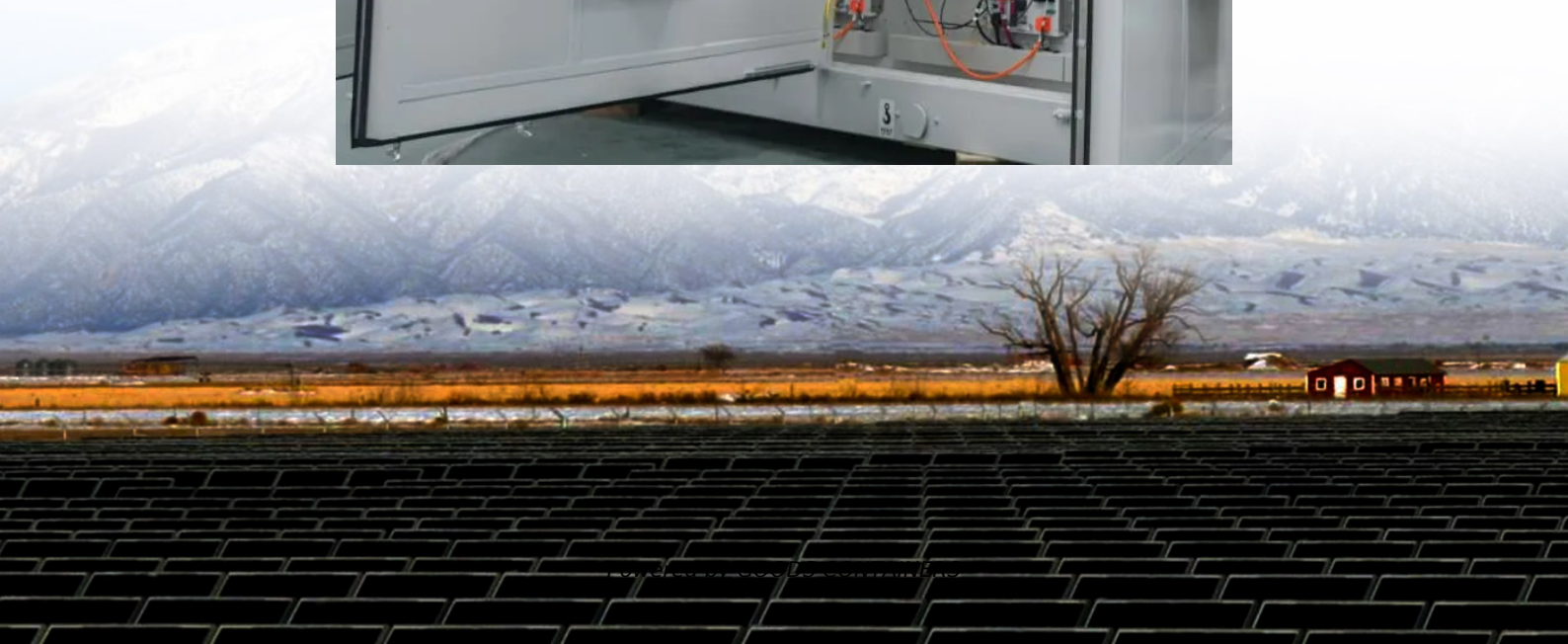


Bidirectional charging of mobile energy storage containers for agricultural irrigation





Overview

Can unidirectional and bidirectional charging be integrated into a hybrid energy storage system?

In the case of bidirectional charging, EVs can even function as mobile, flexible storage systems that can be integrated into the grid. This paper introduces a novel testing environment that integrates unidirectional and bidirectional charging infrastructures into an existing hybrid energy storage system.

Can a stationary hybrid storage system provide unidirectional and bidirectional charging infrastructures?

This work presents a combination of a stationary hybrid storage system with unidirectional and bidirectional charging infrastructures for electric vehicles.

Can AI optimize bidirectional charging?

The current research focus lies on AI-based strategies for optimizing bidirectional charging as well as the operation of the HESS. In the future, we intend to expand the operating strategies by integrating battery degradation considerations, similar to other approaches identified by Adegbohun .

Does CHAdeMO support bidirectional charging?

As the available V2G-capable electric vehicle has a CHAdeMO charging point, bidirectional charging is currently available only with the CHAdeMO standard. However, bidirectional charging with CCS will be added in the near future, as it requires no hardware changes. Table 5 lists the key specifications of the available charging technologies. Table 5.



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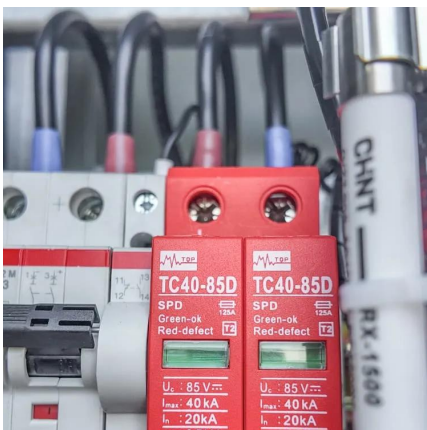
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