OPPORTUNITY

The Connecticut Municipal Electric Energy Cooperative (CMEEC) provides electric services to several Connecticut municipal utilities, which in turn provide electricity to roughly 70,000 residential, commercial and small business customers throughout the state. CMEEC’s vision is to energize customers and community prosperity by delivering sustained lower cost energy solutions. As a vertically integrated co-op, CMEEC and their customers manage a comprehensive portfolio of generation, transmission, distribution and supply portfolios to deliver high stability and low cost power.

CMEEC set sustainability objectives for its operations and evaluated multiple strategies to achieve these goals. Ultimately, the co-op decided a solar power and energy storage project was best as it complemented the objectives most comprehensively.

SOLUTION

To implement these projects, CMEEC turned to Tesla and SolarCity, the industry leaders in solar storage projects. Tesla and SolarCity partnered with Brightfields Development to develop 15 MW (AC) of solar PV across 5 sites, as well as a 1.5 MW/6.0 MWh energy storage system, the largest PV-paired storage system in the Northeast.

APPLICATION

To meet CMEEC’s needs, Tesla and SolarCity designed a system totaling 15 MW (AC) of PV generation spanning five sites of under-utilized plots of lands. The two parties agreed to a 20-year solar power purchase agreement (PPA), under which SolarCity will build, finance, own, operate and maintain the solar systems, and CMEEC will purchase the power generated by the system without the burden of more traditional asset ownership.
The 1.5 MW/6.0 MWh battery storage system will also be financed by Tesla and SolarCity and will be located at the Stott Avenue project site. The batteries are utilized to store solar energy produced during off-peak hours and later discharge this energy at times when CMEEC’s load is peaking, or coincident with the ISO-NE peak load. Tesla and SolarCity will implement and maintain a controls system that allows CMEEC to dispatch the battery’s energy in its preferred manner. By strategically discharging the battery in this manner, CMEEC will reduce the load they serve, and thus will pay lower capacity charges to ISO-NE for that peak event.

The storage component of the project was contracted under the traditional solar PPA model with an embedded 10-year term Capacity Services Exhibit. The exhibit outlines that CMEEC will pay SolarCity a fixed, monthly Capacity Services Charge that is competitive with avoided ISO-NE capacity charges.