



EFECs Are Helping Businesses Meet Carbon-Free Environmental Goals

Businesses Must Pivot With the Changing Energy Market to Remain Vital

Energy generation and usage is at a turning point in our country: Future energy demands must be met with less impact on our climate and with minimal burden on the nation's economy. With energy being one of the top five expenses for most businesses, this is having a major impact. Their challenge is to reduce environmental impact while maintaining profitable operations.

Emission-Free Energy Certificates (EFECs) are allowing companies to meet emissions reduction-related goals and to reap good will as protectors of the environment. This is important for their profitability. According to Nielsen, "Brands that establish a reputation for environmental stewardship... have an opportunity to not only grow market share, but build loyalty." In its 2015 Global Survey of Corporate Social Responsibility and Sustainability, Nielsen found that 72 percent of 15 to 20-year-olds, and 51 percent of 50 to 64-years-olds—with everyone else falling somewhere in between—are willing to pay extra for products and services from sustainable brands.

How EFECs fit into the sustainable energy mix

EFECs are not the only option, of course, for meeting sustainability objectives. Businesses have a number of options along a wide spectrum, depending on their level of commitment. Options include on-site or distributed generation (e.g., solar panels or battery storage) at any cost or voluntary Renewable Energy Certificate (REC) purchases that don't impact operations, but offer a cost-effective way to support the environment.

If these choices don't suffice, businesses that want to "do something," but don't know how to go about it with limited resources, can now also turn to EFECs.

EFECs and RECs are similar commodities. A REC/EFEC represents the environmental attributes related to power production from a qualifying source. The difference is that each REC represents the environmental attributes associated with 1 MWh of electricity generated by a renewable source, whereas each EFEC represents the environmental attributes associated with 1 MWh of electricity generated by a unit that does not directly produce air emissions.

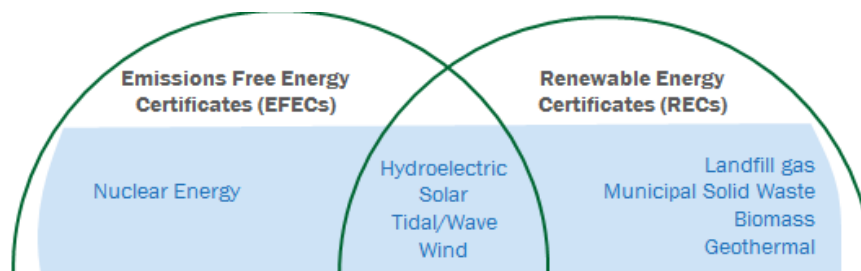
Businesses have been using RECs for nearly a decade to support the production of electric power from renewable generation sources. RECs give businesses the chance to source their power from renewable facilities when land or capital is unavailable to deploy actual onsite renewables.

EFECs were created to represent the emission-free attributes of generating sources, such as nuclear, that do not directly emit GHG from combustion.

PJM Environmental Information Services (PJM EIS), a company that reports and tracks environmental and emissions attributes for power suppliers, defines emission-free energy as electric power output from a generating unit that does not directly produce any air emissions (e.g., sulfur dioxide, nitrogen oxide and carbon dioxide) as reported in its Generation Attributes Tracking System (GATS). Eligible fuel types include solar photovoltaic, solar thermal, wind, hydro, nuclear, tidal energy and wave energy.

For the generation sources that qualify for both an EFEC and a REC, the attribute linked with the MWh can be one or the other, but not both, and will be verified, tracked and retired in the PJM EIS GATS system to avoid double counting.

The difference between EFECs and RECs is simple: EFECs represent the environmental attributes associated with a generator's output (emissions as a result of combustion) and RECs represent the environmental attributes related to a generator's input (the fuel sources).



How RECs and EFECs work to support the environment

To understand how RECs and EFECs work, picture a giant watering can being filled from multiple hoses or spigots flush with energy units generated from various sources, such as coal, gas, nuclear, wind, solar and hydro.

Once in the watering can, the source of the energy units can't be distinguished. When customers pull "water" (electricity) from this "can" (the electric grid), they receive a mix of whatever energy source contributed to the energy units in the can.

Now, the "watering can" can only hold so much "water," but it also must have enough to meet demand if everyone needs water at once—right? And for the sake of our environment, we want much of the energy source in the watering can to be green. When a customer purchases a REC or EFEC, they are encouraging the development of more energy from renewable or emission-free sources.

As a new renewable or emission-free generation of energy comes online, generation from plants that burn fossil fuels has to be reduced, so we don't overflow the watering can. Therefore, when renewable or emission-free energy is added to the grid, less power is needed from existing coal and gas plants. This lessens the release of certain pollutants into the environment.

How businesses benefit from EFECs and RECs

Selling RECs or EFECs provides an additional revenue stream for these energy sources, providing a financial incentive for companies to invest in them. On the flip side, when your business purchases EFECs and/or RECs, you demonstrate support for energy-generating sources that can be part of a broader climate solution. You avoid a capital outlay to deploy your own on-site renewables, yet still power your business with sources that may help you meet your environmental goals.

"Businesses have overwhelmingly expressed a need for low-carbon products," said Ed Wilson, Executive Director, Association Sales. "We have committed to providing a convenient vehicle for our customers to purchase power that helps businesses meet their environmental goals in a cost-efficient manner."

When you purchase a Carbon-Free Electricity Product from Constellation, the electricity you purchase will be matched with EFECs from nuclear energy sources. In other words, you will offset the particular percentage of load you select with carbon-free electricity.

Promoting your environmentally friendly EFEC purchase

You can claim that the EFECs in your carbon-free product purchase are sourced from PJM Emission-Free Energy Credits and are 100 percent nuclear. You can avoid any misleading “green” claims by specifically referencing the percentage of your electricity load that is matched with EFECs, and by accurately qualify any “clean” energy claims when making statements about the EFECs purchased. For example, you can say that the EFECs support demand for nuclear generation sources, which do not directly emit GHG.

Customers who purchase a carbon-free product can use EFECs to compare the impact of emission-free generation sources to the grid average emission factor, which is a blend of generation resources available in the region. For example, **an Illinois customer holding enough EFECs to cover 100 percent of the electricity usage of a 1,000 kW facility for a year could claim carbon dioxide avoidance equivalent to 2,949 metric tons, 2,418 acres of trees or 621 cars removed from the road for a year.***

A carbon-free electricity purchase may help your company to meet internal environmental goals by demonstrating your support for generating sources such as nuclear that can be part of a broader climate solution. Start the conversation with your Constellation representative today by visiting energy.constellation.com/IHLA/contact. Please see the full terms and conditions for Constellation’s carbon-free product for full details of the offering.

**Annual measure based on 65 percent load capacity and 2012 data set eGRID national generation emissions average (1,141.95 lbsCO₂e/MWh)/ Annual measure based on <https://www.epa.gov/energy/ghg-equivalencies-calculations-and-references> (1.22 metric ton CO₂ sequestered annually by one acre of average U.S. Forest)/ Annual measure based on <https://www.epa.gov/energy/ghg-equivalencies-calculations-and-references> (4.75 metric tons CO₂E/vehicle/year).*