

# J.C. Penney aims for \$1 Million in savings across 26 stores with Stem



**Location**  
26 Sites in California

**Building Type**  
Retail facilities

**Activation Date**  
Phase 1 : Fall 2015  
Phase 2: Fall 2016  
Phase 3: Current

**System Size**  
54–108 kW

**Annual net savings**  
\$103,000

**10-Year Estimated Savings**  
>\$1 million

*We have had consistent results in avoided demand charges and Stem has gone out of their way to ensure we are always cash-flow positive in every month.*

**Jonathan Hooser**  
Energy Project Manager  
JCPenney

J.C. Penney Co., the iconic retail chain founded in 1902, has engineered what industry analysts have called a “remarkable turnaround.” Faced with relentless online- and discount-driven market pressures that are challenging most retailers, JCPenney is employing smart cost-reduction strategies to improve its balance sheet. The Plano, TX-based company has aggressively cut its selling, general and administrative (SG&A) expenses, which includes controllable store costs such as energy.

In California, JCPenney has lowered electricity bills by deploying onsite energy storage from Stem. Stem’s PowerStore service is already yielding annual savings of more than \$40,000 across nine stores. Based on this success, JCPenney is plugging in Stem’s energy storage at 17 additional locations throughout California, expected to add another \$60,500 in net savings in the first year. In total, the systems are expected to generate more than \$1 million in savings for JCPenney.

## Identifying a hands-off solution for cost savings

JCPenney wanted to slice operating expenses and meet sustainability goals through new energy strategies. But it faced numerous challenges. One, typical ways of improving efficiency and cutting consumption, such as LED lighting and HVAC retrofits, don’t shield JCPenney from one of the most expensive parts of its electricity bill: timing-based demand charges. The demand charge can mean that power draw during just 15 minutes out of an entire month can set more than half of the total bill. The per-kilowatt energy charge may vary by the time of use, too, with higher rates during grid peaks. Plus, with hundreds of stores, JCPenney can’t afford to manually optimize energy consumption for each individual site with its unique characteristics and rates. And, as a retailer, JCPenney must ensure shoppers’ comfort and satisfaction, so they can’t make adjustments to temperature and lighting—two of the highest sources of energy consumption.

JCPenney’s energy managers know that being able to control the timing of energy use is critical. It’s key to lowering demand charges, avoiding peak times, and protecting against future rate changes.

The bottom line: JCPenney needed a solution for controlling the timing of its energy use —without tying up staff or affecting shoppers' experience.

### Automating savings with Stem's energy storage service

Stem's software-enabled batteries store energy during lower cost periods, and then release the energy to avoid drawing power from the utility when usage is highest or rates suddenly spike. This two-way trick uses a little stored energy to take a big bite out of energy costs—with no disruption. JCPenney can use the same amount of energy, but use it more wisely.

JCPenney chose Stem for its lucrative, low-risk service offering that provides immediate payback and a performance guarantee, without requiring any upfront capital or sacrifice of value.

*Subscribing to Stem is a no-brainer. It is easy to implement, requires no capital outlay and operates in the background to deliver effortless savings.*

**Jonathan Hooser**, Energy Project Manager at JCPenney

Stem's self-learning software and team of experts handle everything – from operating the system, to identifying high-value opportunities for added savings, to remote monitoring and maintenance. The resulting savings are achieved automatically and invisibly, and JCPenney shoppers have no way to detect that energy storage is operating.

JCPenney started earning positive returns day one. And by optimizing when electricity is pulled from the grid, JCPenney contributes to cleaner air, enabling the weaving in of more renewable energy and less fossil-fueled peak energy.

### Achieving \$1 Million in savings

Stem has rolled out systems at nine stores since late 2015 and will be turning on systems at 17 more stores in 2017.

**Phase 1 | 5 sites in San Diego:** Annual net electricity savings: \$20,000; upfront cost: \$0; system sizes: 54 kW each; online: Fall 2015

**Phase 2 | 4 sites in Southern California:** Annual net electricity savings: \$22,810; demand charge reduction: 5–10%; upfront cost: \$0; system sizes: 90 kW, 108 kW, 72 kW and 90 kW; online: Fall 2016

**Phase 3 | 17 sites throughout California:** Estimated annual net savings: \$60,500; upfront cost: \$0; system sizes: 36 kW – 72; online: installations in progress or awaiting incentives



### Real-time visibility into energy usage

In addition to running the automated storage system, Stem software includes a powerful customer-facing tool called PowerScope that lets JCPenney's energy managers see energy use and costs in real time. PowerScope provides alerts, along with monitoring and forecasting tools, that allow the building management team to optimize energy use, accurately predict future costs, model new energy projects in-house, generate data for executive buy-in and verify results after implementation.

Using PowerScope, JCPenney operations managers have the opportunity to save thousands of dollars more each month.

The JCPenney team is upbeat about going with Stem. "Stem has been a knowledgeable and valued partner throughout the assessment and implementation process," says Hooser. "Stem's installation is quick, seamless and non-disruptive. Stem manages everything—from incentive documentation to installation to ongoing operation. And Stem's team is responsive and accessible."

### About Stem

Stem combines self-learning software with energy storage to reduce electricity costs for businesses and institutions. As the market leader in intelligent energy storage, Stem has delivered valuable savings to hundreds of customers, including many Fortune 500 enterprises. Stem's energy storage service agreement requires no capital outlay and delivers automated savings from day one.