Wayside energy storage system Equatorial Guinea

Hitachi Energy energy storage systems are available for the standardized traction voltages of 750 V and 1500 V and can be used in urban transport systems, suburban and mainline railways. Other voltages can also be provided. In addition to the ability to recover braking energy, the energy storage systems also offer other important possibilities.

Technology company ABB"s 1,500 Volt DC Enviline wayside energy storage system (ESS), a three-year project, captures braking energy and then returns it for the the acceleration of other trains which later use the same line section.

Energy storage offers a solution by smoothing out these power variations, absorbing energy as system voltage rises, and delivering energy as voltage drops. This guide will aid engineers in identifying where these solutions can provide the greatest benefits, designing solutions with the greatest impact, and quantifying the costs and benefits of ...

Wayside Energy Storage Systems (WESS) introduce savings in the costs of the electric energy supplied to the railway catenary, by reducing the peak load and also the total energy demand (if locomotive regeneration is available).

Among the various on-board or wayside measures proposed, one of the most promising solutions is based on using wayside energy storage systems (WESSs). A WESS is a storage installation which can be integrated into mass transit systems in urban areas as well as into long-distance railway lines.

This paper presents a comprehensive overview of the currently available strategies and technologies for recovery and management of braking energy in urban rail, covering timetable optimisation, on-board and wayside Energy Storage Systems (ESSs) and reversible substations.

Applications for Wayside Energy Storage Systems. Operational and design considerations of a wayside energy storage systems. Collaboration and connectivity required to utilize WESS to save energy cost and develop new revenue streams. A US case study on Transit Authority & Utility collaboration for successful WESS deployment. Conclusion ...

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o The purpose of wayside energy storage systems (WESS) is to recover as much of the excess energy as possible and release it when needed -For use by other trains (energy conservation = reduction of utility energy costs) -To reduce substation average power demand (reduction of utility demand costs)

The guide provides a description of the data, techniques and procedures applicable to specification, selection, deployment and testing of wayside energy storage system in DC traction power systems. Date of Publication: 01 January 2016

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