

# Grid Scale Energy Storage

June | 2020  
BULLETIN

FutureBridge



## WHAT'S INSIDE!

- Highview Power receives 10 million Pound grant from UK Government for 50 MW cryogenic energy storage facility
- Stem awarded contract to deliver intelligent Energy Storage Management
- EDF Renewables announces multiple partnerships over energy storage for different commercial purposes
- Fluence Sixth-Generation Energy Storage Technology in spotlight

01



Highview Power awarded 10 million Pound grant from UK Government for world's biggest liquid air battery

06



EDF and Zenobe partner over battery trading

02



Community energy utilities in California issue Request for Information on long duration energy storage technologies

07



8minute Solar Energy Signs Contract with MBCP and SVCE for Development of 250 MW Solar-Plus-Storage Project

03



Energy Vault Named Technology Pioneer by World Economic Forum

08



8minute Solar Energy Secures \$225 Million Letter of Credit Facility for Solar and Energy Storage Projects

04



Stem Awarded Exclusive Deal to Deliver Intelligent Energy Storage Management

05



Tesla secures large Megapack project to replace gas peak plant



Highview Power is on a fast-track to develop cryogenic energy storage systems around the globe. The company has already initiated development of multiple projects in Europe and US. It received £35 million investment from Sumitomo Heavy Industries in February 2020. A part of this investment will be utilized for the development of the project at Trafford Energy Park.

18 June 2020

## Highview Power awarded 10 million Pound grant from UK Government for world's biggest liquid air battery



- **Highview Power has announced that it has been awarded a 10 million Pound grant from the UK Department for Business, Energy & Industrial Strategy (BEIS) for a 50 MW cryogenic energy storage facility at Trafford Energy Park, outside of Manchester.**

The project will be developed jointly with independent power station developer Carlton Power. CRYOBattery offers a competitive levelized cost of storage at approximately Pound 110/MWh for a 10-hour, 200 MW / 2 GWh system for large-scale applications.

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08 June 2020

## Community energy utilities in California issue Request for Information on long duration energy storage technologies



- **A group of 11 community-focused energy utilities in California have issued a Request for Information on long duration energy storage technologies.**

The technologies are expected to be able to discharge at full capacity for minimum eight hours and should be able to interconnect directly to transmission or distribution networks and can participate in CAISO electricity markets. The project marks its importance as it is the first private sector initiative in Thailand to integrate utility-scale wind power generation with a battery energy storage system.

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Under the deal, Stem's Athena™ AI platform will provide the intelligence and real-time decision making to optimize the storage system and energy use for the new portfolio customers and provide local controllable capacity to SCE. The platform will enable Stem to seamlessly onboard 87 complex systems and bring new revenue streams to the customers and asset owners.

16 June 2020

## Energy Vault Named Technology Pioneer by World Economic Forum



**ENERGY VAULT**  
Enabling a Renewable World

- **Energy Vault has announced its selection as one of the World Economic Forum's Technology Pioneers of 2020. The company got recognition as it offers an economic way to store clean energy and deliver dispatchable power.**

The World Economic Forum Technology Pioneers of 2020 are 100 of the most promising companies that are shaping industries. Technology Pioneers are early to growth-stage companies from around the world which are involved in design, development and deployment of new technologies and innovations to create significant impact on business and society.

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10 June 2020

## Stem awarded exclusive deal to deliver intelligent Energy Storage Management



- **Stem, an artificial intelligence- driven energy storage services company, is awarded a contract to provide its advanced, intelligent software for managing a portfolio of storage assets owned in partnership by SK E&S and SUSI Partners.**

The portfolio consists of 345 MWh and 25 new commercial and municipal Southern California Edison (SCE) customers in the Los Angeles area. With the expandable capacity of 400MW, the project will have initial capacity of 75MW. Financial details of the investment have not been disclosed. The project will supply clean energy and ancillary services to Alberta Electricity Grid.

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EDF Renewables has displayed multiple activities in the month. Along with signing the optimization agreement with Zenobe, EDF Renewables UK partnered with Octo Energy to find new hybrid solar and battery projects of total capacity 200 MW in England and Wales. Pivot Power appointed EDF to optimize 49.9MW battery asset in Kent to help balance the grid. EDF Renewables North America was chosen by Cox Communications to provide solar photovoltaic and behind-the-meter battery energy storage services.

17 June 2020

## Tesla secures large Megapack project to replace gas peak plant



- **Tesla has secured a massive Megapack project that is being deployed to replace to-be-constructed gas peak plant in California. Southern California Edison has rejected the proposal of construction of a new gas-fired power plant has pivoted to energy storage instead.**

Southern California Edison plans to deploy several battery systems, while the biggest one of capacity 100 MW/400 MWh will be developed by Strata Solar. Though Strata Solar builds its own battery systems, interestingly, it has announced that it has now selected the Tesla Megapack for the new project with Southern California Edison.

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15 June 2020

## EDF and Zenobe partner over battery trading



- **EDF and Zenobe Energy have partnered to jointly trade and optimize 59MW of grid scale battery portfolio. The partnership will extend Zenobe's access to the wholesale market and balancing mechanism by utilizing EDF's trading expertise. The deal also includes contracts for supply and off take of energy.**

The two companies will work together on maximizing return on investments. Zenobe will work collaboratively with EDF to select asset trading strategies. Under the deal, EDF will provide Zenobe with a floor price ensuring minimum income levels are protected.

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The Aratina Solar Center alone is expected to generate hundreds of millions in total capital investment, more than \$12 million in local tax revenues, \$16 million in land payments over the life of the project and 300 direct construction jobs.

16 June 2020

## 8minute Solar Energy Signs Contract with MBCP and SVCE for Development of 250 MW Solar-Plus-Storage Project



- 8minute Solar Energy has executed a power purchase agreement (PPA) with Monterey Bay Community Power Authority (MBCP) and Silicon Valley Clean Energy (SVCE). This is 8minute's first project with Community Choice Energy providers.

The Aratina Solar Center is being built in Kern County, California and is scheduled to come online before the end of 2023. The project capacity is 250-megawatt (250 MWdc / 200 MWac) which includes 150 MWh of energy storage. Aratina Solar Center will provide enough power for 93,000 homes.

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01 June 2020

## 8minute Solar Energy Secures \$225 Million Letter of Credit Facility for Solar and Energy Storage Projects



- 8minute Solar Energy has closed a \$225 million letter of credit (LC) facility from a consortium of five banks: CIT, KeyBank N.A., HSBC, Rabobank and Nomura. The part of credit facility will be used for 18-gigawatt (GW) pipeline of solar and storage projects throughout California, Texas and the Southwestern United States.

The projects include more than 50 utility-scale projects in various stages of development, with a typical project size of 400 MW. 8minute's new generation solar plant design with integrated energy storage will be deployed in most of these projects.

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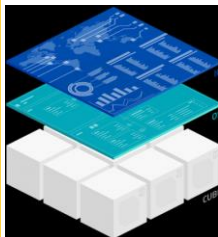
# SPOTLIGHT



Fluence has unveiled its sixth-generation energy storage technology stack which combines factory-built hardware, advanced software and data-driven intelligence. The new stack includes three components: Fluence IQ, Fluence Operating System and Fluence Cube. The company has lined up 2,300 Megawatt-hours of Orders for Sixth-Generation Energy Storage Technology. Major global power suppliers and industrial customers have already committed to deploy Fluence's sixth-generation technology in Asia Pacific, North America and Europe.

## Fluence 6th Generation Technology Stack

Fluence sixth-generation technology stack makes it simpler for customers to deploy storage faster and more cost effectively without sacrificing quality and configurability. The technology pairs the benefits of mass production with the flexibility of a highly configurable system architecture.



### Fluence IQ

Extensible digital intelligence improves system decision-making, asset performance, and operating costs with data-driven insights and dispatch algorithms.

### Fluence Operating System (OS)

Fully integrated operations platform combines comprehensive controls, asset management, and system visibility across sites or entire fleets.

### Fluence Cube

Modular, factory-built, standardized form factor delivers safe, scalable, cost-effective systems that are configurable with latest storage components..

### Safety across system design

- Multiple layers of redundancy
- Comprehensive real-time monitoring
- Hardware-enabled safety measures

### Robust Network and Cyber security Management

- On-site
- In transit
- In the cloud

### Gridstack™



Grid-scale energy storage system designed for the most demanding market applications with industry leading reliability and safety.

- Easily configurable and highly scalable
- Total system safety
- Application stacking
- Fast-response capability
- Augmentation flexibility

### Sunstack™



PV-optimized, co-located energy storage system designed to improve and expand the capabilities of solar generation.

- DC-coupled system architecture
- Co-located and distributed across solar fields
- PV-specific dispatch algorithms
- Total system safety

### Edgestack™



Connection-ready, C&I energy storage system designed to support 500+ kW applications with rapid deployment.

- Easily configurable and highly scalable
- Optimized for deploying across fleets
- Total system safety
- Augmentation flexibility

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