

Energy Independence through Solar Array

BJ's Wholesale Club is a membership-only retail chain that is committed to providing high quality food and merchandise at low prices. For BJ's any reduction in operating costs means the company can direct more resources to its core mission. Recognizing the opportunity to reduce energy costs through solar photovoltaic (PV) installations, BJ's engaged SolarCity and Direct Energy to evaluate and install solar PV at several locations in Massachusetts, Maryland, and New Jersey.

In total, BJ's installed nearly 20 systems that collectively produce 5.5 megawatts of direct current (MW-DC) annually. The individual project sizes range from 260 kilowatts (kW) to 1.3 MW. One location also installed solar-powered battery storage to further reduce energy costs through demand charge savings.

Project Keys to Success

BJ's coordinated directly with its building landlords at each of its leased facilities. This presented additional concerns including overcoming split incentives of the solar installations, ongoing operational requirements, roof maintenance, and property vacancy or lease turnover. By initiating conversations with the landlords early in the process, was able to minimize or share risks for the building owner and get the projects approved.

BJ's Wholesale Club also recommends that other companies that lease their building and are interested in solar energy determine the potential increase in equity value solar brings to a building over time. While there will always be some negotiation between property owner and tenant regarding shared risks, having a building with lower operating costs than the building across the street provides a competitive advantage to both parties.



Photo credit: Solar City

| SOLAR PROJECT HIGHLIGHTS | |
|--------------------------|--|
| Year | 2013 and 2014 |
| Location | MA, MD, NJ |
| Installation Type | Roof and ground mounted |
| Size | 5.5 MW-DC total |
| Avg. Annual Production | 6.6 million kWh across all sites |
| Electricity Offset | 23%, on average |
| Monthly Bill Savings | At least 10% below current utility rates |
| Expected Payback | Cash flow positive from day 1 |
| Financing | PPAs |

Financing

The installations are financed under a 20-year power purchase agreement (PPA) in which BJ's Wholesale Club buys the solar electricity produced by the solar arrays from SolarCity at an agreed upon price over the agreement term. The PPA is below retail electricity rates, and requires no upfront customer investment. Direct Energy acts as the Tax Equity Provider in the agreement, so the solar incentives, such as the 30 percent Investment Tax Credit, are utilized and then reflected in a lower PPA price. This simplifies the arrangement for BJ's providing the company with a lower long-term cost of electricity. Because the PPA price is less than the current utility retail electricity price, BJ's began saving money immediately

KEY TAKEAWAYS

- ▶ For tenant-led solar PV projects, match the solar purchase agreements to the timeline for the building lease or include terms that mitigate any impact of property vacancy or turnover.
- ▶ Identify the additional equity value provided to the building owner through reduced operating expenses from the solar installation. Having a building with lower operating costs than the one across the street provides a competitive advantage to both parties.
- ▶ Coordinate directly with the building landlord to discuss operational and maintenance requirements for the solar installation. Landlords will be concerned with roof maintenance associated with the additional load from the solar installation.



Photo Credit: SolarCity