

Corporate Renewable Energy Procurement Pathways in the Southeast: **TENNESSEE**

Many corporations, higher education institutions, and municipalities use off-site renewable energy purchasing to meet ambitious renewable energy goals. Limited off-site renewable projects in the Southeastern United States may not be a function of limited corporate interest, but rather may reflect regulatory and market barriers. This report summarizes the status of off-site renewable procurement in Tennessee, highlighting the potential for market expansion.

To understand the potential for renewable procurement in the Southeast, NREL gathered and estimated data from corporations, cities, and higher education institutions with renewable energy commitments. We pair this with data on existing renewable energy supply options (Figure 1). A summary of purchasing pathways in the state and their contracted capacity is found in Table 1.

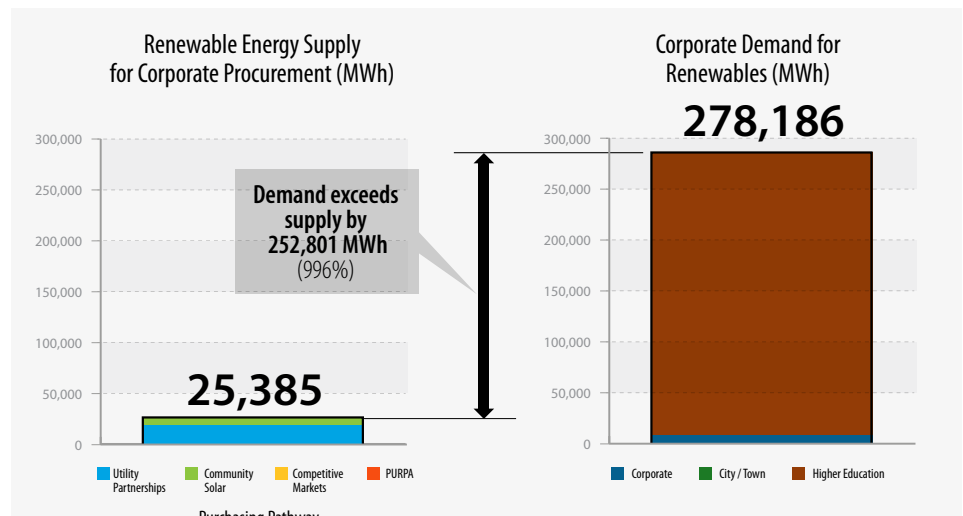


Figure 1. Corporate renewable energy supply and demand

In Tennessee, our sample of demand for renewables exceeds supply by 0.25 million megawatt hours (MWh), or 996%. The demand is dominated by higher education institutions.

Utility Partnerships

The Tennessee Valley Authority (TVA) offers a variety of options for commercial and industrial customers to procure renewable energy, although total corporate procurement through these programs is not published. Blocks of renewable energy certificates (RECs) can be purchased through the Green Power Switch Southeastern RECs program, or businesses can partner with local power companies to apply to TVA's Distributed Solar Solutions program. TVA states on their website that they accept unsolicited proposals for renewable energy projects.

Bilateral agreements with TVA have been the primary pathway for corporate renewable energy procurement to date. In 2012, Volkswagen partnered with TVA and the Silicon Ranch Corporation to procure electricity from the 10 MW Chattanooga Solar Farm. In 2018, Google began construction of a data center in Clarksville and is working with TVA to meet its 100% renewable energy goal. Total capacity procured for this project has not been announced.

Community Solar

Georgia leads the southeast region in terms of installed community solar capacity. About 60% of this capacity has been installed by cooperative utilities, and these programs vary in terms of corporate customer eligibility and REC treatment. Georgia Power operates a 3 MW community solar program, but only residential customers are eligible to participate.

Competitive Market Access

Installed community solar capacity lags in Tennessee compared to North Carolina, Florida, and South Carolina. TVA's Distributed Solar Solutions program provides an avenue for local power companies to develop 50 kilowatts (kW) to 2 megawatts (MW) community solar

projects up to the 10 MW program cap. While businesses are eligible to participate in TVA's Distributed Solar Solutions community solar projects, REC treatment is not clear and potential for electricity cost savings is limited.

PURPA

Tennessee has 55.6 MW of qualifying facilities allowed under the federal Public Utility Regulatory Policies Act (PURPA). However, no PURPA capacity is directly owned by corporations with renewable energy objectives. TVA compensates qualifying facilities 80 MW and smaller under 5-year contracts. Rates are set monthly and no capacity payment is included.

Market Outlook

This analysis identified few utility-scale renewable energy procurement options in Tennessee outside those offered by TVA. TVA has experience working with corporate customers in bilateral agreements, with several new projects under development. Corporations operating within AEP territory may have the option to pursue off-site PPAs within the PJM wholesale market.

Pathway	Deployed Capacity (MW)	Key Considerations
Utility Partnerships	10	<ul style="list-style-type: none"> TVA has experience with bilateral deals and is forming new ones
Community Solar	4	<ul style="list-style-type: none"> TVA's Distributed Solar Solutions program provides pathway, program capped at 10 MW capacity
Competitive Markets	0	<ul style="list-style-type: none"> No retail choice 2% of commercial and industrial load is served in the PJM footprint.
PURPA	0	<ul style="list-style-type: none"> No corporate-owned QFs

Table 1. Deployed capacity and key considerations for corporate procurement

Heeter, Jenny; Cook, Jeffrey J.; and Jenny Sauer. 2018. *Existing and Potential Corporate Off-site Renewable Procurement in the Southeast*. Golden, CO: National Renewable Energy Laboratory. NREL/TP-6A20-72003. <https://www.nrel.gov/docs/fy18osti/72003.pdf>.