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## **Best Practices in Public Claims for Green Power Purchases and Sales**

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## I. INTRODUCTION

Interest in renewable energy claims is increasing as a result of rapid growth of renewable electricity sales, particularly sales of Renewable Energy Certificates (RECs). This growth in the largely unregulated voluntary market has highlighted the need for clear guidelines on what constitutes legitimate environmental claims. In order to evaluate green electricity claims, one must first determine what constitutes a claim. Some claims are explicit and easy to identify. Others, however, can be simply implied or even unintentional. This paper identifies some typical types of claims and provides guidance to renewable energy sellers on truthful advertising practices.

While investor-owned utilities are regulated by state agencies, there is often less oversight of publicly owned utilities.<sup>1</sup> REC transactions by these types of utilities and by other sellers are largely unregulated. Center for Resource Solutions administers the Green-e<sup>®</sup> certification program, which includes Green-e Energy and Green-e Climate.<sup>2</sup> These consumer-protection programs ensure that sellers offering certified products follow best practices in claims and marketing, and Green-e Energy certifies the majority of the voluntary renewable energy transactions in the United States. This paper serves as a reference to understand best practice in marketing claims as viewed by Center for Resource Solutions; it does not supersede or modify the Green-e Energy National Standard or any other Green-e program governing documents.

This paper will be updated from time to time to address new developments in the voluntary renewable energy market (as noted by the document's version number).

## II. BACKGROUND INFORMATION

The complexity of renewable energy marketing warrants a brief overview. Some common questions are answered below.

### 1. What is a REC and what does it represent, contain, track, and identify?

A REC<sup>3</sup> represents the non-energy attributes, including all the environmental attributes, of one megawatt-hour (MWh) of renewable electricity generation. The renewable energy market has developed the REC as a tradable commodity of renewable energy attributes which can be sold “bundled” with the electricity with which it was generated or separately from the underlying

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<sup>1</sup> Publicly owned utilities include rural cooperatives, municipal utilities, federal power authorities, and others.

<sup>2</sup> The Green-e<sup>®</sup> name and symbol are registered trademarks of Center for Resource Solutions.

<sup>3</sup> Renewable Energy Certificate (REC) is the most prevalent and preferred term. However, RECs are also sometimes referred to as “green tags,” “tradable renewable certificates (TRCs),” or “renewable energy credits.”

electricity, allowing for a larger and more efficient national market for renewable energy. RECs are based on actual facility generation (in MWh) rather than facility capacity, measured in megawatts. Ownership of a REC provides contractual rights to the non-energy attributes of one MWh of renewable energy generation. RECs are used by government agencies (such as state utility regulatory commissions) to document compliance with renewable procurement requirements, such as state-level renewable portfolio standards (RPSs)<sup>4</sup>, and by the voluntary renewable energy market to demonstrate renewable energy purchases.

RECs are valuable because there is a unique demand for renewable energy beyond the value of the electricity itself. Regulators and environmentally conscious organizations and individuals are often willing to pay more for energy from renewable sources.

## 2. Why are RECs purchased and what is a voluntary REC?

There are two main reasons that RECs are purchased. First, utilities and other load-serving entities purchase RECs in order to meet state and local laws and regulations requiring minimum amounts of renewable energy use, including RPSs. Because a REC represents one MWh of renewable generation, utilities can use RECs determined to be eligible by the state or local government to substantiate their compliance with these requirements. These utilities or load serving entities are said to be participating in the *compliance market* for RECs.

Many companies and individuals want to purchase renewable energy, even though they are not required to by law. Companies may want to use renewable energy in order to reduce or offset emissions from their electricity use and make particular marketing claims about this clean-energy use, and individuals may want to similarly address the emissions from their electricity use and support renewable energy. Such purchases are intended to increase the renewable generation on the grid beyond the levels needed to satisfy RPSs or other state requirements.

In 1997 this *voluntary market* for renewable energy started to form as states deregulated their electric utility sectors and allowed customers for the first time the ability to choose their electricity provider. Many of these providers offered their customers renewable energy, often for an additional fee. This difference in cost reflected the need for renewable generators to be able to sell electricity for more than the typical market price for electricity because renewable electricity is generally more expensive to build than other forms of electricity (e.g. oil, coal, or natural gas).

The REC market is now an essential component of the voluntary renewable energy market. The market for RECs initially developed to overcome a market barrier for renewable energy generators. Due to the physical constraints of the electricity grid, renewable generators have few, if any, choices about who they can sell their electricity to. Once electricity is generated, it must be purchased by an entity within a relatively defined geographic region that is served by at most a few different utilities or load-serving entities. Before the REC market, if none of these entities were willing to pay more for renewable energy, the generator could be forced to sell its power

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<sup>4</sup> For a definition of RPS and other terms you will find in this document, please see the Green-e Dictionary at [www.green-e.org](http://www.green-e.org).

below the cost of production, or cease operation. Today, the REC market allows renewable generators to sell their “undifferentiated” electricity to a local buyer, and the environmental benefits, embodied in the REC, to a different party who is interested in the environmental benefits. RECs allow renewable generators to find willing buyers for their renewable attributes.

### 3. Can you give me an analogy to help understand the electrical grid?

One can view the grid as a lake fed by many different streams, some originating in the mountains from glaciers, others coming from springs or rainwater. Once the water becomes comingled, there is no way to tell where any one molecule of water originated. A cup of water pulled from the lake has a probability of containing some water from each source, and it’s impossible to distinguish water that came from snowmelt from water that came from a spring.

The electricity flows into the grid in a similar way. The grid, like the lake, is supplied by a variety of sources, some that produced more pollution than others. Once in the grid, the electricity that flows out into individual houses and businesses is considered to be an average of all sources of generation.

An additional layer of complexity results from the structure of the grid that pools electricity regionally. Much like a system of lakes connected by channels, electricity can be transmitted out of one region and into another region of the grid. These regions are overseen by the North American Electric Reliability Corporation (NERC) and referred to as NERC regions.

### 4. Is buying a REC like making a donation?

RECs are not donations. RECs are commodities that are created when renewable energy is produced that can be bought and sold on various markets, and then “retired” when a purchaser makes a green energy claim. Purchasing a REC is not a donation to either the marketer or the generator, because when you buy a REC you are buying a real (though intangible) commodity. RECs signify the sole and full claim that renewable energy was put onto the grid on behalf of the final purchaser who uses the REC. Organizations and individuals are willing to pay more for renewable energy, not because the electricity makes their lights or appliances behave any differently than when electricity comes from coal, but because renewable energy has certain benefits to the environment, the economy, energy security, and local economic development.

### 5. Who can claim a REC, and how?

REC claims can be made in a number of ways. Any statement or press release about using renewable electricity, cutting back on greenhouse gas (GHG) emissions from electricity through the use of renewable electricity, or receiving any other environmental benefits of renewable energy use constitute the claiming of a REC. When a person or company claims to be using renewable electricity or any of the environmental attributes within a REC, they claim sole ownership and use of that REC, and the REC must be retired through state agencies or tracking

systems<sup>5</sup> (this is usually done on behalf of consumers by the REC seller). Once a REC is claimed and retired, either by public statements, use toward a state RPS, retired in a tracking system or through other means, it is considered double-counting of the benefits of the renewable energy generation if another party claims the retired REC.

## 6. What is “double selling” and “double counting”?

The broadly defined nature of claims and the intangible nature of RECs can result in problems with double selling and double counting, where RECs are claimed by more than one party. Double selling can occur if a REC seller sells the same REC to multiple parties. Double counting of RECs could occur if a utility is counting the same renewable MWh to meet both its RPS requirements and to meet sales of a voluntary green pricing program, or if a solar panel owner claims to be using renewable electricity while the RECs are contractually retained by another party.

In order to avoid double selling and double counting, contracts for the sale of energy and RECs should be clear and explicit about the ownership of RECs and the environmental attributes they contain.<sup>6</sup> Renewable energy contracts that are silent on the ownership of RECs can create confusion as to REC ownership, which is detrimental to renewable energy markets and may result in double selling or double counting.

The attributes contained within RECs are primarily environmental attributes, such as the zero or low level of emissions created when renewable energy is generated as well as the impact that the renewable energy has on the grid, such as the carbon dioxide (CO<sub>2</sub>) emissions not created when renewable energy displaces energy derived from coal. The ownership of these generation attributes is what enables a person to make a truthful claim about renewable energy. RECs can be traded multiple times before finally reaching the entity making emission-reduction claims, so long as intermediaries are not making claims based on the RECs they have held temporarily. Once a claim is made, the RECs are considered “retired” and should not be resold to another party or claimed by another party. Retirement can take place formally within a tracking system, or more frequently, through emissions avoidance or renewable energy claims. In short, retirement of a REC is considered to be a claim and vice versa.

## IV. COMMON CLAIMS ISSUES AND EXAMPLES

In addition to the analogies provided in the previous section, examples of common claims issues can provide a deeper understanding of the kinds of statements one can make about renewable energy.

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<sup>5</sup> See Appendix.

<sup>6</sup> A reference for contractual terms can be found at: The Environmental Markets Association, “*Master Renewable Energy Certificate Purchase and Sale Agreement.*” March 21, 2007. v. 1. Accessible at: [www.environmentalmarkets.org](http://www.environmentalmarkets.org).

## 1. What is the primary environmental benefit of renewable energy?

The most significant benefit of renewable energy is that it creates low or no emissions of carbon dioxide and other pollutants. Generating electricity from renewable sources prevents emissions that would otherwise be released from fossil fuel generation. Because there needs to be a steady supply of electricity to meet the constant demand, when renewable generation is added, dirtier fossil fuel generation can be turned down or taken offline.<sup>7</sup> So, when renewable energy generation is delivered onto the grid it prevents a more polluting source, like natural gas, from being used to generate an equivalent amount of electricity.

## 2. What environmental attributes are in my REC?

A REC embodies the environmental benefits of that MWh of clean electricity, including avoided emissions, but definitions of the exact environmental attributes of each REC vary according to where the REC is generated, registered, or used. As identified above, the main environmental attribute of a REC generated in the U.S. or Canada is the carbon dioxide emissions arising from renewable electricity generation.

When a REC is used to meet the reporting requirements of an environmental program, like a state RPS, the EPA Green Power Partnership, a city's annual carbon goals or in a Green-e Energy certified sale, that program will have specific rules about how that REC is counted and what use of that REC means. As with the laws mentioned above, it is important to be aware of the definition of RECs of the program or standard toward which a REC is being claimed.

Many generators have signed up with renewable energy tracking systems to track renewable energy generation. These tracking systems are essentially electronic databases and are used much like online bank accounts to track and trade renewables. Because RECs can carry different environmental attributes between tracking systems, RECs sold in one tracking system may appear to have different attributes than RECs sold in another tracking system. A savvy buyer who is interested in purchasing RECs containing particular attributes may need to do further research into the generation location and relevant laws surrounding renewable energy, if those particular attributes are not contained in the definition of a REC used by the tracking system. A nonprofit established in 2008 called the Environmental Tracking Network of North America is working with tracking systems to adopt one consistent REC definition.

## 2. How does the Voluntary Market Interact with Cap-and-Trade?

Cap-and-trade programs as a means to address climate change present challenges to the voluntary renewable energy market. These programs typically target emitters of certain pollutants that contribute to global warming and subject emissions of those pollutants to a maximum level, or cap. Once a pollutant is capped, the development of new renewable

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<sup>7</sup> For simplicity we assume a constant demand.

resources has no impact on the level of the cap and therefore on the total level of emissions unless emission levels are lowered based on renewable energy purchases. If no such mechanism is in place, once a particular pollutant is capped, purchase of renewable energy and RECs will reduce the purchasers own emissions footprint, but any renewable energy or RECs produced after the start date of the cap will no longer result in global reductions of that particular pollutant.

Ten states in the northeastern U.S. states have implemented cap and trade system for CO<sub>2</sub> from the electricity sector called the Regional Greenhouse Gas Initiative (RGGI). While the rules for implementing this cap vary from state to state, all but one of the states participating in RGGI have developed mechanisms to reduce emissions (through allowance retirement) based on the amount of voluntary renewable energy purchases in the region.

The Green-e Energy program, which certifies renewable energy products, requires that a REC or renewable electricity product must contain all of the environmental attributes associated with the renewable generation at the point of generation, to the greatest extent possible based on current law.<sup>8</sup> This means that:

- Where there is a cap and trade program, but emissions allowances are not assigned to renewable energy generators, RECs do not contain these emission benefits.
- Where there is a cap and trade program, and the regulation provides that emissions allowances may be assigned to a renewable electricity generator, then a REC may contain the capped pollutants emissions benefits if appropriate allowances are secured.
- In instances where pollutants are not regulated within a cap and trade program, all RECs are assumed to contain emission reduction benefits.

Another example of a cap and trade system was implemented by the Clean Air Act<sup>9</sup>, which provided for a cap and trade mechanism to combat acid rain. Under this particular cap and trade system, sulfur dioxide (SO<sub>2</sub>) allowances are not issued to renewable energy facilities. Therefore, a generator may produce any amount of renewable energy and not affect the overall amount of SO<sub>2</sub> emitted because the total amount of SO<sub>2</sub> is already limited by law.

Many states have implemented regional caps on nitrogen oxides (NO<sub>x</sub>), and in some of these states allowances can be set aside for renewable energy generators. As a result, RECs in these states with these allocations for renewable energy states can contain the environmental attributes of NO<sub>x</sub> reductions. Renewable generators in states and regions with no NO<sub>x</sub> caps may also legitimately claim to reduce NO<sub>x</sub> emissions. The net result is that the ability of renewable energy generation to reduce NO<sub>x</sub> emissions varies depending on whether or not the generator is located in a region with a NO<sub>x</sub> cap and whether within that cap there are allowances allocated to renewable generators.

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<sup>8</sup> Center for Resource Solutions, *Green-e Energy Standard*, v.1.6. Available at: [www.green-e.org/getcert\\_re\\_stan.shtml](http://www.green-e.org/getcert_re_stan.shtml).

<sup>9</sup> 42 U.S.C. 7401



In sum, environmental claims should not be made related to capped and traded pollutants unless the claimant's renewable energy actually contains all of those benefits.

#### Claim Example 2-A: Marketer/customer claim

A REC marketer supplies a buyer with the following message: "Thank you for your purchase of 10 MWh of our renewable energy product. With your purchase you have reduced the emissions of seven pounds of acid-rain causing pollutants such as SO<sub>2</sub>!" Unless the marketer has independently procured sufficient SO<sub>2</sub> allowances to account for this amount of electricity generation, this is not a valid claim. If the marketer has not matched the energy product with an SO<sub>2</sub> allowance, then this purchase of renewables does not result in any actual reduction of SO<sub>2</sub> as the renewable generator was not granted allowances under the cap, nor were any allowances retired as a result of the renewable power production.

### 3. What is the difference between "renewable," "green," and "clean" electricity?

Renewable energy sources include, but are not limited to, wind, sun, heat from the earth's interior, oceans and rivers, and biomass. The National Association of Attorneys General's *Environmental Marketing Guidelines for Electricity* ("NAAG Guidelines") opted for the common meaning of the word "renewable," focusing on "replenishability" on a reasonably short time scale, and applying it to energy sources, rather than specific technologies.<sup>10</sup>

However, use of renewable resources can still have environmental impacts, so "renewable" is not always equated with "green," "clean" or similar terms. For example, certain hydroelectric projects have impacts on fish and river ecosystems.<sup>11</sup> "Clean" often implies that there is little or no pollution associated with using a fuel source, so nuclear is often called "clean" because it emits very little carbon dioxide when generating electricity, though uranium, the fuel in nuclear reactors, is not replenishable or renewable. "Green" is often treated similarly, and is a more general term indicating overall lower-impact power; while it is commonly used interchangeably with "renewable," "green" could be used to describe non-renewable but overall low-impact energy.

According to the NAAG Guidelines, it is deceptive to represent or imply that electricity is derived from renewable sources when it is not. It is also deceptive to claim or imply that a renewable energy source has no significant negative environmental impacts by sole virtue of the fact that it is renewable. For example, the claim "good for the earth" would be a deceptive claim related to some hydroelectric projects, and that the claim "renewable" would be deceptive for

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<sup>10</sup> NAAG Guidelines (Dec. 1999) Accessible at: <http://apps3.eere.energy.gov/greenpower/markets/marketing.shtml?page=2&companyid=169>.

<sup>11</sup> E.g. Under the NAAG definition, there is no basis to distinguish between large-scale and small-scale hydro, yet large-scale hydro has been shown to cause significant environmental destruction and is not generally considered "green".

biomass facilities that source fuel from a clear-cut old growth forest.

#### 4. Are there any special considerations for utility green pricing programs?

When a utility offers its customers a green pricing option, it is providing customers with an option to purchase renewable energy beyond the amount in the utility's overall fuel mix. As only one party can claim a discrete amount of renewable energy, in this case the green pricing customers (and not the general ratepayers) have paid for the renewable energy generation by their purchase of the green pricing product. These green pricing customers own the right to make renewable claims commensurate with their additional purchase.

##### Claim Example 4-A: Customer claim

A utility in a state with RPS requirements must procure 10 percent of its basic generation from renewables. Thus, 10 percent of the basic fuel mix, not including any voluntary sales made in a green pricing program, must be renewable. Say the utility offers an additional green pricing option providing customers with 25, 50, or 100 percent renewable energy. A customer participating in the green pricing program can make legitimate environmental claims based on the percentage of renewable energy they are buying through the green pricing program. In the case that they are buying a green pricing product that is made up of 25 percent renewables and 75 percent utility mix, the maximum environmental claim that can be made by the customer is 32.5 percent renewables (which includes the 10 percent renewables from the RPS). If consumers buy the 50 percent renewable option, they are getting 55 percent total renewables.

##### Claim Example 4-B: Utility claim

In the case above, assume that because of the extra renewable energy that the utility supplies to its green pricing program, it ends up selling in total three percent more renewables than it is obligated to under its RPS obligations. What percent renewable should the electric utility claim its power to be? While it provides 10 percent renewables to all customers through its RPS obligations, a voluntary subclass of customers has brought the utility's total sales up to 13 percent renewable. But three percent of that total is being distributed to a select group of customers who are paying extra for this benefit. If the utility reported that its overall mix was 13 percent renewable, then general customers (not participants in the green pricing program) would likely expect that they were receiving 13 percent renewable energy. But this is not the case, as three percent of the renewables are specifically being assigned to green pricing customers. Therefore, on a disclosure label the utility should report its green pricing sales independently of its system mix, and report its system mix as being 10 percent renewable.

#### 5. What do you call the electricity after you have sold the RECs?

With the increase in the volume of REC sales comes a commensurate increase in sales of electricity from renewable energy facilities that has been stripped of its environmental value. In some cases, buyers and sellers of that "null" electricity may wish to make environmental claims.

Buyers of electrical output from a renewable facility that do not also buy RECs should not make environmental claims as they have not purchased that right. A buyer purchases RECs for the specific purpose of making environmental claims based on that renewable generation.

#### Claim Example 5-A: Utility claim

Utility Y is selling RECs from a biomass facility it owns in State A. Utility Y sells the RECs from the facility to utility Z in state B.<sup>12</sup> Can utility Y claim the renewable energy output of its biomass facility in its disclosure label?

In this example, utility Y should not report as renewable power the MWh associated with the RECs on any environmental disclosure or other utility power mix statement. The renewable attributes belong to utility Z, and cannot be claimed by more than one party. The way in which RECs are handled on a utility disclosure label is a state decision, but one that affects other states as well. It is important that the utility regulators in states A and B communicate to ensure that the RECs are counted only once.

How then, should utility Y represent the MWh (now stripped of RECs) associated with the facility on its state disclosure label? While the energy is no longer considered renewable, it is likewise not derived from coal or any other identifiable source. There are several ways that these MWh can be accounted for. The most common method is to ascribe the average system mix to those MWh; some sort of average emissions rate must be assigned to these null MWh so that they do not have an influence on the overall emissions rate of the MWhs they are mixed in with. The renewable energy output from utility Y's renewable facility should be labeled as system power (or "null power") in utility Y's resource disclosure label and labeled as renewable power (biomass) in the label of the utility in state B that bought the RECs. Again, utility commissions in both states should be aware of the transaction so the proper information will be conveyed to consumers.

Regulators should understand that the method for calculating the state mix for environmental disclosure purposes can limit the market for RECs by effectively prohibiting their separation from the underlying electricity. This limitation may apply even if the RECs are not used for a state program. Such calculation methods may have the counterproductive effect of discouraging renewable generation.

Many state regulators rely on REC tracking systems to substantiate renewable energy claims in utility disclosures. This best practice eliminates any double claim that could occur as well as the potential for null power to be claimed as renewable power.

#### Claim Example 5-B: Host claim

A winery paid for and installed a small (<10 kilowatt capacity) solar photovoltaic ("PV") system to power its wine-making operations. The winery then sold the RECs to a company that

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<sup>12</sup> This scenario would be the same if Utility Y was selling RECs to a marketer rather than to Utility Z.

aggregates RECs from many sources (typically called a REC aggregator, marketer or seller) who resold the RECs. Can the winery claim to be using renewable energy? Can the winery claim to generate renewable energy?

When the winery sold the RECs from its PV system, it also sold the ability to claim that they are using renewable energy. The winery cannot claim to be a renewable-powered facility because to do so would result in a double claim of the REC. All of the renewable and other environmental attributes from the renewable generation were transferred to the aggregator at the time of the REC sale. In an FTC study of consumer perceptions conducted in parallel with the release of the Proposed Revisions to the Green Guides, 62 percent of respondents stated that the companies claiming to “host a renewable energy facility” were using renewable energy. As a result the winery should not make singular statements that they are hosting or generating renewable energy, as to do so would mislead consumers. When RECs are sold from an on-site generation facility, reference to the generation facility should always contain language about the RECs being sold. For example, if the winery said it is generating solar electricity, it should at the very least also say that the solar electricity is being sold to another party, or that the RECs are being sold and not retained.

#### Example 5-C: Utility claim

A utility is selling the RECs from its wind farm to a REC marketer. The utility wants to advertise its commitment to the environment and launches an ad campaign with language about green power and pictures of the wind farm. The utility also says that it has invested in renewable energy. In this example, the customers (and potential customers) of the utility are under the false impression that they are purchasing renewable energy for their homes or businesses. In fact, the claims for all of the renewable attributes of that power were transferred to the marketer with the RECs. To avoid double-counting and false advertising, the utility must not advertise that they supply green power. If the utility discusses the generation of renewable energy it must also disclose that it is selling off the RECs from the renewable facility and that the wind power is not part of the system mix provided to utility customers.

## 6. What is the impact of participating in a greenhouse gas registry on the types of claims one can make?

Participating in a greenhouse gas registry can impact the statements one can make about renewable energy.

#### Claim Example 6-A: Participant in greenhouse gas registries

The owner of a renewable energy facility, participating in a greenhouse gas registry or trading platform, should report generation as null power if the generation owner did not retain ownership of the RECs. Null power is considered to have emissions equivalent to an average of the overall system. Thus, null power is neither emissions-free, nor is it considered renewable. Similarly, a registry participant who reports electricity usage under Scope II (emissions associated with

electricity use) should report system average emissions if the electricity purchased was null power. Assigning system power emissions attributes to null power is considered a best practice in U.S. electricity sector emissions accounting, and is implemented by several U.S. electricity generation tracking systems and regulatory programs.<sup>13</sup>

## 7. Can I sell both RECs and carbon offsets from renewable energy derived from captured methane, and what kinds of claims can I make?

The process of methane capture and destruction is one of the rare cases in which both a carbon offset and REC may be produced in the same process. When making claims associated with renewable energy derived from capturing methane and using it as a power plant fuel, it is important to distinguish between the emissions benefits related to the methane capture and conversion (the greenhouse gas capture benefit), and the emissions benefits related to the generation of net-zero emission electricity (renewable energy benefit). Because generating electricity from flaring methane isn't necessary to capture the carbon benefits of methane destruction, generating electricity from the heat of flaring is a separate activity and claims made surrounding the renewable energy benefits are separate and in addition to the claims made for methane capture.

Carbon benefits result from the destruction of methane through flaring. For the carbon accounting of the GHG emission reductions from methane flaring, project developers should follow IPCC guidelines, or other established GHG protocols. For the generation of electricity, the RECs can be treated as having zero emissions, just as they are for most other renewable energy sources, because the carbon emissions of fuel burning are accounted for in the flaring process.

### Claim Example 7-A: Facility Owner Claim

A farm storing manure in an open lagoon installs a manure digester. The farm plans to capture the biogas and burn it to create electricity. The farm wants to sell two different commodities – the GHG reductions from the abatement of methane emissions from the lagoon, and the RECs from the generation of renewable energy. The benefits of the RECs are generated from the displacement of grid power, and as such, the RECs' attributes do not include the avoided lagoon emissions. The other commodity created is the GHG reductions from the avoided lagoon emissions. These are produced by the digester as opposed to the electric generator.

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<sup>13</sup> For example, the New England Generation Information System (NEGIS) is used by several states to calculate the average system mix. NEGIS assigns average system mix characteristics to any electrical power that is not paired with a certificate that identifies a specific generator.

## 8. Can you bundle RECs with null electricity, and what is “green power”?

A growing number of electricity sellers are taking the opportunity to provide renewable energy options to their customers. Some of these electricity providers may be able to directly contract with renewable generators, but others may only be able to purchase RECs on behalf of their customers and bundle them with the electricity they are already providing.

During the development of the Green-e Energy National Standard, Center for Resource Solutions conducted a focus group study, finding a common assumption among consumers of electricity that the generation of their power is taking place locally. The range of what is considered “local generation” may vary quite a bit throughout the country, however most consumers understand electricity consumption to have not only national and global effects (such as greenhouse gas emissions), but also more localized social, environmental, and economic implications as well. Thus, when choosing to purchase renewable energy, a consumer would not expect just to benefit from the global benefits of renewable energy we all share, but also more local benefits. As a result, RECs bundled with the undifferentiated electricity and represented as a “renewable electricity” product should be generated in the same region as the underlying electricity is consumed in unless labeled otherwise.

What is considered the same region for purposes of renewable electricity generation is somewhat ambiguous. Electrical regions can be defined as the utility service territory, the state, or the NERC region or subregion in which the consumer is located. Green-e Energy allows participants to define in-region renewable electricity generation as that which is generated within the NERC region, because energy within a NERC region is relatively free flowing. As such, an increase in renewable energy generation within the region has a broad impact on the entire NERC region, and therefore can have an impact on the electricity mix that is serving customers in that region.

An important step for making emissions claims when pairing RECs with energy is that the total emission rates (CO<sub>2</sub> per kWh) for the underlying electricity associated with this product should be at or below the system average for the NERC region. Making claims that compare renewable purchases with power from a broader area than electricity is reasonably drawn from may result in deceptive or inaccurate marketing. For example, if the renewable generation takes place outside of the NERC region where the customer is located and the average emissions in that region are “dirtier” (or cleaner) than the average system mix of the NERC region where the customer is located, then accurate carbon equivalency claims would indicate that these sources (not the local ones) are being turned down with the customers renewable energy purchase.

### Claim Example 8-A: Marketer Claim

A marketer buys wholesale electricity out of the spot electricity market, and then purchases enough wholesale RECs generated in the same NERC region to match the electricity they procure. They then “bundle” these two commodities, and when serving their customers represent their product as renewable electricity. This type of claim is accurate.

### Claim Example 8-B: Marketer Claim

*A marketer buys wholesale electricity in the Northeast to serve its customers in that region, and then purchases the corresponding number of RECs from Texas to meet its electricity load. The marketer then bundles these two commodities and represents their product as renewable electricity.*

Without disclosing the fact that the marketer is buying RECs from another region, this may be a misleading claim, as consumers may assume they are getting something other than what the marketer is actually providing.

#### Claim Example 8-C: Utility Claim

*A utility has an average system mix of 50 percent coal, 25 percent natural gas, 25 percent nuclear power, and no green pricing program. Later, it begins a green pricing program that is supplied solely by RECs generated in the same NERC region without any changes to its sources of electricity supply. After a certain point, 10 percent of the utility's customer base has enrolled and is paying extra for what they are told is 100 percent renewable energy. The utility has not actively changed its underlying electricity supply, and has only purchased RECs for the green pricing program. The remaining 90 percent of the customer base has been given a new power disclosure label of the system mix, stating the mix has changed to 44 percent coal, 28 percent natural gas and 28 percent nuclear power.*

What this change in reported system mix means is that the utility has allocated only coal-derived electricity to the green power program participants to underlie the RECs it has purchased for the program. In this case, representing this retail green pricing product as 100 percent renewable is deceptive, as the mix being purchased by the green pricing customers is dirtier than what they would have otherwise gotten from the utility as system mix electricity. What's more, the green pricing customers are actually paying to make regular customers' electricity cleaner, since a smaller proportion of coal electricity remains in the system mix.

## 9. Can a utility sell RECs from a facility paid for by ratepayers?

Utilities are involved renewable energy in a number of ways. They offer green pricing programs, they use RECs to meet RPS obligations, they may own renewable generation facilities, and they frequently include renewables in their general mix. Utilities and regulators have several options of how to collect money from ratepayers to pay for these programs.

Including renewables in the general rates of an electric utility, with associated costs and benefits shared by all ratepayers, is an important component in developing renewable energy markets. Whether mandated through a state RPS, developed as part of an internal goal, or simply through the realization that renewable resources can be a cost-effective source of clean electricity, renewable energy provides price stability and reduces risk related to carbon regulation.

Including renewable resources in general rates allows certain environmental claims to be made

by the utility and its customers. In other words, if a utility's electricity resource mix is five percent renewable generation, then each customer can assume to be five percent renewable-powered. This is the case so long as the utility retains and retires the RECs associated with all renewable energy being counted toward that five percent.

Conflicts with claims arise when a renewable facility has been paid for by regular electricity ratepayers. Should a utility be allowed to sell the RECs from a renewable energy facility that has been paid for through the general tariff? The answer depends on the ability of utility regulators to prevent double selling. In the event that RECs from one of these facilities are sold to other parties, regulators must be able to reimburse and inform ratepayers appropriately in order to avoid double claims.

RECs from facilities that are paid for through the general utility tariff should become the property of the ratepayers. Accordingly, any revenue from the sale of such RECs should be treated like an off-system sale to ensure that ratepayers are appropriately compensated. When reporting power generation to relevant authorities, this generation should be treated as system mix. As such, this generation should not be called renewable energy in state emission disclosures or for system mix calculations. Furthermore, if a utility sells RECs, then the utility should not be representing to its ratepayers that they are getting electricity from renewables.

#### Claim Example 9-1: Utility Claim

*A utility has bought a biomass generation facility. The facility was purchased with funds from electricity rates. The state PUC has approved recovery of these costs. Two years after the purchase, the utility launches a voluntary green pricing program.*

*Can the utility use renewable energy from the biomass facility to supply the green pricing product to its customers? If so, what disclosures and reimbursements must be given to the ratepayers who have paid for the biomass facility?*

The general utility customers assume that they are still getting electricity from a biomass facility that they paid for, however the utility is delivering all of its biomass energy to the green pricing customers. This constitutes a double claim of the biomass attributes.

If the utility chooses this path, at minimum, it should amend its fuel disclosure label (removing the percent generated from biomass) and remove all images and mentions of the biomass facility from informational materials concerning its overall power mix going forward. The PUC may also require the utility to reimburse the ratepayers for the construction costs of the biomass facility.

#### **10. Who gets default ownership of RECs if the electricity contract is silent?**

Both federal and state legislation can influence ownership of environmental attributes. In many cases, government provides default provisions for ownership of RECs if contracts are not explicit. For example, in 2003 the Federal Energy Regulatory Commission ("FERC") issued a ruling stating:



*“contracts for the sale of [qualifying facility] capacity and energy entered into pursuant to [the Public Utility Regulatory Policies Act] PURPA do not convey RECs to the purchasing utility (absent an express provision in a contract to the contrary). While a state may decide that a sale of power at wholesale automatically transfers ownership of the state created RECs, that requirement must find its authority in state law, not PURPA.”<sup>14</sup>*

This ruling has resulted in considerable confusion in the marketplace regarding ownership of RECs from PURPA qualifying facilities.

To avoid looking to both state and federal law to determine ownership of the RECs, electricity contracts should be explicit as to the ownership of the RECs. The following examples illustrate problems that are likely to arise in the REC market if contracts fail to clearly assign the attributes encompassed in the RECs being sold.

#### Example 10-A: Utility Claim

In this example, a utility signed a contract with a qualifying facility wind farm in 2000 to buy electricity pursuant to PURPA. The contract is silent on whether the sale of electricity includes the sale of RECs. The state legislature is also silent as to whether RECs from qualifying facilities are included in contracts for the sale of electricity.

Either party may believe that they have valid title to the RECs. The wind farm owner may interpret the ruling as an articulation and continuation of prior policy, under which RECs must be expressly transferred, lest they remain with the generator. As the wind farm has not expressly sold the RECs and there is no applicable state legislation, the wind farm believes it owns the RECs.

At the same time, the utility may believe that since the contract originated before the FERC ruling that the FERC ruling does not apply to the contract in question, but rather that the utility owns all output (electricity and RECs) from the wind farm. Absent a ruling from the state regulator or legislature, neither party can be sure who owns the RECs and neither party has the right to use the RECs, leaving both parties open to substantial risk when making any renewable energy claims.

#### Claim Example 10-B: Utility Claim

This example starts with the same facts as Example 10-A, except that in this case there is 2004 state legislation specifying that when contracts are silent on the issue, the in-state qualifying facilities retain the rights to the RECs they generate. In this example, if the utility wanted to purchase the RECs, it would need to renegotiate the contract with the wind farm or pursue an additional contract for the RECs. Prior to such action, the utility may not make any claims related to the renewable nature of the electricity it buys from the wind farm; the utility cannot claim that the energy it purchases is wind energy, renewable energy, or that it was generated with

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<sup>14</sup> 105 FERC 61,004 ruling (Oct. 1, 2003), rehearing denied 107 FERC 61,016 (Apr. 15, 2008).

zero emissions.

## V. CONCLUSION

Continued growth in the voluntary market for renewable energy has created the need for clear guidelines on what constitutes legitimate environmental claims. The complexities of the renewable energy market and the electricity grid can result in confusion and double claims. To avoid making unintentional claims, contracts should clearly specify ownership of the environmental attributes contained in renewable energy. Renewable energy generators, marketers, purchasers, and utility companies should all be aware of the specific claims that they have purchased and sold and help to provide the clarity that the market needs to flourish.

## VI. APPENDIX

The increasing prevalence of REC tracking systems should help to provide certainty as to REC ownership and reduce claims disputes. Renewable energy generation ownership can be accounted for in two different ways: through contract-path auditing and through tracking systems. Tracking systems are databases with basic information about each MWh of renewable power generated in the region and are becoming the preferable method because they can be highly automated, contain specific information about each MWh, and are accessible over the Internet to market participants. Electronic tracking systems allow RECs to be transferred among account holders much as in online banking. Renewable energy tracking systems assign a unique identification number for each MWh of renewable electricity generated in a particular region. The database tracks certain information for each megawatt hour, including facility location, generation technology, facility owner, fuel type, nameplate capacity, the year the facility began operating, and the month/year the MWh was generated. Since each MWh has a unique identification number and can only be in one account at any time, this reduces ownership disputes.

A tracking system are used by regulators as a registry of generating facilities, as a means of verifying compliance with a state RPS, for aiding in the creation of disclosure labels, for verifying green pricing supply and for other purposes such as verifying wholesale supply for green power products. Tracking systems are not substitutes for certification and verification, as tracking systems only monitor wholesale transactions—individual retail green power customers do not hold accounts on tracking systems.

There are several regional tracking systems in operation in the U.S., and more under development. Fully operational regional tracking systems include the New England Generation Information System (NEGIS); the Electric Reliability Council of Texas (ERCOT); the Western Renewable Energy Generation Information System (WREGIS); the Midwest Renewable Energy Tracking System (M-RETS); and Pennsylvania, New Jersey, and Maryland (PJM)'s Generation

Attribute Tracking System (PJM/GATS), as well as the North American Registry, which allows generators not covered by any of other the other regional tracking systems to track their attributes. The Environmental Tracking Network of North America (ETNNA) is a trade association working to promote compatibility among certificate issuing and tracking systems in North America.<sup>15</sup>

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<sup>15</sup> The ETNNA website can be found at: [www.etnna.org](http://www.etnna.org).