

**SolarTech Power Solutions**

# **Energy Storage and solar Integration Project for Battery Swap Station**



## Overview

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What is battery swapping station (BSS)?

Battery Swapping Station (BSS) proposes an alternative way of refueling Electric Vehicles (EVs) that can lead towards a sustainable transportation ecosystem. BSS has significant potential to function as a grid scale energy storage. This paper provides a broad review of relation of BSS with EVs and power grid.

What is battery swapping technology?

Battery swapping technology is the most appropriate substitute for conventional fuel stations considering the present driving habits of people. Essentially, it is suggested in many research articles that batteries should be owned by the stations and provide to the EV users.

Is battery swapping station a good solution for battery refueling?

Among various solution the usage of battery swapping station seems more promising as it provide quick battery refueling within a very short time period. The battery swapping station's progress is limited due to the associated investment and operational cost which needs to be addressed to ensure the global acceptance.

What are the parameters of battery swapping?

Parameters are classified based on the battery swapping methods and applications. There are four standard techniques available in terms of mechanical system namely top swapping, bottom swapping, sideways swapping, and rear swapping. Bottom swapping refers to the mechanism that swaps batteries from the lower part of the vehicle.

How does a battery swapping station work?

The swapping station takes the fully charged batteries out of the set and returns the depleted batteries to the stack. Further, the charging station sets

the prices to maximize the utility profit.

What is battery swapping model?

Battery swapping model is initially targeted at small vehicles such as eAutos, eRickshaws and two-wheelers. They have partnered with Sun Mobility for setting up battery swapping facility .

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