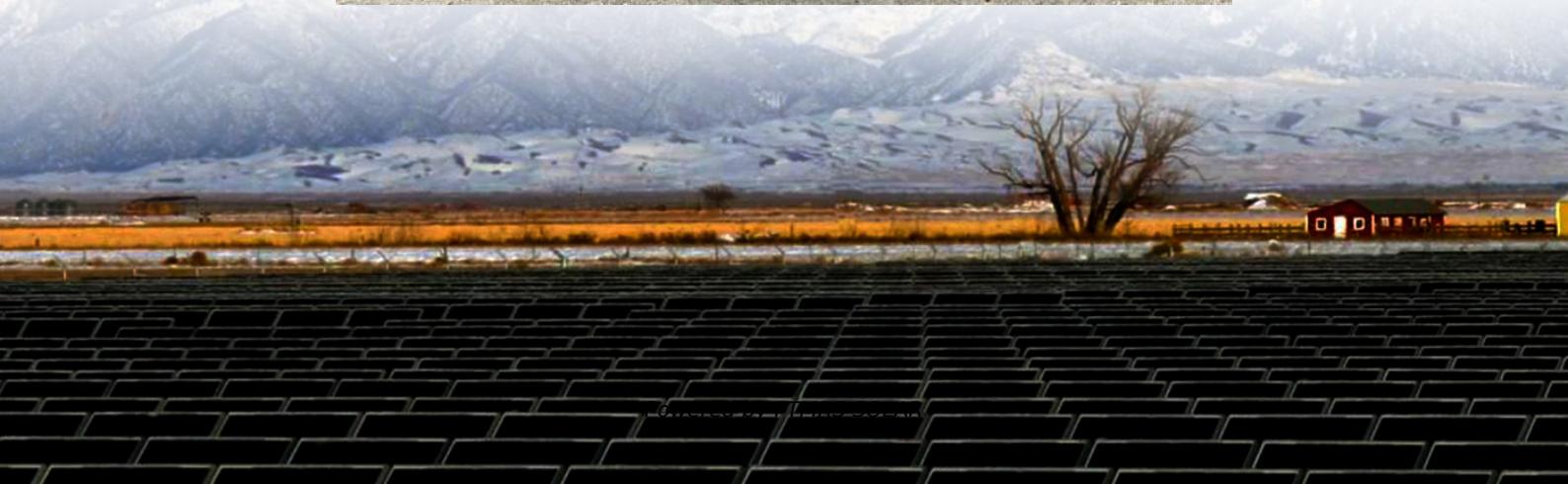




FTMRS SOLAR

# DC power supply for European energy storage containers in chemical plants





## Overview

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How does energy storage work in the EU?

The main energy storage method in the EU is by far 'pumped storage hydropower', which works by pumping water into reservoirs when there is an electricity surplus in the grid - for example on a sunny or windy day - and releasing it when more energy is needed.

What is a high-power storage system?

High-power storage systems provide a dependable backup for power outages or variations in renewable energy output, guaranteeing a continuous supply of electricity to vital loads. These technologies can immediately supply electricity during unanticipated situations, eliminating grid interruptions.

What are high-power energy storage devices?

For this application, high-power energy storage devices with sophisticated power electronics interfaces—such as SMES, supercapacitors, flywheels, and high-power batteries—have become competitive options. These storage devices can sense disturbances, react at full power in 20 ms, and inject or absorb oscillatory power for a maximum of 20 cycles.

What is pumped hydroenergy storage (PHES)?

Pumped Hydroenergy Storage (PHES) Pumped hydroenergy storage (PHES) is a proven and widely adopted technology in renewable energy storage. This system plays a pivotal role in mitigating the intermittency of renewable energy sources by storing excess electricity during periods of low demand and releasing it when demand is high, as shown in Figure 1.



## DC power supply for European energy storage containers in chemical plants

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