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How Renewable Energy Certificates Make a Difference

The impacts and benefits of buying renewable energy

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Renewable Energy Certificates (RECs) allow electricity consumers to choose renewable energy, and RECs are essential to all renewable energy delivery and usage claims. Consumer preference for renewable energy can drive change in the electricity market. The national market for renewable energy, enabled by RECs, can also accelerate renewable energy development. Beyond the demand-side impact of their choice, renewable energy consumers can do a number of other things to increase the impact that their individual purchase has in the market and on the grid.

Different Ways to Assess Impact

There are many ways consumer choice can make a real, measurable difference on renewable energy use across North America. To evaluate the impact of these choices, we can:

1. Examine the direct impact that residential and commercial purchases have on the grid, in terms of development of new projects.

Consumers may be looking to see that their renewable energy purchase or activity directly led to or affected the supply of renewable energy on the grid.

2. Examine purchases in the context of market growth.

Renewable energy markets can aggregate demand and scale development on the grid, and consumers in those markets can grow the market by contributing to demand as much as possible. Consumers may be looking to support a national or regional market that can deliver and develop renewable energy from new facilities at lowest cost and maximize the efficiency of renewable energy development.

Both goals are important, and there is a range of renewable energy purchasing options and strategies to meet different organizational goals. Organizations of all sizes can support

markets that make a difference and maximize their own individual impacts.

How the REC Market Creates Impact

RECs are used to demonstrate use of renewable electricity in the U.S. The more consumers who buy RECs, the more renewable electricity the market will create to meet that aggregate demand. RECs are the instrument that enables consumer preference to drive the development of renewable energy, and by switching to renewable energy using any procurement or purchasing option, consumers and organizations are using RECs. Each consumer's choice makes a difference by sending a market signal.

The impact that voluntary renewable energy markets and REC purchases actually have on the supply of renewable energy depends on levels of demand. More demand will drive development of renewable energy across the market faster.

Larger markets are better for scaling and delivering cost-effective renewable energy. In the US, consumers can support a regional or national market which can deliver and develop renewable energy at lowest cost and that has benefits across the region or across the country. Others may choose (or also choose) to focus an investment more locally. A national market has significant advantages in terms of market efficiencies, scalability, and cost. It aggregates demand from across the country to build renewable energy where it makes the most sense and it provides access to renewable energy regardless of location or proximity to renewable resources.

How Consumers Can Increase Their Impact

There are two general ways for consumers to increase their impact on the development of renewable energy—amplify the market signal, the demand-side affect of purchasing

renewable energy; and create new renewable supply, which directly affects the grid.

To amplify the impact of the market on electricity production, we must increase demand, which means more people buying more RECs. To amplify the impact of their purchases in the market, consumers can buy more, buy long-term, and buy from newer projects. These three criteria can be used as common leadership criteria across all purchasing options and applied to purchases from the national market, through direct contracts with generators, or with on-site generation.

- **Buy more:** Increasing demand for renewable energy accelerates the impact of the market on renewable supply. Increasing demand or purchasing more in this context means increasing the percent of renewable energy used (not necessarily increasing overall electricity consumption), though large consumers may have a larger impact on total demand.
- **Enter into a long-term commitment:** Consumers can enter into longer-term purchase agreements to provide sustained demand, using any purchasing option.
- **Buy from newer projects:** Purchasing from newer facilities drives demand for new development of renewables, and making a long-term purchase from a new project in development may help secure project financing and actually help move a project's development forward.

Green-e® Energy certification includes requirements that ensure the renewable facility is high-quality and built recently, that the generation is not being used for compliance with a law, and that the RECs are not being double counted.

Consumers can also support specific facilities or build new renewable energy to meet their needs, impacting the grid directly. This may be more complex compared to purchasing from the national market and the transaction costs may be higher, depending on how the arrangement is structured with the developer, utility, investors, and others, and depending on the complexities of the local regulatory environment. But companies with the means can tell a compelling story with tangible evidence of their environmental impact and leadership.

Overall, leadership and increasing impact are a matter of commitment to sustained engagement in renewable energy over time. Impact is not so much a matter of which purchasing option is chosen—it cannot necessarily be said that direct purchasing options, for example, are always more impactful than retail options. In some cases, purchasing choices may simply reflect the circumstances of different buyers or groups of buyers—where they are located, what options are available, and the cost of different options for that consumer.

RECs reduce the costs of renewable energy and make renewable energy available to everyone. The market for RECs can scale renewable energy nationally. There is a difference between aggregate impact as expressed through the market and direct impact on the local grid. Both are important for companies and individual purchasers to think about. Participation in the national renewable energy market has significant advantages in terms of market efficiencies, scalability, and cost. Consumers can increase their impact by buying more, buying long-term, and buying from newer facilities. They can also explore purchasing options that directly impact the grid. ●

Impact and Scope 2 Accounting with RECs

In 2015, The Greenhouse Gas Protocol, a joint initiative of the World Resources Institute (WRI) and World Business Council on Sustainable Development (WBCSD), released new guidance on how companies should calculate and report GHG emissions from purchased electricity—Scope 2 GHG emissions. The guidance addresses how companies can drive electricity supply changes by accounting for renewable energy purchases using RECs: “[*Voluntary consumer programs are*] generally designed to support growth of low-carbon energy by increasing demand for specific attributes. As demand grows, it will push up the price of these attributes, which in turn can stimulate supply. [...] In short, if demand for low-carbon energy, which on a shared grid can only be expressed using certificates and contracts, begins to approach existing supply, the pressure or incentive to build additional supply grows, with certificates also serving as an additional revenue stream to help signal that demand. This is the same theory that underlies all other markets and is also the basis of scope 3 accounting.” (pg. 89). For full guidance and executive summary, see: www.ghgprotocol.org/scope_2_guidance, or www.wri.org/publication/ghg-protocol-scope-2-guidance.

