

This document is designed to help Better Buildings, Better Plants, and Better Climate Challenge partners learn about utility-based renewable electricity supply options in the US energy market. For more information about renewable energy and other renewable electricity procurement options, please see the [Renewable Energy Resources Hub](#).

Introduction

In **regulated retail electricity markets**, electricity consumers are required to buy electricity from their local utility company. Utilities in these markets have developed various green power initiatives that allow their customers to still utilize and invest in clean energy resources like wind and solar. **Utility green power** and **utility green tariff** programs offer customers, known as “offtakers,” a structured and convenient way to purchase renewable energy, providing supply and price stability while supporting clean energy in the overall electricity market. Consumers work with their local utility or renewable energy provider to discuss goals, energy needs, available options, and the procurement process. Similar products known as **competitive green power** products are also offered in deregulated retail markets where customers can purchase energy directly from suppliers. Figure 1 shows an example utility green power offering. This document provides a more detailed explanation of green tariffs and other utility-based green power programs.

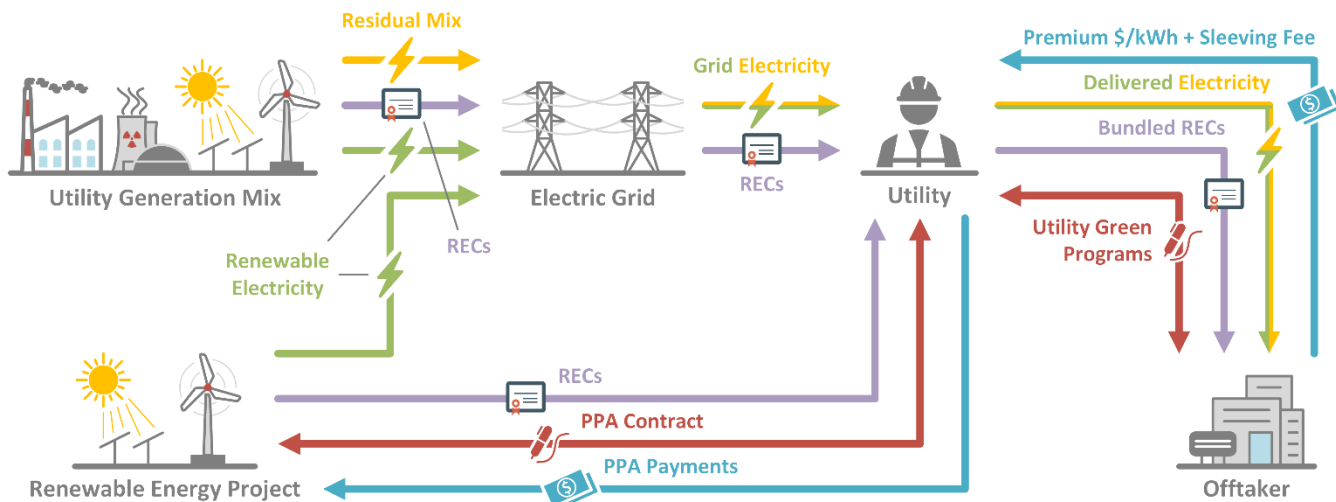


Figure 1: Structure of typical Utility Green Power and Green Tariff offerings.

Utility Green Power Products

Electricity providers of all types across the US offer **green power products**, including municipal, investor-owned, and cooperative utilities. These products allow customers to pay an extra, per-kWh premium to receive electricity generated from renewable sources bundled with Renewable Energy Certificates (RECs). Charges are often an extra line item on the utility bill. Energy from these products does not necessarily come from a specific renewable energy project and the energy mix can be changed by the utility. Green products are generally flexible and do not lock customers into long-term contracts. There are two main procurement options for green power products:

- ▶ **Percentage-based:** Customers can choose a percentage of their electricity that will be sourced from renewables (e.g., 25%, 50%, or 100%).
- ▶ **Block-based:** Customers can purchase a set number of renewable electricity "blocks" per month. Each block represents a specific amount of generated renewable energy (typically 100 kWh).

Utility Green Power Products

Some states offer optional **utility green tariff** programs through local utilities (Figure 2) designed for commercial and industrial customers who want to support specific renewable energy projects on their electricity grid and reduce the environmental impact of their energy portfolio. Green tariffs offer a special rate for electricity generated from specific renewable energy projects, allowing businesses to directly contribute to clean energy development and potentially insulate themselves from energy price fluctuations. Customers can opt for up to 100% renewable electricity depending on their requirements and utility generation capacity. Eligibility and program details for green tariff programs vary by state, utility, and customer. There are three main ways utilities procure renewable electricity through green tariffs:

- 1. Pre-selected Projects:** The utility supplies renewable energy from existing projects they own or have purchased from independent producers on the grid at a negotiated rate.
- 2. Project Involvement:** Customers can be directly involved in specific competitive renewable energy projects, or utilities can provide pre-arranged agreements similar to sleeved PPAs to encourage new renewable generation.
- 3. Market-Based Pricing:** Customers agree to pay the wholesale market price for the renewable electricity procured by the utility through the green tariff.

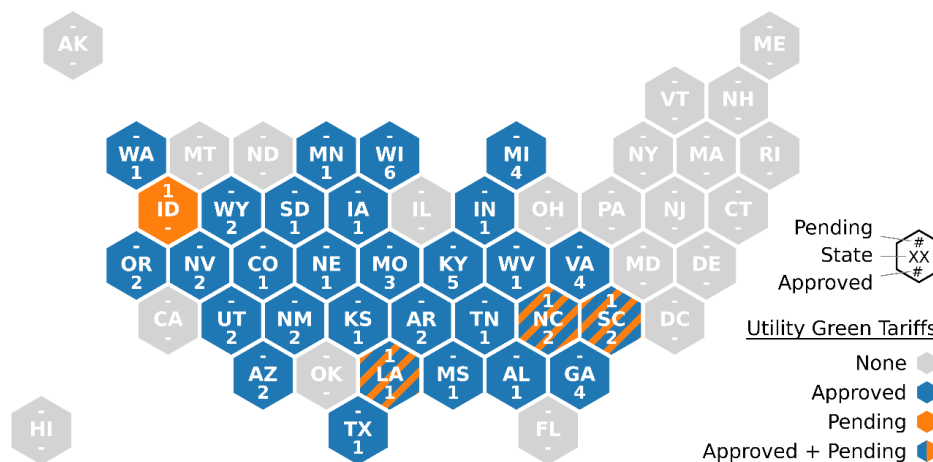


Figure 2: States with utility green tariff programs as of October 2023.¹

Utility Green Power Products versus Utility Green Tariffs

While both green tariffs and green products provide consumers options for procuring renewable energy and RECs within regulated retail electricity markets, there are key differences in contracts, projects, eligibility, and process. Green tariffs allow eligible consumers to enter into long-term agreements for renewable electricity from specific projects at specific prices. Green products, in contrast, are more flexible and do not typically require a long-term commitment but are not tied to specific renewable projects. To summarize:

- ▶ **Utility Green Power Products:** Flexible options with no long-term commitment, customers pay a premium for mixed renewables.
- ▶ **Utility Green Tariffs:** Long-term contract with bundled RECs from specific renewable electricity projects.

¹ Figure based on “U.S. Utility Green Tariff Report – January 2023 Update” by Celeste Wanner, Priya Barua, Josh Kaplan, and Sarah Mihalecz, Clean Energy Buyers Association (CEBA), 2023 and “Green Tariffs” by CEBA, <https://cebayers.org/solutions/procure-clean-energy/green-tariffs/>.

Competitive Green Power Products

In **competitive retail electricity markets**, businesses can purchase competitive green power products directly from suppliers instead of exclusively through their utility provider. Competitive suppliers provide renewable power to the grid, but the local utility typically still maintains control over billing and transmission infrastructure. Like utility green products, competitive green products can involve a premium per-kWh rate on monthly utility bills. However, some municipalities in these markets may restrict retail choice.

Competitive green power products offer flexible purchase percentages (e.g., 25%, 50%, or 100%) and can vary based on location and specific renewable sourcing requirements. These products are characterized by short-term contracts, generally under 24 months. Businesses interested in exploring competitive green power products should consult consumer information websites in states where their facilities are located to determine availability. Table 1 outlines green power purchasing options for consumers in both regulated and competitive electricity markets:

Figure 2: States with utility green tariff programs as of October 2023.

Option	Electricity Market	Agreement Term	Supply Type
Competitive Green Power Products	Deregulated (check local market)	Short (6-36 months)	Retail
Utility Green Power Products	Regulated (check with utility)	Month-by month	Retail
Utility Green Tariffs	Regulated (check with utility)	Long (4-8 years)	Project-specific

Case Studies

The following case studies highlight successful green power purchasing projects from two Better Buildings, Better Plants partners. For more information on these companies and other projects they have implemented, please visit the [Better Buildings Solution Center](#).

DENSO (Utility Green Tariffs)

In 2022, mobility supplier DENSO partnered with the City of Maryville, TN, to leverage renewables as part of their 2035 carbon neutral goal.²

Although DENSO is in a regulated electricity market, the Tennessee Valley Authority allows local utilities to source up to 5% of their total energy from third parties under their Generation Flexibility program. The program allowed DENSO to partner with Silicon Ranch to build a 10.5-megawatt (MW) solar project and receive renewable energy through their municipal utility. These kinds of partnerships demonstrate potential for businesses and municipalities to achieve emissions reductions through utility-based programs.



Detroit Diesel (Utility Green Power Products)

In 2021, heavy-duty engine manufacturer Detroit Diesel enrolled in DTE Energy's MIGreenPower Program. The increasing enrollment represents a substantial expansion in the use of renewable energy

and will reach 100% clean electricity by 2028. Detroit Diesel will ultimately be supporting 100,000 MWh of annual renewable electricity generation. This initiative aligns with Detroit Diesel's broader sustainability goals as well as those of their parent company (Daimler Truck North America), which include carbon neutral truck manufacturing plants by 2025 and carbon neutral vehicles by 2039.³



² <https://web.archive.org/web/20231211131640/https://www.denso.com/us-ca/en/news/newsroom/2022/20221102-01/>

³ <https://web.archive.org/web/20240422001307/https://ir.dteenergy.com/news/press-release-details/2021/Detroit-Diesel-Makes-Impactful-Clean-Energy-Commitment-through-DTE-Energys-MIGreenPower-program/default.aspx>

Authors and Acknowledgments

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DOCUMENT AVAILABILITY

Online Access: US Department of Energy (DOE) reports produced after 1991 and a growing number of pre-1991 documents are available free via <https://www.osti.gov>. The public may also search the National Technical Information Service's [National Technical Reports Library \(NTRL\)](#) for reports not available in digital format.

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