

# Stem reduces AlSCO's electricity spend by more than \$10,000 in first year



**Location**  
San Jose, California

**Activation Date**  
March 2014

**System Size**  
54 kW

**Goal**  
Automatically reduce peak electricity costs without changing operations

**Building Type**  
Industrial-scale laundry facility

AlSCO was the first company to introduce linen and uniform rental services to the world in 1889 and now has more than 16,000 employees and 150 branches worldwide. A leader in sustainable business practices, AlSCO employs energy efficient plant technologies, state of the art water re-use systems, safe detergent, and sustainable products.

Located in California's Bay Area region, AlSCO's San Jose branch is exposed to some of the highest electricity rates in the country. Industrial-sized washers and dryers, automated folding stations, boilers, and vacuum systems at the laundry facility start and stop for brief periods according to the needs of the business. Running these motors at the same time contributed to steep power spikes that caused high demand charges, often exceeding 60 percent of the electric bill. The company was paying more for a few instances of peak usage than for the total electricity consumed each month.

### Automated system combines storage and software to slash demand

The facility's General Manager needed a solution that would allow him to reduce demand peaks without disrupting operations. "Our business revolves around our customers' timetables, so we have little flexibility to space out operations throughout the day," he explained. "Battery storage is the perfect solution because it automatically lowers our energy spend without requiring us to change anything. There's really nothing else like it in the market."

*Between the high cost of electricity in California and the large volume of processing we do here, this facility spends more on electricity than almost any other AlSCO branch in North America. Stem's unique technology presented a solution with no risk, no upfront investment, and solid returns. There was no reason to say no.*

**AlSCO General Manager | San Jose Branch**

### Stem's impact

**5.5%**

Peak Demand reduction

**2:1**

Savings vs. Costs ratio

**\$104,000**

10 year projected savings

**Immediate**

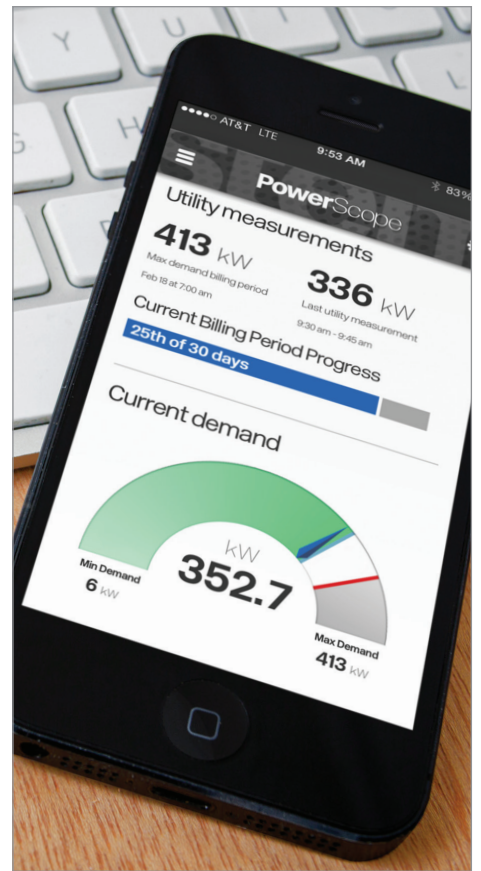
Payback period



In March of 2014, Stem installed a 54 kW energy storage system, which uses real-time data collection and predictive analytics to automatically shave demand spikes. The system has generated more than \$10,000 annually in direct and verifiable utility bill savings, reducing demand charges by almost six percent. The installation was completed at zero upfront cost, presenting no financial risk to AlSCO, and began delivering savings from the first month.

#### Stem outperforms projected savings estimate

When selecting vendors and suppliers, AlSCO has a history of setting high standards, choosing vendors and products defined by integrity, quality, and sustainability. The Stem team provided a thorough explanation of AlSCO's savings estimate, which took into account detailed historic energy usage, weather, similar facilities, the utility rate structure, and adjustments for real world variability. AlSCO's estimate proved to be highly accurate, yet conservative, with results actually surpassing initial savings projections.



*Stem didn't overpromise. After more than a year of being operational, my Stem system is actually generating about 20% more savings than what was initially projected, which I can easily track within the PowerScope software.*

**AlSCO General Manager | San Jose Branch**

#### Benefits increase over time

The Stem system continually learns AlSCO's energy patterns and uses that information to improve its control algorithms, increasing its effectiveness over time. As the system self-tunes and demand rates continue to rise between 7 and 11 percent each year, AlSCO's savings from the Stem system will steadily increase over time. Over the next decade, AlSCO can expect to save more than \$100,000 on electricity costs.

#### About Stem

Stem combines powerful learning software and on-site energy storage to automate savings.

To learn more, visit [stem.com](http://stem.com)

#### Photography

- AlSCO's industrial laundry facility in San Jose, California (left)
- Massive dryers line a room at AlSCO (middle)
- Stem's 54 kW PowerStore installed at AlSCO (right)
- Stem's PowerMonitor control device (right) and PowerStore (left) at AlSCO
- Stem's PowerScope software displaying real time load measurements