

Energy storage performance indicators

What are energy performance indicators?

Energy Performance Indicators are a metric for tracking energy efficiency. They help to normalise energy consumption by any measurable, influencing factor. They are a commonly used tool by energy professionals, and a necessary requirement for ISO 50001 certification. For example, consider a factory making widgets.

What is the scope of the energy indicator?

The scope of the indicator is to consider which part of the total energy required by the building/group of buildings (or by a specific function, such as heating or artificial lighting) and/or the generation from RES, during a certain period, is stored-in and then released from the storage system.

How many data-driven energy flexibility key performance indicators are there?

This paper provides a holistic review of (1) data-driven energy flexibility key performance indicators (KPIs) for buildings in the operational phase and (2) open datasets that can be used for testing energy flexibility KPIs. The review identifies a total of 81 data-driven KPIs from 91 recent publications.

What are the main KPIs for the assessment of ESSs in buildings?

The main KPIs to allow the assessment of ESSs in buildings are presented and described below. 1. Storage capacity This is the quantity of stored energy in the storage system or available immediately after it is completely charged.

What is an energy storage system (ESS)?

In general, the most common applications of ESSs for power uses in buildings are "energy-intensive", that means they are typically suited to store/release energy during time periods that range from minutes (short-term) to months (seasonal) and are not designed to manage power peaks (Chatzivasileiadi, Ampatzi, & Knight, 2013).

Can thermal energy storage be used for building load management?

Thermal energy storage for building load management: Application to electrically heated floor Predictive control strategies based on weather forecast in buildings with energy storage system: A review of the state-of-the art

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