Granite Construction



Company Achieves \$860K in Savings with Stem Energy Storage – In One Year

Granite is America's Infrastructure Company[™]. Incorporated in 1922, Granite is one of the largest diversified construction and construction materials companies in the United States as well as a full-suite provider in the transportation, water infrastructure and mineral exploration markets serving North America and Guam.

Faced with rising demand charges and changing rate structures, Granite pursued energy storage to gain the flexibility to buy energy at the most inexpensive times and use stored power when costs are higher. An asphalt provider to contractors and municipalities in the Stockton, California area, Granite first installed Stem energy storage at its French Camp site, near Stockton, in 2018. The success of that project moved Granite to install Stem systems at four other locations. In 2020, the combination of Stem's Athena[™] smart energy software and a storage-friendly tariff saved Granite \$860,000 on utility bills.

Challenge

Historically, Granite accumulated high monthly power demand charges from PG&E during the plant's normal operational hours. In order to reduce energy costs, they interviewed multiple energy storage providers throughout California. However, repeated discussions with other providers to design, install, and maintain battery storage showed that although many could provide similar-looking storage systems, they all lacked smart storage software capabilities. This would be essential to help automate demand charge management and utilize the batteries to best reduce costs.

Location Stockton, California

Facility Type Construction Plant

Solutions Energy Storage, Utility Bill Optimization

Commercial Operation Date August 2018

Energy Storage System Size 315 kW / 510 kWh

Actual 1-Year Savings (Site) \$85,000

Actual 1-Year Savings (Fleet) \$860,000 (in 2020)

"Athena[™] is key to making the system function, as it can monitor the grid and know when to switch to battery power. The other companies we considered for battery storage had similar storage systems but lacked Athena's Al capabilities. Ultimately, we chose Stem because of their knowledge of battery systems and many installations throughout California. Granite needed an energy storage provider who could work with all three big utilities, as our sites span all of them."

Chris Herne

Corporate Plant Equipment Manager at Granite Construction



Energy Superintelligence™

Granite also needed a provider who could work with multiple California utilities – including PG&E, SoCal Edison, and SDG&E – that span their other statewide construction plants. Many providers, they found, worked only in one utility's service area.



Solution

Granite ultimately chose Stem because of our knowledge of battery systems and installation expertise throughout California with various utilities.

Granite's French Camp construction plant provides asphalt even when power costs are very high. So, Athena's demand management capabilities were ideal for Granite to switch to stored battery power and use less grid-supplied power in order to save on energy costs. The batteries then recharge overnight, when energy costs go down.

Athena's predictive analytics combine tens of thousands of historical, forecasted, and real-time data points, including market data and local weather forecasts, to optimize dispatch of Stem battery systems.

Importantly, installing storage also allowed Granite to qualify for PG&E's Option S tariff which greatly increased potential savings.

Results

In 2020, Stem's Athena smart energy software and the Option S tariff saved Granite \$85,000 at the French Camp location and \$860,000 across all five of its Stem systems. More installations are in progress.

Granite acknowledges that Athena is key to making the energy storage system function, as its Al capabilities monitor grid conditions and automatically switch the construction plant to run on battery power during peak demand times.

"We selected Stem because we have confidence in the intelligence of Stem's energy storage controls."

Aaron Vasbiner

Plants Manager for the Valley Region at Granite Construction



About Stem

Stem leads the industry in developing and deploying artificial intelligence (AI)-powered energy storage that helps operations leaders control energy costs, while enhancing sustainability and resilience. As the market leader in real- time energy optimization, Stem has created new cash flows for hundreds of customers, including many Fortune 500 enterprises.

To learn more about Stem's energy storage solutions, contact us at www.stem.com/contact-us



