

# Case Study: California State University Dominguez Hills Energy Storage Delivers Cost Savings and Sustainability to Campus

## CSUDH

California State University Dominguez Hills (CSUDH) serves nearly 15,000 students. A core tenet of the university's mission and its Campus as a Living Lab for Sustainability initiative is to make sustainable environmental, social and economic practices a way of life. Several projects have been designed to reduce energy consumption and costs - including LED lighting, HVAC upgrades, and an energy storage strategy to participate in a demand response (DR) program. All these measures ease demand on the utility grid, helping to reduce the need to build new peaker plants.

“ This partnership has enabled us to control energy costs, decrease our greenhouse gas footprint, and support demand response as a Virtual Power Plant to help reduce the number of new peaker plants that have to be built. As of today, our energy storage system enables the campus to intelligently deliver up to 1,000 kW of load reductions. We're extremely pleased with the reliability of our energy storage system, which is critical to reducing our energy costs and meeting our sustainability goals. We just passed the two-year mark, and the data shows we're running strong and stable and still getting better.

**Kenneth Seeton**  
Central Plant Manager / Energy Manager, CSUDH

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### Location

Carson, CA

### Facility Type

University Campus

### Solutions

Solar Plus Storage, Utility  
Bill Optimization, Demand  
Response, Sustainability

### Energy Storage System Size

1MW / 4.2MWh plus  
1.5 MW solar PV

### Annual Savings

\$70K

### Commercial Operation Date

December 2017



### Challenge

Seeton recognized that to continue reducing his operational costs while progressing on sustainability goals – such as shifting systems from natural gas to electricity to lower the university's carbon footprint – he needed to add intelligent energy storage to the campus.



### Solution

The CSUDH batteries reduce demand from the grid throughout the day and automatically provide far better grid relief via automated load reductions than what was possible with manual adjustments. The campus now also acts as a Virtual Power Plant, flexibly providing approximately 400 kW of load reduction during a DR event. When combined with the energy storage system, the campus can intelligently deliver up to 1,400 kW of load reductions.



### Results

The Athena platform continually learns and adapts over time, performing thousands of calculations, forecasting simulations, and split-second decisions to optimize battery use. By monitoring CSUDH's load curve, the solution can determine how much load it can discharge while still being able to manage demand peaks. Visual dashboards have enabled Seeton to demonstrate Stem's energy storage benefits to university officials, other campuses, and visitors from around the world.

To learn more about Stem's solutions, contact [stem.com/contact-us](https://stem.com/contact-us).