

WHITE PAPER - A GUIDE TO RECS

THE VALUE OF RENEWABLE ENERGY CREDITS



renewable **choice**
ENERGY

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If the human race is ever going to reach a point of true sustainability on this planet, we need to employ every method available to us. We need to reduce what we use, re-purpose our waste and ensure that what we do use has the smallest possible impact. In the realm of energy (clearly one of our biggest impacts on the planet), conservation, efficiency and renewable energy go hand-in-hand. At Renewable Choice Energy, we are constantly working with our clients to help them measure and reduce their impact, choose renewable energy sources and offset their carbon footprint.

Yet, despite the importance and value of efficiency, alone it will never be enough. With a growing and increasing industrialized global population, even if we become 40 percent more efficient we are still losing ground if we continue to use coal, oil and gas for the remaining 60 percent of our energy needs. One of the easiest and most commercially viable changes we can make today is to use renewable energy.

There are two ways to switch to renewable energy: the first is to build your own power plant on-site at your home or business (put up solar panels, a wind turbine, etc.) and the second is to purchase grid-sourced green power. For most companies and institutions it may not be practical to create their own energy- there may be a lack of natural resources, upfront capital or they tend to focus on their core competencies (which often do not include energy generation). Luckily for these entities there is a way to choose green power straight from the power grid – in the form of renewable energy credits.

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WHAT ARE RENEWABLE ENERGY CREDITS?

Renewable energy credits, or RECs, are how we track and trade green power in North America. They verify that one megawatt-hour (MWh) of green power was generated, and embody the environmental attributes of that clean energy including carbon dioxide reduction. RECs are endorsed and purchased by the U.S. EPA, Air Force, Fortune 500 companies, major universities and NGOs.

When a renewable facility, such as a wind farm, produces one MWh of electricity and adds it to the power grid, they also generate one corresponding REC (one-for-one). Once the electricity is on the power grid, there is no way to accurately track where it ends up- it mixes with the electricity generated from coal, nuclear and all other sources. We can think of the national power grid as one big pool of energy. Unless you are fully off-grid, there is no way to tell where the electrons running through your computer right now actually originated. However, if you have ownership of RECs corresponding to the amount of power you take out of the pool, you know that at least that much power was generated at a renewable facility and added back to the power grid somewhere.

All renewable energy tracking is based on RECs - in both compliance and voluntary markets. Thirty U.S. states and the District of Columbia have established Renewable Portfolio Standards (RPS) or renewable electricity standards. These standards essentially mandate that utilities in those states have a certain percentage green power in their power mix (e.g. 20% by 2020). The way that these utilities prove that they have this green power in the mix is through ownership of the associated RECs.

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The voluntary market works the same way. If you hear a company is “wind powered” or “buying green power” it probably means they are buying enough RECs to match their electricity usage. There is a common myth that you can “buy green power” from a utility company and that is somehow different from buying RECs. When you buy green power from a utility it means you are buying your delivered power and a REC, bundled together. The electrons from the wind farm aren't all going to your building either way; you are just ensuring that your usage is replaced in the pool with clean energy. RECs are the only way to track and trade grid-sourced green power.

WHY BUY RECS?

Buying green power is becoming more popular as we have seen an increase in voluntary buyers over the past six years – voluntary buyers are actually outspending the utilities that are mandated to buy because of an RPS. Buying RECs is the easiest way to show that you are green powered or using 100% renewable energy – an environmental commitment that can help connect you to customers, partners and important stakeholders through marketing and branding efforts. Since the REC also embodies the environmental benefits of producing clean energy, the buyer can also reduce their greenhouse gas emissions through REC purchases. From businesses trying to be good corporate citizens and universities supporting student interests to government agencies looking to support domestic industry, REC purchasers come in all sizes and types of organizations.

THE BIG PICTURE

The value of the REC system goes beyond value to the buyer. For renewable energy developers, RECs provide an additional income stream that can help make a project viable or more competitive with conventional fossil fuel generators. It allows them to capture the added value in producing energy in a sustainable way. Further, the robust voluntary REC market demonstrates broad support and demand for renewable energy. On the support side, corporate advertising dollars can help spread the word and garner public support. On the demand side, increased green power demand helps drive up REC prices, providing further incentive for new development.

We can all work together to help increase that demand, whether it is choosing green power for our own personal energy use or demanding that the places we shop, the products we buy and the politicians we elect are also committed to using renewable energy.

Following are frequently asked questions that we hear on a regular basis. By clarifying these common questions, we hope to help increase the understanding of the importance of RECs and how they are making a difference.



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FREQUENTLY ASKED QUESTIONS - FAQs

The Green-e® Energy program was established by the non-profit Center for Resource Solutions to provide an objective, comprehensive standard for consumers to compare renewable energy options.

WHAT DO RENEWABLE ENERGY CREDITS REPRESENT?

Renewable energy credits are a market mechanism that represents the environmental benefits associated with generating electricity from renewable energy sources. A wind farm is credited with one renewable energy credit (REC) for every 1,000 kilowatt hour (kWh) of electricity it produces, or 1 megawatt hour (MWh). A certifying agency gives each REC a unique identification number to make sure it doesn't get double-counted. The clean energy is then fed into the national electrical grid. RECs are the industry standard for accounting for renewable energy product.

They represent:

- Electricity generated from a renewable resource
- The additional cost and value of renewable energy

ARE RENEWABLE ENERGY CREDITS CERTIFIED?

Not all renewable energy credits are certified. Renewable Choice's RECs are all certified by Green-e® Energy, the leading consumer industry standard for environmental certification. The Green-e Energy program was established by the non-profit Center for Resource Solutions to provide an objective, comprehensive standard for consumers to compare renewable energy options.

Green-e requires:

- Annual auditing of Renewable Choice and our marketing materials
- Annual auditing of projects, by an independent certified public accounting firm, in order to guarantee that RECs meet its stringent regulatory requirements
- Eligible renewable energy projects to have begun operation on or after January 1, 1997
- RECs to be produced in the calendar year in which the RECs were sold, the first three months of the following calendar year or the last six months of the prior calendar year

The Green-e logo helps consumers easily identify environmentally superior renewable energy options. For more information on Green-e certification requirements, call 1-888-63-GREEN or log on to www.green-e.org.

WILL BUYING RECS AFFECT MY RELATIONSHIP WITH MY UTILITY?

Purchasing green power via RECs can be done separately from purchasing your delivered power from your utility. In fact, most voluntary green power transactions are done independent from the utility. Many utility companies (over 600 in the US) offer a 'green pricing program' whereby you can buy a certain percentage of your energy or a certain number of 'blocks' from wind power. All you are doing in this case is buying delivered power and RECs, bundled together on one bill from your utility. You can just as easily buy delivered power from the utility and RECs separately and have the exact same environmental impact. The advantage to buying a bundled product is that it's only

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one bill to worry about. The advantage to buying RECs separately is that they are significantly less expensive and you can engage your REC supplier (like Renewable Choice) to help you market your commitment, gain recognition from the EPA and execute a communications strategy around it. Generally the utility doesn't have the bandwidth to engage with customers around their green power commitments.

HOW DOES RENEWABLE ENERGY GET TO BUILDINGS AND COMMUNITIES?

It doesn't. In most cases, renewable energy from wind farms, biomass facilities or other renewable energy projects can't be piped directly to a business or facility. We use electricity from the local utility and we use the same mix of energy as everybody else.

The difference is that by paying a little more and purchasing renewable energy credits (RECs), we are ensured that the same amount of electricity we use from the grid is offset with RECs and clean electricity gets replaced on the grid in the form of renewable energy - which makes the energy mix cleaner for everyone. Since renewable energy is basically emission-free, the clean energy we are purchasing balances the emissions from the conventional electricity that we use in our buildings and communities.

WHY IS SUPPORTING RENEWABLE ENERGY SO IMPORTANT?

Generating renewable energy:

- Saves natural resources
- Does not create air pollution such as carbon dioxide and mercury
- Provides supplemental income for farmers and ranchers who lease their land
- Reduces our dependency on fossil fuels
- Helps fight global climate change
- Helps build demand for building new clean energy projects

WHAT TYPES OF PROJECTS GENERATE RENEWABLE ENERGY CREDITS?

RECs are produced by clean and renewable sources of energy and allow companies and consumers to offset their conventional electricity use with renewable energy. Here are the types of clean energy that RECs support.

- Wind farms
- Biomass facilities
- Hydroelectric projects
- Geothermal projects
- Photovoltaic/solar projects

About Renewable Choice

Renewable Choice has been helping companies measure, understand and reduce their carbon impact for over ten years. Our carbon accounting software, Mosaic™, automates the GHG inventory process via a simple, web-based interface which automatically does the conversions and calculations necessary to create a GHG inventory that's compliant with international protocols. Visit our website to [learn more](#).