



## Septa energy storage

SOUTHEASTERN Pennsylvania Transit Authority (Septa) has awarded ABB a contract to supply a second Enviline energy storage and recovery system for Philadelphia's Market - Frankford line. The system will enable Septa to recover train braking energy through the 700V dc third rail electrification ...

The Power Department maintains legacy systems from the early 20th century while also exploring innovative technologies in areas such as energy storage, electric vehicles, and renewable energy. SEPTA's Power Engineering group is seeking a highly motivated Senior OCS Engineer to serve as the technical lead for all of SEPTA's overhead contact ...

**SEPTA WILL CONTINUE TO DRIVE GROWTH & DEVELOPMENT** With funding from Act 89, SEPTA continues to invest in Pennsylvania businesses. Over the past five years (2015 - 2019), SEPTA has issued a total of \$1.3B in contracts to PA companies, an average annual value of \$260M per year. **SEPTA PROCUREMENT OF GOODS AND SERVICES SUPPORTS JOBS**

Viridity Energy has selected Saft's Intensium Max20 lithium-ion storage batteries to capture and store excess power produced by Septa trains under regenerative braking. A DC-to-DC converter and control system supplied by Envitech is used to transmit regenerated energy between the third rail and the lineside substation.

The solution chosen by SEPTA is a wayside energy storage system which supplies the catenary of an electric train system and captures through a third rail this otherwise wasted braking energy into resistors. The ESS feeds the energy back to the trains, typically to assist their acceleration when demand is at its peak.

The project is among the first commercially deployed battery storage systems in the transit sector, and its ability to return power to the regional grid is a first. "[The novelty] of the SEPTA energy storage program is in the parallel functions for savings and market revenue," says Chad Von Eck, vice president of energy storage at Viridity.

As a whole, implementation will reduce SEPTA's energy consumption by 126,155 mmBtu, 2.8 percent of baseline energy consumption, and GHG emissions by 122,372,224 pounds of CO2-equivalents, 12.3 percent ... 1 ESCO FOR WAYSIDE ENERGY STORAGE Energy Efficiency Vehicle Electricity (61,729) (19,261,775) 2 ENHANCE UTILIZATION OF ...

Southeastern Pennsylvania Transportation Authority (SEPTA) is installing an 8.75-MW lithium-ion (Li-ion) battery storage network that will reduce operating costs, emissions and energy intensity while enhancing service and helping stabilize the regional power grid, management announced January 21.

SEPTA and Viridity Energy. The following year, SEPTA's WESS project won the Pennsylvania Gov-ernor's



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Award for Environmental Excellence as well as the Energy Storage North America 2014 Award for Excellence and Innovation in Energy Storage. WESS is more The WESS topology in place at SEPTA can be adapted to provide different energy market ser-

The second system will incorporate a hybrid approach to energy storage, enabling SEPTA to recover train braking energy to reduce the electricity consumption, while simultaneously generating ...

A lot of the electricity went into the city's two subway lines, but the Southeastern Pennsylvania Transportation Authority, or SEPTA, is now taking innovative steps to try to conserve some of ...

When SEPTA's trains brake at each stop to load and unload thousands of Pennsylvania passengers, the kinetic energy of the train is converted into electricity. The agency will capture the regenerative braking energy of trains through a large-scale battery storage system and will deploy that energy as virtual power into the region's supplier of wholesale power ...

US energy company Constellation has awarded ABB Canada a contract to engineer, manufacture and commission seven Enviline lithium-ion trackside energy storage systems (ESS) for Southeastern Pennsylvania Transportation Authority's (Septa) 700V dc Market - Frankford line.

of SEPTA's emissions. SEPTA has reduced its emissions across both bus and rail modes through various initiatives like installing wayside energy storage batteries at SEPTA's substations, upgrading the Silverliner V Fleet, and investing more in low or no emission buses. NATURAL ENVIRONMENT - Goal 1 GOAL 1 NATURAL ENVIRONMENT REDUCE SEPTA'S

The Southeastern Pennsylvania Transportation Authority's (SEPTA's) wayside energy storage initiatives have received national recognition for their innovative integration of emerging smart ...

In a bid to boost its energy resiliency, cut costs and support the stability of Philadelphia's electrical grid, SEPTA this week announced plans for a battery storage network that will capture and ...

SEPTA's fleet of 1,379 buses and trackless trolley buses are now either electric or hybrid electric and offer increased energy efficiency and lower maintenance costs compared to traditional diesel counterparts. The vehicles are equipped with advanced features such as regenerative braking and onboard energy storage systems.

The Journal of Energy Storage focusses on all aspects of energy storage, in particular systems integration, electric grid integration, modelling and analysis, novel energy storage technologies, sizing and management strategies, business models for operation of storage systems and energy storage developments worldwide.

These new buses will offer increased energy efficiency and lower maintenance costs. Additionally, the vehicles have advanced features including regenerative braking and onboard energy storage systems.



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SEPTA employees donated and distributed 10,000 new toys, games, and bicycles for deserving children in the Greater Philadelphia region during the annual Yule Toy drive. SEPTA received the 2016 Governor's Award for Environmental Excellence for its Griscom Wayside Energy Storage System, which captures and recycles

The realization of this project is the result of collaborative work between Southeastern Pennsylvania Transit Authority (SEPTA) and three vendors to provide the integrated system solution shown in figure 1 consisting of a Power Control System, high power DC-DC converters, Lithium-Ion energy storage batteries and energy management and ...

One of the most interesting is a battery-based system currently in use at SEPTA, the Philadelphia-area transit operator. Based on storage technology from Envitech, which ABB acquired in 2011, the system allows the energy from braking trains to be captured and immediately re-used to power trains as they accelerate.

The second system will incorporate a "hybrid" approach to energy storage, enabling SEPTA to recover train braking energy to reduce the electricity consumption, while simultaneously generating revenues by participating in ancillary (micro-grid) services of the local Regional Transmission Organization (RTO). The system will be installed at ...

A 25 megawatt solar project that is helping advance energy and sustainability priorities for SEPTA has reached commercial operation. ... Lightsource bp is a global leader in the development and management of solar energy and energy storage projects and a 50:50 joint venture with bp. For more than a decade ...

savings for SEPTA. The SEPTA energy storage project is one of the largest behind-the-meter battery storage systems in the country, and the project . is unique in that it provides operational benefits to both the grid operator and SEPTA. With no required upfront capital investment from SEPTA, the project is a showcase for how Constellation can

The press release says that the 8.75 MW network will operate at seven SEPTA substations. Constellation is a subsidiary of Exelon Corp. The release says that Viridity also is working on the project. The idea is to store and reuse energy generated by braking subway. The storage networks also will power drains in case of an outage.

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