

## SolarInnovate Energy Solutions

# What is the function of the substation battery cabinet



## Overview

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What is a substation battery?

Substation batteries are integral to various functions within the power infrastructure: Backup Power Supply: During power outages, batteries provide the necessary power to control systems, ensuring that critical operations continue without interruption.

Why do substations need batteries?

Batteries play a crucial role in the smooth and efficient operation of substations, ensuring that power systems remain stable and reliable. These batteries work in conjunction with battery chargers to provide essential backup power, support communication systems, and enhance overall substation automation.

What is a petrochemical substation?

Substations are prevalent in all petrochemical facilities. Their function is to distribute power to the process units. Typically, there are either one or two types of battery systems within each substation. There may be a “station power” battery system to power the switchgear controls, which typically operates at 125VDC.

What types of batteries are used in substations?

In this article, we'll explore the types of batteries used in substations, their functions, the benefits they offer to modern power systems, and their applications in field devices like reclosers. Flooded Lead-Acid Batteries: These are the traditional type of lead-acid batteries, known for their reliability and durability.

Where do batteries go in a substation?

In large substations, the batteries may be out in the middle of the floor with the pan protruding all the way around the battery rack. Erroneously, the

measurements for the required working space about the batteries are many times taken from the terminals of the batteries.

What issues should a substation design engineer consider when installing batteries?

Hydrogen off-gassing is another issue that often arises when dealing with batteries in a substation. The design engineer should consult American Petroleum Institute Recommended Practice 500 to determine ventilation and classification requirements whenever batteries are installed indoors.

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