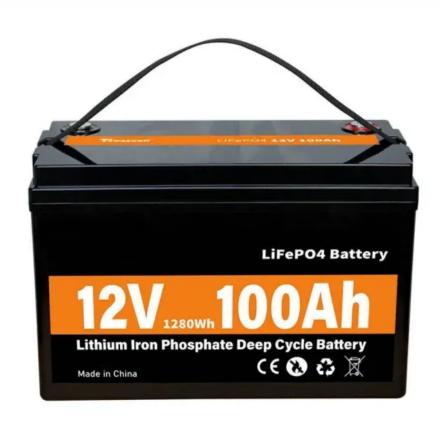


### **SolarInnovate Energy Solutions**

# Which Athens energy storage power supply is better to use





#### **Overview**

How many kWh a day can a power station save?

Depending on the desired value of energy savings, it appears that storage savings of up to 1900 kWh/day are possible for the said station, corresponding to 100 % of its measured daily energy demand .

Can a hybrid energy storage system save energy?

Preliminary results confirm the feasibility of the energy saving concept indicating a significant potential for the hybrid energy storage devices and subsequent energy re-use of 4000-6000 kWh/day per rectifier substation of otherwise unused train braking energy, with a typical Metro station stationary loads consumption of 2000 kWh/day. 1.

What is energy storage?

Energy stored used on Metro station electrical loads e.g. lighting/ventilation/pumps/etc. or for other public uses (e.g. street lighting). Field measurements based energy storage system design with proven feasibility.

What are the benefits of storing energy in Metro stations?

In turn the stored energy could power upon demand selected stationary electrical loads in Metro stations of a non-safety critical character (such as lighting, ventilation, pumps, etc.) leading to very significant energy savings and to a corresponding reduction of greenhouse gases.

What is hybrid energy storage system (Hess)?

Hybrid Energy Storage System (HESS) development, storing train braking regenerated energy in supercapacitors/batteries in Metro stations. Energy stored used on Metro station electrical loads e.g. lighting/ventilation/pumps/etc. or for other public uses (e.g. street lighting).



Can a hybrid energy storage system smooth out DC traction network power fluctuations?

A hybrid energy storage system has also been reported aiming to smooth out DC traction network power fluctuations, due to moving trains. In this context, a variable gain K iterative learning control (K-ILC) is proposed to balance the DC regulated voltage characteristics and thus lead to optimal lifetime of the battery storage system.



#### Which Athens energy storage power supply is better to use



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