

## SHOWCASE PROJECT: BECTON DICKINSON: TORREY VIEW SOLAR PROJECT

### SOLUTION OVERVIEW

BD is a global medical technology company that is advancing the world of health by improving medical discovery, diagnostics, and the delivery of care. In alignment with BD's goal of advancing the world of health, and BD's 2030 sustainability targets specific to supply chain resilience and carbon reduction, BD set a goal to decrease the company's overall carbon footprint by 46% by 2030—from a baseline year of 2019. Increasing the use of renewable energy across their portfolio is one way they are making progress towards their stated goals. BD worked with a solar provider to install rooftop solar photovoltaic (PV) system at the Torrey View site in San Diego, California. The Torrey View solar PV system will reduce the purchase of grid-sourced electricity by 868,000 kilowatt-hours (kWh) annually, which is 30% of the site's annual power consumption. This is enough energy to power 43 U.S. homes for a year and equates to a reduction of 600 metric tons of carbon dioxide emissions.

BD is currently installing solar PV systems at several sites globally. The company evaluates multiple options for funding solar PV projects based on capital outlay, cash flow, and return on investment. Funding options include cash investment, ownership via financing, and third-party ownership through a power purchase agreement (PPA). To minimize the company's capital investment for the Torrey View project, a PPA was negotiated with a third party that will own, operate, and maintain the system for a 20-year term.

### SECTOR TYPE

Industrial

### LOCATION

San Diego, California

### PROJECT SIZE

215,000 square feet

### FINANCIAL OVERVIEW

\$800,000+

### SOLUTIONS

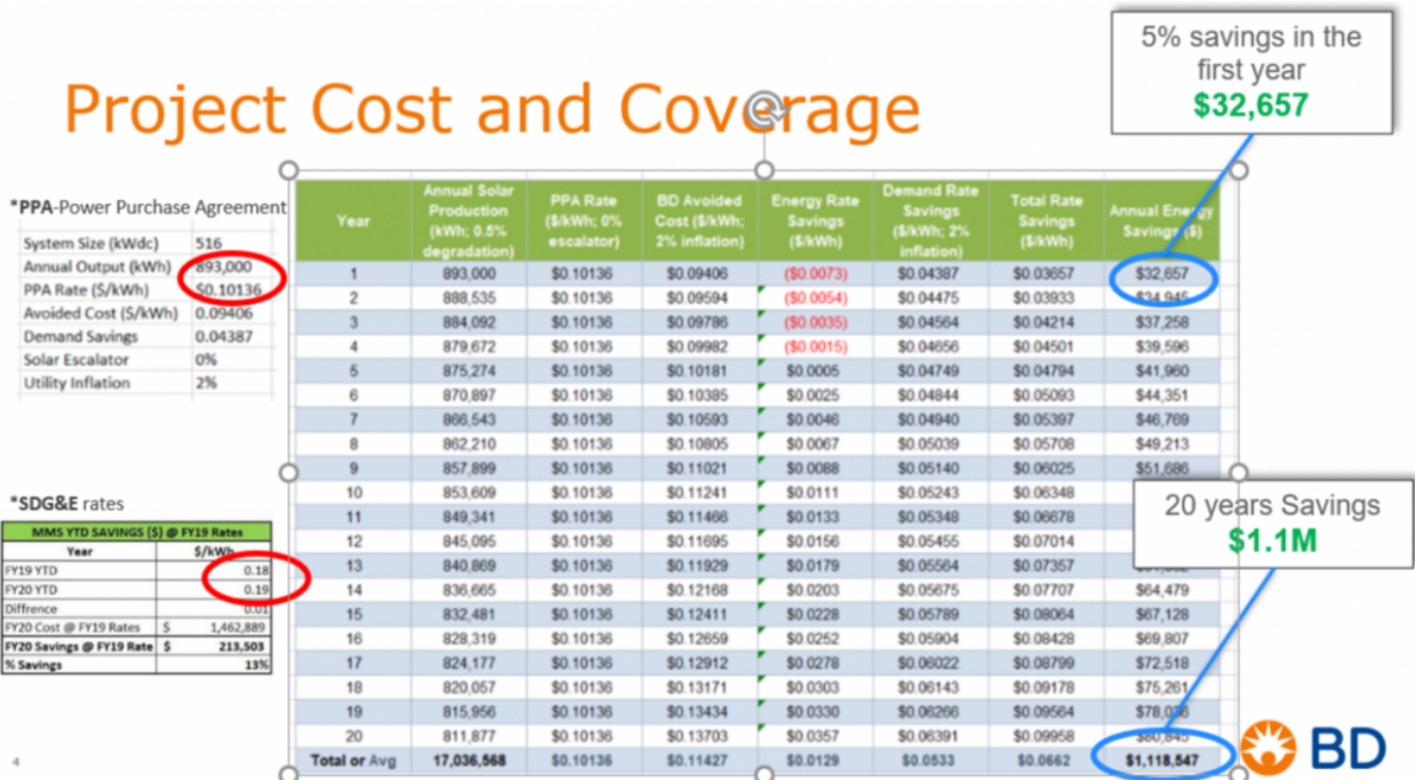
The BD Torrey View site has two two-story buildings, A & B, and is approximately 215,000 square feet in total. The PV System is installed on the rooftop of both buildings and is attached to the roof using a ballasted system instead of a mechanically fastened system. The ballasted roof system decreases the need for roofing penetrations, which require specially trained contractors to install.

The ballasted roof system eliminated 3,000 roofing penetrations and reduced the installation noise, allowing for a quieter mounting process. This method also reduces the risk of improper installation, which can result in deterioration or leakage, causing maintenance costs in the future.

A cross-functional BD team was organized to work with the PPA partner company, NextEra. This ensured that BD's internal policies and procedures were met in addition to ensuring compliance with local requirements. The project team managed several risks and issues associated with the project, including concerns of residential neighbors and impacts on building occupants. The project team was able to keep the project on schedule despite a complex permitting process. The project team employed the following project management practices to bring the schedule to completion:

- Weekly operations meetings
- Daily site safety discussions and inspections
- Collaborative communications with contractors, sub-contractors, and stakeholders
- Ongoing reviews of protocols, Job Safety Assessments, procedures, and risk analyses

The energy savings will lead to future cost savings over the term of the PPA, which is twenty years. The cost savings are projected to be 5% in the first year based on \$0.03657/kWh, or a total of roughly \$32,657. The PPA also enables BD to have budget certainty through a fixed rate per kilowatt-hour for the 20-year life of the project.



### OTHER BENEFITS

On top of the energy, cost savings, and GHG reductions, the installment of the PV system at the BD Torrey View site will increase employee engagement and interest in the company's sustainability

efforts. The project will also provide valuable experience and data to support other BD sites considering renewable energy projects. BD plans to work with their PPA partner to capture real-time monitoring of the activity of the PV system. BD will also continue to find more opportunities for solar PV at their sites, leveraging PPA (Power Purchase Agreements) or whole purchases to increase renewable energy generation and achieve their 2030 sustainability goals.

## Annual Energy Use

Baseline(January-August 2020)



Actual(January-August 2021)



**Energy Savings**

**34%**

## Annual Energy Cost

Baseline(January-August 2020)



Actual(January-August 2021)



**Cost Savings**

**20%**

