

BRAINTREE SUBSTATION:

A case study with BELD and Borrego Solar



The Challenge:

BELD received a grant from the Massachusetts Clean Energy Center through the Advancing Commonwealth Energy Storage (ACES) program to construct an energy storage system at their Braintree substation. The project had two main goals: one, to reduce capacity and transmission costs and provide value to ratepayers, and two, to showcase the energy storage system's ability to support increased renewables generation while maintaining grid reliability and reducing peak load. The biggest challenge to achieving these goals was the strict timeline, as the project needed to be operational starting in May 2018 to provide cost reductions to ratepayers for the summer 2018 capacity season. BELD executed the site construction, installation, and wiring of the system and selected Borrego Solar to lead the design of the solar portion of the project.

The Customer:

Braintree Electric Light Department

BELD is one of 41 municipal light departments organized under Massachusetts General Laws chapter 164 and is recognized locally and nationally as an innovator in technology and new services.

Project Details:

Commissioned June 2018

Size: 2MW/4MWh

Use case: System peak reduction (ICAP), distribution peak reduction (RNS)

Scope: ESS system, autonomous operation & control platform (ESWare), system integration

The Solution:

BELD and Borrego Solar sought a partner to provide an energy storage system designed to support the project goals, and selected IHI Terrasun Solutions, Inc. for their advanced control software and sophisticated system engineering capabilities. IHI Terrasun provided a 2MW/4MWh battery operated on the proprietary software suite which provides hands-on control of the system.

The system was operational during the summer 2018 capacity season, when it was dispatched during potential ICAP and RNS system peak hours to decrease capacity costs and maximize the value to ratepayers in 2019. BELD and Borrego Solar will continue to test and prove the additional benefits of the system, such as renewables support.

Commissioned in June 2018, this project is the first to reach operation among the Massachusetts ACES grant projects.

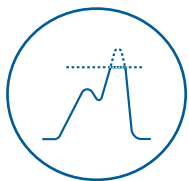
Key System Benefits:



Smooth solar generation
and support renewables



Provide hands-on controls
and autonomous operation



Reduce peak load
and decrease costs

The Developer + Engineer:

Borrego Solar Systems

Borrego Solar Systems is the largest privately owned commercial solar company and the third largest commercial solar EPC firm in the U.S, with more than 500MW of solar capacity in the United States.

To learn more about this project and IHI Terrasun's advanced software and solutions, reach out to the sales team. With expert engineers and a suite of offerings that can be tailored to fit specific projects, IHI Terrasun Solutions is ready to create the ideal energy storage solution for your needs.

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