contract year. They may also be generated six (6) months immediately preceding each contract year of the period of performance, or three (3) months immediately following each contract year of performance. This is consistent with recommended practice for the EPA Green Power Partnerships.”

*Renewable Energy Requirement Guidance for EPACT 2005 and Executive Order 13423*

Federally funded buildings *must* comply with the above statement regarding REC vintages. In other words, the REC volumes and vintages for any contract must match the corresponding years and quantities within the contract. The intent is to match the REC vintage and quantities with the consumption dates as closely as possible, mimicking the way a utility provides green power. For example, a two year contract from 2010-2012 must contain the appropriate percentage of REC vintages from *each* of the years in the contract.

Based on Green-e Energy requirements that a certified product must be generated and sold for use in the same calendar year (or six months prior and three months after), a purchase of single year vintage RECs for a multi-year claim can only be Green-e Energy certifiable for the *first* contract year. For example, a two year contract from 2010-2012 cannot be Green-e Energy certifiable beyond the first year

(2010-2011) if the total electricity consumption for the two year contract is provided by vintage 2010 RECs. Therefore, we believe any purchase without regard for correct sourcing of vintages *does not* fulfill the United States Green Building Council's (USGBC) requirements for a two year purchase agreement that meets Green-e Energy National standards.

Furthermore, through the alternate LEED Green Power compliance path, all utility green power procurement programs are required to source appropriate vintages in a Green-e Energy eligible "bundled" (Electricity with RECs) delivery method. Again, the intent is to match REC vintage with the dates of consumption as closely as possible, replicating the way green power (the actual electrons) is generated and consumed.

## **Purchasing RECs to Build the Renewable Energy Market**

Green-e Energy and the USGBC have expressed concern over confusion in the REC market stemming from low cost RECs sourced without regard for vintages:

"In Green-e discussions with the LEED Energy & Atmosphere Technical Advisory Group (EA TAG) it came up that there is concern from the USGBC about the value of very inexpensive RECs. Certain members of the EA TAG feel that an inexpensive REC does very little to build new generation or change the market."

*Green-e Energy Update email – June 3, 2009*

By making vintage based REC investments, the LEED program can play a vital role in building and sustaining a market that incentivizes renewable energy capacity on our nation's grid. RECs will most likely be a more valuable commodity in the future with the relative certainty of a Federal Renewable Energy Standard requiring a percentage of electricity generation to come from renewable sources, and by sourcing correct vintages, the problem of "very inexpensive RECs" will be stabilized by the market for future RECs.

The intent of the USGBC in the Green Power Point is to "encourage the development and use of grid-source, renewable energy technologies on a net zero pollution basis." We believe that a long term (2 years or more) contract with a renewable energy generator creates a guaranteed future revenue stream more likely to incentivize renewable energy generation than a short term contract. By sourcing RECs that match *actual electricity consumption*, the REC provider is able to negotiate long term contracts for RECs with renewable energy producers, such as a pulp mill in Georgia or a biofuel plant in Alabama.

These long term contracts provide renewable energy producers with something more valuable than a dollar in their pocket - it affords them long term investment planning certainty for their business. Without attention and support for vintages, these generators cannot have the certainty that a dollar today is anything more than stewardship fad.

## Conclusion

Renewable Energy Certificates play an important role in supporting renewable energy production in the United States. The LEED market has the potential to incentivize the industry further, and the best way to support an emerging industry is a long term contract that aligns the years of generation with the years of consumption.

Based on Green-e Energy requirements, an up-front purchase of single year vintage RECs for a multi-year claim can only be Green-e Energy eligible for the first contract year. Therefore, we believe any purchase without regard for correct sourcing of vintages *does not* fulfill the USGBC's requirements for a two year Green-e Energy certifiable contract.

Furthermore, by supporting clean renewable energy in a more economically sustainable manner, long term REC contracts based on vintages could remedy the stigma held by some building professionals that RECs are simply a way to "purchase cheap LEED points".

The voluntary LEED market has the potential to advance a number of environmental initiatives completely independent of Federal or State regulation. To extend its influence further outside of the built environment, the USGBC should continue to maximize the potential of these emerging environmental markets by incentivizing building professionals to invest in environmental assets associated with the building industry.

Furthermore, we believe that mandating the correct sourcing of REC vintages for all eligible LEED projects will have the greatest impact on the USGBC's Green Power Point credit intent - "to encourage the development and use of grid-source, renewable energy technologies on a net zero pollution basis."

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