**Center for**

**RESOURCE SOLUTIONS**

*Issue Brief*

# THE NEED FOR GREEN-E CERTIFICATION AND VERIFICATION

# IN AN ERA OF RENEWABLE ENERGY TRACKING SYSTEMS

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# SUMMARY

The Green-e Program is a voluntary certification program that provides environmental and consumer protection standards for renewable energy and tradable renewable certificate (TRC) products.[1]  An essential part of the Green-e Program is verification that certified products meet Green-e standards.  Verification includes steps to ensure that all aspects of the Green-e standards are meet, including that renewable energy supply is sufficient to meet sales, products meet the Green-e criteria and stated product content, and marketing and product information is accurate and communicated to customers.

Renewable energy tracking systems support one of these essential verification elements – assurance of renewable energy supply.  Green-e verification of renewable energy supply has several components, including that the renewable energy and TRCs were generated by eligible generators, that generation matched the quantity and type that Green-e certified providers claimed, and that the quantity and type of product sold met Green-e's product standards, including requirements regarding emissions limitations and the age of the generation facility. Tracking systems can provide some of the information needed by Green-e to verify supply, and Green-e accepts reports from tracking systems to substantiate the quantity and type of renewable energy and TRCs generated.  Tracking systems currently do not perform the other Green-e verification functions related to supply, including ensuring that renewable energy purchases are sufficient to meet all aspects of the Green-e standards and stated product content, nor do they provide the other non-supply verification functions, such as assuring that customers are billed correctly for their Green-e products, that customers are adequately informed about the products they are purchasing, and that Green-e certified marketers report sales information on Green-e certified products to the Green-e Program.

# BACKGROUND

The Green-e Renewable Energy Certification Program was established by the Center for Resource Solutions (CRS) in 1997 to provide a way for consumers to easily identify environmentally-superior electricity products.  The Program is the leading national consumer protection program of its kind and now certifies 60 products sold by 98 marketers and utilities.  This voluntary program operates in three markets: competitive electricity, monopoly utility and TRCs. Sellers of Green-e certified products undergo an annual verification process to ensure that their supply meets their consumer demand, that customers receive what they pay for, that products meet Green-e environmental standards, and that product claims are portrayed adequately and accurately.  Over 147,000 households and businesses bought Green-e certified renewable energy products in 2002, representing a 58% market share (based on MWh) of U.S. green power retail sales.  Over one in three customers of green power chose a Green-e certified product.

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[1]   TRCs represent the all of the environmental, societal and economic non-energy attributes of a specific quantity of renewable generation, namely the benefits from displacement of conventional fuels.

Over the past few years, several regions of the country have developed or begun the development of tracking systems for renewable generation. In the U.S., functional systems now operate in New England, Texas, and Wisconsin, and are under development in the Western states (WECC) and mid-Atlantic (PJM).[2] These systems issue a unique certificate for every MWh of renewable energy generation, and then track certificates though an electronic accounting system from generation to retirement.[3] The system administrator enters generation data into an electronic system. The data is usually provided by the transmission company or independent system operator (ISO). Once issued, certificates can be traded and transferred easily regardless of the actual energy flow. Tracking systems facilitate compliance with regulatory renewable energy mandates, environmental disclosure rules, and voluntary green market programs. Tracking systems help verify compliance with such regulations and voluntary programs, facilitate certificate trading, and add liquidity to and bolster consumer confidence in renewable energy markets.

The question has been raised about the need for Green-e certification and verification in regions where tracking systems are in place. Is Green-e still relevant in an era when each unit of renewable energy is identified and tracked from generation to retirement? This document provides a discussion of the comparative functions of tracking systems and the Green-e Program.

## WHAT DOES A TRACKING SYSTEM DO?

Renewable energy tracking systems are an accounting system for TRCs[4]. Tracking systems typically issue a certificate with a unique serial number for every MWh of renewable electricity generation. By tracking that certificate through intermediate transactions from the renewable generator to the load serving entity (LSE), state regulators can easily determine whether an LSE has met its renewable energy mandate. TRCs can also be tracked for other entities, such as green power marketers, who sell TRCs in the national voluntary market to retail or commercial customers.[5]

In order to maintain credibility and liquidity of the TRC market for all of these uses, electronic issuing and tracking systems have been developed in parts of North America, the European Union and Australia. Tracking systems provide the support and legitimization of the TRC as a secure, tradable and marketable product. These systems help ensure that: (1) TRCs represent renewable generation, (2) certificate ownership is clearly defined, (3) certificates are retired when used to meet state or regional regulatory requirements, and (4) only one certificate exists for each unique MWh of generation.

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[2] CRS is helping develop the Western renewable energy tracking system, WREGIS, and is also leading the effort to establish a new network and governance structure for renewable energy tracking systems in North America, the North American Association of Issuing Bodies (NAAIB).

[3] In some cases, tracking systems include renewable and non-renewable generation.

[4] The New England Generation Information System tracks all generation, not just renewable energy generation.

[5] Entities other than LSEs, such as TRC marketers, can have accounts in tracking systems depending on system design and statutory and regulatory requirements.

Tracking systems are evolving to serve multiple purposes throughout North America. The three operational U.S. systems (New England, Texas and Wisconsin) were designed to verify specific regulatory requirements relevant to renewable generation. However, they also serve the voluntary market. Tracking systems can be designed to include a range of information related to generation such as fuel source, renewable portfolio standard (RPS) eligibility, emissions data, vintage, MWh generated by time period, location of generation, and Green-e eligibility.[6] However, the tracking system itself is "policy neutral" in order to support multiple purposes and programs.

In sum, a certificate tracking system acts like a banking system – identifying each piece of currency with a unique number, and allowing that piece of currency to be bought and sold electronically with some assurance of oversight. Market participants can rely on the system to transfer ownership of the certificates. However, tracking systems do not make determinations on the quality and quantity of certificates needed to comply with various program goals. State regulators, agencies and voluntary programs make those determinations. Tracking systems also do not provide consumer information on retail products, but do provide 'reports' to regulators and market participants on wholesale transactions.

## WHAT DOES GREEN-E PROVIDE?

Green-e provides four functions that promote markets for environmentally-preferable renewable energy products and protect consumers. Green-e 1) sets standards to ensure retail products have a significant positive impact on the market; 2) certifies that proposed products meet the standards; 3) verifies that products delivered to customers met the standards, including that the type and amount of renewable electricity claimed has been delivered to the grid; and 4) ensures adequate and accurate product disclosure. The sections below describe in more detail the market and consumer protection functions of the Green-e Program, and how tracking systems facilitate compliance with Green-e.

### *Balances Generation and Sales*

Each Green-e certified product undergoes an annual verification process. One aspect of the process is checking contract paths to ensure that marketers purchased the renewable energy and TRCs that they claim. Additionally, Green-e requires audits of both generation (including metering data) and sales (including billing records) to ensure that the quantity of renewable supply is sufficient to meet sales. Tracking systems assist Green-e certified marketers in demonstrating compliance with Green-e renewable energy/TRC supply requirements in that they provide documentation of TRC ownership by resource type. Tracking systems can provide much, and in some cases, all of the information needed by Green-e to verify that renewable resources used in a Green-e certified product meet the

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[6] Some tracking systems include information on the union status of the employees at the generation facility.

Green-e eligible renewable criteria, and to verify the quantity of TRCs purchased by the marketer.  However, tracking systems do not verify that sellers allocated TRCs to their products consistent with product claims and Green-e standards.

## Ensures that Customer is Purchasing High Quality, New Renewables

Green-e standards limit the definition of renewable energy to environmentally-preferable renewable resources, as defined by a broad stakeholder community  – and exclude some types of low or zero emission, but non-renewable, energy forms, and even renewable biomass with unacceptably high emissions.  For example, large hydro, "clean" coal, nuclear, municipal solid waste incineration, fuel cells powered by non-renewables, and other energy sources that may be included in some tracking systems cannot be included in Green-e certified products.  In addition, the Green-e Program ensures that customers receive as least an established minimal level of "new" renewables, to ensure that the customers' payment goes toward the development of new renewable generating capacity.  All of these requirements must be checked against what each marketer has claimed and what each marketer has sold (*i.e.,* the load being met).

While the tracking systems do record the vintage of the facility, they do not differentiate between new and old facilities for the purposes of consumer disclosure or meeting product standards.  The tracking system alone provides no assurance to the retail customer they are getting the high quality, new renewables that were sold to them.

## Ensures Customers are Getting What they Pay For

For a Green-e certified product, not only do the quantities of generation need to meet or exceed sales, but the quantity, type and vintage of renewables must meet what the customer was promised.  In other words, if a customer is promised 50% new wind, 45% biomass, and 5% solar – then Green-e will ensure that this mix was purchased on the customer's behalf.  In addition, the Green-e Program ensures that for electricity products the renewables were sourced from the customer's region – or if not, that the customer was notified of the geographic location at which the renewable energy was generated.   Green-e verification is the nation's only regular monitoring function of green power marketers at this detailed level.  Tracking systems do not provide assurance that individual customers are billed properly for their purchases, or that the renewable energy or TRC product that was delivered to the customer contained the mix of resources promised and met Green-e product standards.

## Prevents Double Counting or Double Use

The Green-e Program has strict criteria governing the use of mandated renewables (such as those serving an RPS), the disposition of emissions credits from renewable energy, and other standards regarding potential double-counting and/or double-use of a unit of renewable energy.  For example, renewable energy that is used to serve a renewable energy mandate

cannot be used to satisfy Green-e requirements.[7]  In addition, any emissions credits associated with a unit of renewable energy generation must be passed on to the customer in order to be part of a Green-e certified product.[8]  This ensures that the customers' payment makes an incremental difference in the marketplace, and has a positive impact on the environment.  Tracking systems provide the most assurance available that TRCs are not double sold.  However, they do not enforce Green-e's concerns with regard to double claims involving state programs (such as an RPS) and retail product claims, nor do they enforce Green-e's policies prohibiting the sale of TRCs which have had certain attributes (for example, carbon offsets) removed.

## *Provides Stakeholder Support for Retail Purchases*

The Green-e Program was launched to minimize the potential negative outcomes from electricity choice while maximizing growth of the green power market.  In developing the Green-e Program standards, CRS has received input from hundreds of stakeholders.  The resulting standards have been endorsed by dozens of national and regional environmental groups, energy marketers, utilities and others.  The U.S. EPA's Green Power Partnership references the Green-e criteria as its standard for best practices, as do the U.S. Green Building Council, the Federal Energy Management Program (FEMP), and others.

Developers of tracking systems have solicited stakeholder input to ensure that the resulting systems accommodate the needs of market participants.  But that is different from ensuring that stakeholders, such as environmental organizations, will support the renewable energy products that are sold in the retail market.  Tracking wholesale energy in one of these systems does not guarantee environmentally-preferable outcomes from retail purchases.

## *Ensures the TRCs Are Described to the Customer, and that Marketer and Purchaser Claims are Accurate and Legal*

Green-e certified products must meet disclosure requirements which direct vendors to disclose to customers not only the fuel mix of the renewable energy product, but also the fuel mix of system electricity for comparative purposes.  This is particularly important since most states do not require utilities and/or energy marketers to disclose this information.  Green-e also performs a biannual review of marketing materials for certified products to ensure that information provided in all media (*e.g.,* websites, radio commercials, customer bill inserts, call centers and brochures) is truthful, does not overstate environmental benefits, and provides sufficient information for customers to make informed purchasing decisions.  This Marketing Compliance Review, conducted by Green-e staff, ensures that the electric service provider or TRC marketer is abiding by the Green-e Code of Conduct, which governs the use of the Green-e logo and outlines the Green-e Program's customer disclosure requirements.  Tracking systems do not address renewable energy marketing, and do not protect customers

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[7]  Green-e standards require that when customers select a Green-e certified product, the renewable energy they receive is above and beyond what they would receive as a regular rate payer under an RPS.

[8]  Renewable energy emissions benefits are a essential aspect of why consumers are willing to pay extra for renewable energy products.

from misleading marketing claims. Some states do have system mix disclosure requirements, and in those regions where tracking systems are in place, regulators in some cases use the tracking systems to develop system-mix disclosure information. In states that do have disclosure requirements, Green-e defers to state rules.

## *Actively Promotes Green Power Markets*

In the fall of 2003, Green-e launched a new labeling initiative to place the Green-e logo on packages of consumer products manufactured by companies purchasing certified renewable energy. The "Made with Certified Renewable Energy" and "This Company Uses Certified Renewable Energy" Initiative advances the market for renewable energy by encouraging companies to purchase significant amounts of certified renewable energy to offset the production of specific consumer product lines or a significant portion of their company energy use. Companies purchasing qualifying amounts of certified renewable energy can make the "Made with Certified Renewable Energy" claim on products and feature the Green-e logo with the percentage of corresponding certified renewable energy applied. Alternatively, companies that purchase qualifying amounts of certified renewable energy company-wide can make the "This Company Uses Certified Renewable Energy" claim on their products as well. The labeling campaign helps companies promote their renewable energy purchases.

With over 50 members, the Green-e Marketers' Marketers Group (MMG) is a forum for marketing and public relations professionals from green power providers and utility green pricing programs in the U.S. and Canada, and is a benefit for providers of Green-e certified products. MMG members participate in educational conference calls and have access to a "members-only" area website. Calls have focused on effective direct mail campaign strategies, consumer purchasing trends, successful green power marketing messages, selling green power to federal customers, and the effect of "Do Not Call" legislation on out-bound calling centers. The website has examples of effective marketing materials, presentations, marketing publications, helpful contacts and other marketing resources. Tracking systems and their administrators do not actively promote renewable energy markets.

## *Conducts Education and Outreach Activities*

CRS staff speak and exhibit at numerous conferences and events. CRS issues national press releases about new certified products, distributes the quarterly "Green-e News" and "Green Pricing News" to a readership of over 4,000 people, conducts workshops and produces educational materials for regulators, and distributes other materials to targeted audiences to promote green power purchasing. (In 2003, the Green-e website received 102,000 individual hits, and the Green-e toll-free number received 1,700 individual callers.) Tracking systems and their administrators do not provide education and outreach activities for renewable energy markets.

## HOW TRACKING SYSTEMS INTERACT WITH GREEN-E

Green-e allows marketers to use tracking systems to facilitate substantiation of claims. Green-e's processes for verifying marketer claims have been aided by the operation of regional tracking systems, allowing Green-e to accept system reports as proof of supply in place of the more cumbersome contract path audits and attestations Green-e uses in regions without tracking systems. Green-e verification still plays a critical role in ensuring the certified marketers deliver the type of resources required by the Green-e standard, meet customer demand with the quantity and type of renewables promised and required by the Green-e standard, and adequately disclose to customers information about the products they are purchasing.

Green-e audits are more streamlined, efficient, and less costly to Green-e certified marketers who sell products in regions that have tracking systems. Tracking systems facilitate Green-e's verification audit and lower the costs of the audit that marketers will have to pay. However, tracking systems do not replace the Green-e role as an independent third-party certifier and verifier.

## CONCLUSION

Both Green-e and tracking systems are essential components of maintaining and building a credible and larger renewable energy market. Tracking systems add confidence and liquidity to the wholesale market for renewable energy and TRCs, while Green-e provides the vital link between credible wholesale markets and retail renewable energy products, and ensures that these products provide positive environmental and consumer benefits.

# EXAMPLES: ACTUAL PROBLEMS IN THE MARKETPLACE THAT GREEN-E PREVENTS

The Green-e Program verification process found, and ensured that marketers rectified, the following mistakes in 2003. All of the Green-e product marketers agreed to make the necessary changes. In addition, because of the strict Green-e standards, outreach and verification processes, many misrepresentations and faulty product sales have been averted. Green-e market watchdog functions provide tangible benefits to customers, the marketers participating in the Green-e Program, and the market as a whole. However, it is unlikely that green power products that are not subject to Green-e's certification criteria and verification processes are as careful and vigilant to protect customers and uphold product standards.

> ➤ A TRC marketer purchased 1980's vintage TRCs. This was problematic because Green-e requires that a marketer purchase TRCs from "new" renewables (1999 or later). In addition, the TRCs that the marketer had purchased did not meet the renewable resource mix that they had promised their customers. Green-e requested corrective actions that required the marketer to purchase sufficient new TRCs to meet their customer demand. Because the marketer had altered their product's resource mix, the marketer was required to send a revised product content label to all their customers, which noted the change historically and pledged what their future resource mix would be. Without Green-e verification these customers would not have received what they paid for nor would they have received accurate product disclosure.

> ➤ Green-e requires each marketer to send their customers a historic disclosure label, which confirms that the marketer purchased the quantity and type of renewable energy or certificates needed to satisfy their customer demand. One or more marketers did not submit historic disclosure labels. As a result of Green-e's investigation, the marketers corrected the situation and sent the labels to their customers. Not all states require this type of historic disclosure. Green-e requires historic disclosure to ensure that the market as a whole conforms to minimum standards of consumer disclosure.

> ➤ A marketer had a significant shortfall of renewables needed to meet their customer demand. Green-e requires that the marketer "true-up" their product within the year. Green-e believes that retail renewable energy products should meet a "freshness" requirement for delivered energy that may be more rigorous than some state laws and marketers commit to this practice when they sign a contract with CRS for certification. As the product was Green-e certified, the marketer was required to "true-up" the shortfall that the Green-e verification audit had revealed and deliver the type and amount of renewable energy they promised their customers.

> ➤ A marketer submitted an audit report demonstrating that they had purchased enough existing renewables to meet all of their customers' demand. However Green-e requires a minimum percentage of the purchase to be sourced from new renewables. In follow-up to Green-e's investigation, Green-e required the marketer to "true-up"

their product in order to meet the Green-e new renewable standard and this true up was also verified by an independent accountant.

➢ A marketer purchased TRCs from a utility. For this type of transaction, Green-e requires that the marketer notify the regulatory bodies that oversee the utility from which the marketer purchased the TRCs to prevent double selling or double claims. In follow-up to Green-e's investigation, the marketer provided the required regulatory notification to the appropriate agencies and authorities.

## CASE STUDIES:

The following case studies show how a product has a greater chance of failing in the marketplace if it is not meeting Green-e standards:

➢ Los Angeles Department of Water and Power (LADWP). LADWP was the number one utility on the National Renewable Energy Laboratory (NREL) top ten ranking of utility green pricing programs in 2002. LADWP appeared to be the top of its class with more green pricing participants than any utility in the country. In 2003, the Los Angeles city attorney released an audit of the program, which revealed that about half of the participants claimed by the utility were not paying to participate in the program.[9] More importantly, LADWP was selling its customers out-of-state TRCs from hundreds of miles away, while marketing the product as delivered electricity that improved local air quality within the Los Angeles basin. Moreover, customers were unaware that they were purchasing TRCs instead of renewable electricity. The city attorney required that the program change its purchasing practices, and used Green-e standards as an example of how consumer problems could have been avoided. Many of the issues brought to light by the audit are still in the process of being resolved, and LADWP is launching a new renewable energy program that will hopefully meet Green-e standards. (For more information on this program visit: http://www.ladwp.com/ladwp/cms/ladwp005198.jsp)

➢ Gulf Power: Gulf Power, the Southern Company's utility in Florida, offers a solar option called "EarthCents" (http://www.southerncompany.com/earthcents/). The program invites customers to support 100 watts of photovoltaics (PV) for six dollars. However, the utility will not install any PV panels until they have 10,000 subscribers. This tariff was approved in 1999 and to date the program has only 95 subscribers. If the program's growth rate stays the same, it is very likely that the subscribers' payments will never be put towards the generation of solar power. This product would not meet Green-e standards.

➢ Contribution Programs: Many utilities offer "contribution" programs where the customers pay into a fund that is used by the utility to develop renewables. In these

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9   These customers were on a low-income tariff that did not require them to alter their payment in order to participate (no premium, no green tariff).

programs, there is no promise to deliver any amount of renewables, and in most cases these programs have low participation rates and negligible results. Green-e does not certify a "contribution" program since there is no standard that can be verified.

> Old Facilities and Mandated Renewables: Several utilities have used existing renewables (*e.g.* old hydroelectric dams and biomass facilities that have long been part of the general rate base) for green pricing and charged premiums.  Other utilities have planned to meet RPS obligations through green pricing - therefore putting the cost burden for a mandated facility on voluntary customers.   Green-e does not allow either of these practices.