

Energy storage station substation design plan





Overview

Why do we need a standardized substation design document?

Challenges such as evolving regulations and international standardization are acknowledged, underscoring the need for adaptable and regularly updated design documents. Utilizing a standardized design criteria is expected to improve consistency in substation design, facilitating easier adaptation and conformity to region-specific standards.

What are the requirements for electrical substation design?

Compliance with applicable standards is a fundamental requirement in the design of electrical substations. This ensures that the substation is designed and built to a level of quality and safety that is accepted internationally. Standards to be complied with may include those from IEC, IEEE, and national standards organizations.

What are the design criteria for a substation project?

In this chapter an example substation project is considered for the application of the design criteria. The goal of the design criteria is to be a reference that allows substation design stakeholders to understand and verify the design of the substation, and to ensure that it meets all relevant standards and regulations.

How is a substation connected to a power plant?

Building electrification. The substation is to be connected to the Finnish TSO's 110 kV grid through a spare substation feeder. The connection type is a power plant connection. In this case the TSO is Fingrid. The grid connection is with a single 31,5 MVA step-up transformer, where the power plant nominal output power is 30 MW.

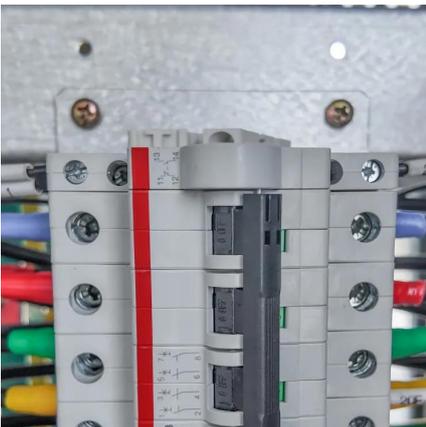


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