Stem The Tide ... Of Wasteful Energy Use

hen John Carrington took the top post at Stem Inc. in late 2013, the energy storage builder and operator had four projects in its portfolio. Today, the Bay Area company has more than 1,000 sites in operation or contracted.

It closed the books on 2019 with more than 100 new installations as the top commercial energy storage installer in California, according to the California Solar & Storage Association in Sacramento.

"As much as the great growth we've had up to this point, our best days are ahead," Stem's chief executive says confidently. Earlier this month, the company added to its California portfolio after winning a contract to manage storage assets owned by Korean liquefied natural gas supplier SK E&S and SUSI Partners, a Swiss fund manager



All in, the Athena software will integrate 87 systems from the properties. A megawatt can power 330 homes per hour, depending on location, infrastructure, power systems and other variables. That means Stem's new 345MWh portfolio is equal to powering about 110,000+ homes per hour.

Stem Inc. has added to its California portfolio by winning a coveted contract to manage energy-storage assets owned by Korean liquefied natural gas supplier SK E&S and SUSI Partners, a Swiss fund manager that oversees \$1.3 billion in clean energy investments.

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Energy storage takes on added significance in California during the dry, fire season as frequent power outages and aging grid infrastructure threatens energy accessibility. Under the agreement, the projects will utilize Stem's artificial intelligence software, AthenaTM, to optimize 345 megawatt hours of energy for 25 commercial and municipal customers in the Southern California area.

The software is the secret sauce of the business, Carrington says. "That's what makes everything work. Our Athena platform really allows customers to control their energy use and unlock additional revenue and save on their energy bills."

The real-time platform digests and manages more than three billion unique data elements to optimize commercial and industrial energy loads by automatically switching between battery power, onsite generation and grid power. Updates are handled via the cloud.



tem, which was established in 2009, is in a rare industry experiencing growth amid the coronavirus pandemic and recession. Most of its portfolio is comprised of educational, healthcare and retail properties, with nominal exposure to office buildings, which have yet to re-open nationwide.

"In the COVID world, reducing costs and saving money on energy is in focus," says Carrington, who spent 16 years at General Electric before moving into the solar industry. More customers are heeding that message as Stem's client list now tops 350, and includes a roster of industry leaders such as Adobe, Home Depot, Walmart, Facebook and Kaiser.

Some major market forces beyond COVID-19 are fueling demand, including smart grid transformation, increased battery storage adoption, the growth of renewable energy sources, and global climate change, which has pushed shareholders to demand carbon-cutting measures and initiatives in the private sector.

"Storage will be bigger than solar and the jobs it can create are significant," Carrington says.

Stem employs about 150 people with 100 at its headquarters in Millbrae, Calif. The company is on a hiring push to attract data scientists, software developers and sales personnel. The company has raised more than \$230 million. Backers include

GE Ventures, the venture capital arm of GE; Mitsui & Co.; Temasek, Singapore's state-run investment fund; and Mithril Capital Management, the VC firm launched and backed by billionaire investor Peter Thiel.

The solid capital position along with a strong track record have allowed Stem to finance all its projects – which typically carry 10-year management and maintenance contracts – and add new market value with software operated storage. This positioning also enables bankable projects through Stem's growing partner channels based on proven performance.

"We are seeing more and more opportunities to monetize in various markets," Carrington says of software applications. "We have the flexibility to go back, and with software updates, use those systems in place to capture new market value for our customers and Stem."

Its influential backers and market position has helped Stem win projects in Hawaii, Arizona, Massachusetts, and Texas as well as Japan and Canada. The company is announcing another international market expansion this month. "We are continuing to expand beyond the U.S. and Canada," Carrington says. "And we'll continue to innovate." — By Chris Casacchia, California Business Journal.

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