

Utility Green Power Option

Description:

Green power options allow customers to voluntarily purchase “green power” from renewable energy sources such as wind and solar. Few programs were available in the early 2000s, but today, utilities across 47 states offer green power options for their customers, and some states require that utilities offer voluntary green power programs. Customers may have to pay a premium for green power, while some communities offer green power packages at lower cost than conventional utility programs.

Discussion of the Policy:

Utility green power options can take two major forms: 1) green pricing programs, or 2) renewable energy or green tariffs. Green pricing options are primarily designed for residential and small commercial users. Green pricing options are also ubiquitous, with programs available in major utility service territories in most U.S. states. Additionally, several states have adopted policies requiring utilities to offer green power options. Green power pricing programs are voluntary, in which customers opt-in to a utility, electric service provider, or unbundled renewable energy certificate (REC) provider program to purchase power from “green” or renewable sources. More recently, the development of shared renewable programs, community choice aggregation (CCA), and voluntary power purchase agreements (PPAs) offer additional pathways for customers to purchase green power.

A CCA program allows a community to aggregate their load and purchase electricity from a supplier other than the default utility to achieve cost savings over prevailing utility rates. Unlike green pricing programs, individual customers typically must opt-out of CCA programs, rather than opting in. Those communities that employ CCA are not required to purchase renewable power, but many of them do. In fact, some procure up to 100% of their electricity from renewable resources at a cost savings over that of utility rates. See the [Shared Renewables](#) policy brief for a discussion of these policies.

The second form of green power option is a renewable energy tariff, or “[green tariff](#).” In contrast with typical pricing programs, green tariffs are a relatively new development designed for large corporate purchasers to meet their electricity demand with renewable energy sources in states with regulated electricity markets. Rather than paying a premium under the standard rate structure as in green pricing programs, tariff customers are subject to modified rate structures that reflect the costs of the renewable energy projects contracted for electricity service. Tariff contracts generally have term lengths of 10, 15, or 20 years, offering long-term stability and predictability for large commercial and industrial electricity users. Because contract terms are negotiated under certain green tariffs, the customer typically has greater discretion in selecting the energy source than customers under a typical green power pricing program. As an example, NV Energy’s [Green Energy Rider](#) allows commercial customers to contract directly with the utility for 50% or 100% of their electricity usage and set a negotiated cost structure and term length of at least two years. Apple is one major green energy rider customer who has contracted 320 megawatts (MW) in solar capacity with NV Energy as of 2018. Tariffs or riders are not the only option for large customers seeking to increase their renewables portfolio; some utilities have negotiated bilateral, “one-off” renewable contracts rather than develop a tariff available to all users within the commercial and industrial customer class.

While green power pricing programs have a greater number of customers, a larger proportion of renewable energy sales occur under utility-scale renewable contracts. Green power options primarily for residential and small commercial users – utility green pricing, CCAs, and competitive suppliers – served approximately 96% of all green power customers in the US as of 2017.¹ However, these programs only comprise 32% of green power

¹ National Renewable Energy Laboratory, 2018. [Status and Trends in the US Voluntary Green Power Market](#), p.4

Ohio have adopted both CCA and green energy purchasing requirements. This includes approximately 90 cities in Illinois and a few cities in each of the other states.

At present, 16 states have approved a utility renewable energy tariff for large corporate buyers. Of those, 11 programs have executed contracts for renewable energy projects. In the other five states (Kentucky, Missouri, Nebraska, Utah, Wisconsin), deals have yet to be executed. In regulated states with no green tariff, utilities in five states (Alabama, Arizona, Iowa, Oklahoma, and Tennessee) have entered into bilateral renewable contracts with corporate customers.

- CCAs in the state of Illinois:
<http://www.pluginillinois.org/MunicipalAggregationList.aspx>
- Georgia Power, Commercial and Industrial Renewable Energy Development Initiative (REDI):
<https://www.georgiapower.com/company/energy-industry/energy-sources/solar-energy/solar/c-and-i-redi.html>
- State of Oregon: Mandatory Green Pricing Program Enabling Legislation:
<https://olis.leg.state.or.us/liz/2007R1/Measures/Overview/SB838>
- Top Ten Utility Green Pricing Programs
<https://www.nrel.gov/analysis/assets/pdfs/utility-green-power-ranking.pdf>

Key Components:

The design of green power programs varies based upon the type of program and the provider, but they tend to have the following components:

Green Pricing Programs

- Customers are offered an additional rate premium or, in the case of CCAs, a standard electricity rate in cents/kilowatt-hour (KWh).
- Customers served by an electricity provider must opt-in to a green purchasing program, while in CCAs they must opt-out of the program if they do not wish to participate.
- In the case of electricity provider programs, customers often can determine how much renewable generation they wish to purchase to meet their electricity needs, and in the case of CCAs, customers may have the opportunity to select from a range of options.
- Utility programs often have a specified minimum duration for enrollment period, typically lasting at least one year.
- The rates offered are revised after the conclusion of an enrollment period, typically annually in the case of electricity provider programs and upon contract end dates for CCAs.

Green Tariffs

- Minimum energy demand requirement for participating facilities.
- Alternate rate schedule to reflect the costs of the renewable project(s) and provide price stability. Cost structure may be negotiable.
- There are three types of utility renewable energy tariffs: 1) 'sleeved' PPAs, in which the utility facilitates access to individual PPAs, 2) subscriber programs such as community solar, or 3) market-based rate programs, in which customers can participate in the wholesale market through the utility.
- Program size limit, expressed in nameplate capacity (MW) or energy demand (MWh).

- Specified term length or term length options, typically set at 5, 10, 15, or 20 years. May be negotiable.

More Information:

- National Renewable Energy Laboratory (NREL), Community Choice Aggregation: Challenges, Opportunities, and Impact on Renewable Energy Markets:
<https://www.nrel.gov/docs/fy19osti/72195.pdf>
- NREL, Energy Analysis webpage:
<https://www.nrel.gov/analysis/green-power.html>
- NREL, Utility Green Pricing Programs Design, Implementation, and Consumer Response Technical Report:
<http://www.nrel.gov/docs/fy04osti/35618.pdf>
- U.S. Department of Energy: Green Power Network:
<https://www.energy.gov/eere/solarpoweringamerica/green-power-partnership>
- World Resources Institute, Emerging Green Tariffs in Regulated US Electricity Markets:
<https://www.wri.org/publication/emerging-green-tariffs-us-regulated-electricity-markets>
- World Resources Institute, Implementation Guide for Utilities: Designing Renewable Energy Products to Meet Large Energy Customer Needs:
<https://www.wri.org/publication/implementation-guide-green-tariffs>