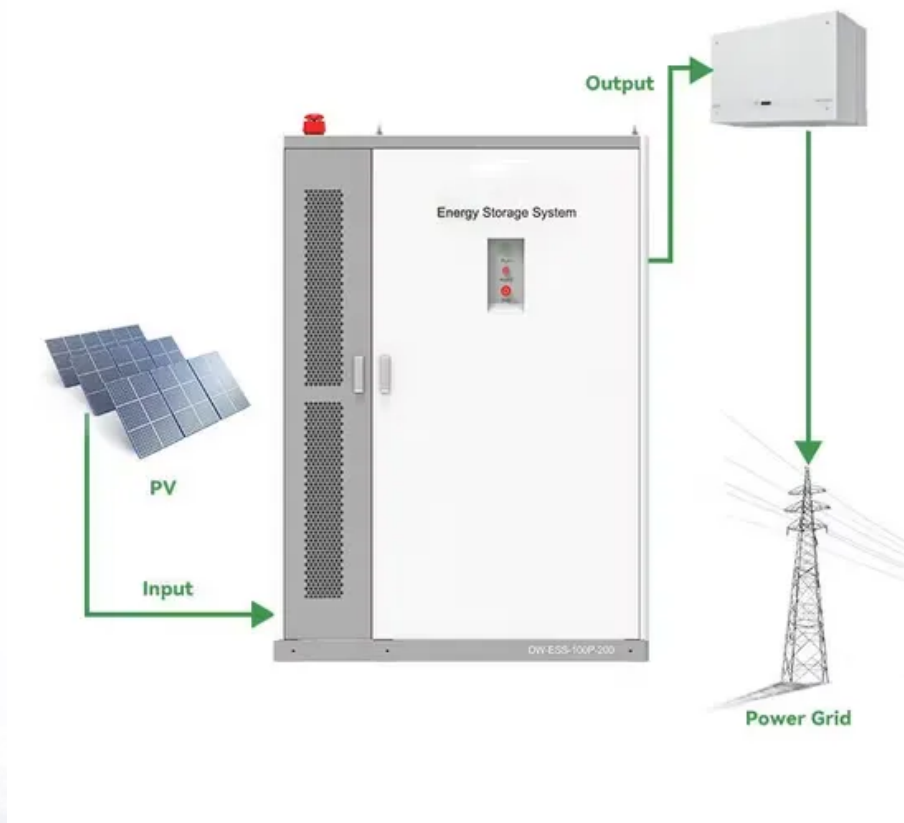


Electric vehicle energy storage power station patent award



Overview

Will solar power power a public EV charging station?

Clearly a solar array at fueling station in most locations will not produce enough electricity alone to operate a public EV charging station. However, the present disclosure does include renewable energy as a percentage of the charging load. As the technology improves, the percentage of renewable will increase.

Do EV batteries need recharging stations?

An EV battery charging infrastructure must be developed which allows longer trips to destinations farther from home, and allows for a faster recharge. There is presently a national network of petroleum fueling stations along all highways for cars and trucks, but few of these have recharging stations for EVs.

Can solar power be used to charge EVs?

In the present application the solar output is used immediately to charge EVs. In the event no EVs are being charged during solar production, the electricity can be stored in a battery for a short period, or put into the transmission grid through a metering program providing a credit.

Electric vehicle energy storage power station patent award



Electric vehicle charging station dynamically responding to power ...

An electric vehicle charging station charging electric vehicles dynamically responds to power limit messages. The charging station includes a charging port that is configured to electrically ...

IOPLY-???????????

It has been granted domestic and foreign patents related to key materials, and served as a demonstration model to complete the world's first sodium-ion ...



Advancements in large-scale energy storage technologies ...

The rapid evolution of renewable energy sources and the increasing demand for sustainable power systems have necessitated the development of efficient and reliable large-scale energy ...

Battery swapping system and techniques

A system for exchanging an electrical energy

storage system (EESS) of an electric vehicle includes. An EESS station is configured to position an electric vehicle in x and y directions.



Mobile Electric Vehicle Charging Station Employing Multiple Power ...

A mobile power station for the purpose of recharging electric vehicles is provided. The charging station includes separate, but different, types of electrical generation capabilities. For example, ...

Systems and methods for charging electric vehicles

System and methods are disclosed to charge an electric vehicle (EV) and manage grid power consumption. The system includes a building switchgear coupled to a building meter; an ...



[US20210261005A1](#)

The energy management of the station is performed by an optimization and rule-based algorithm that controls the power flow between the fast chargers, the energy storage system and the grid ...



Battery-enabled, direct current, electric vehicle charging station

An electric vehicle charging station comprises a direct current (DC) bus configured to receive DC power from multiple power sources including at least one battery energy storage system ...



Energy Storage Innovation Award

To submit a nominee, you will need to log into your existing IEEE account (or register for a new one) to identify as a nominator. Select the "IEEE PELS ...



Electric vehicle charging station management

A timeline of key events for this patent application, including priority claims, publications, legal status, reassignments, and litigation. Google has not performed a legal analysis and makes no





BYD awarded first China Patent Gold Medal for new energy vehicles

In addition to the Gold Medal awarded primarily for its hybrid vehicle Qin, BYD has received two China Patent Awards of Excellence for its battery module and battery energy ...

Self-charging electric vehicle (scev)

A self-charging electric vehicle configured for converting solar energy and wind energy into electrical energy comprising a systems and methods. The vehicle includes a body and frame ...



ELECTRIC VEHICLE STATION EQUIPMENT FOR GRID ...

That is, the operator plugs a charger for the vehicle's battery into an electrical outlet connected to a utility's electric power grid (the "grid") and the vehicle's charger ...

Battery swapping system and techniques

This document describes systems and techniques for swapping an electrical energy storage system, such as a battery pack of an electric vehicle. In some implementations, a system can ...



Charging stations for electric vehicles

The charging station may be used to transfer power to any electric vehicle, hybrid electric vehicle, or any other vehicle that may include a propulsion power source, such as a battery, ...



SMART ELECTRIC VEHICLE PARKING AND CHARGING STATION

The present disclosure is directed to methods, apparatus, and systems that allow users to find charging stations and access those charging stations. Methods consistent ...



COMPACT AND DISTRIBUTED STATION FOR ...

Background Art [0002] With the increasing popularity of electric vehicles, fast charging stations and battery swap stations have also been widely applied and rapidly built. At present, there are ...



DOE Invests \$68 Million in Innovative Heavy-Duty ...

As part of the U.S. Department of Energy's (DOE) continued commitment to electrified commercial road transport, DOE today announced a ...



Valuation of Electric Vehicle and Battery Technology ...

The electric vehicle (EV) and battery technology landscape is a dynamic canvas where innovation paints the future of transportation and ...

Solar and Wind Energy based charging station for ...

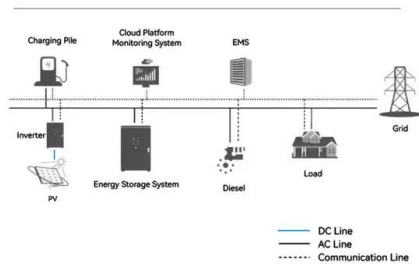
power for charging the battery packs of electric vehicles (EVs). The renewable charging station consists of both the solar photovoltaic (PV) ...



WO2025066041A1

An electric vehicle charging and energy storage system, comprising a photovoltaic panel (101), an energy storage battery (102), a hybrid inverter (103) and an isolated power converter

System Topology



Supply station and method capable of charging

The present disclosure relates to the technical field of supplying vehicles with energy, and discloses a supply station and a method capable of charging electricity and filling with ...



Development of artificial Intelligence-Based adaptive vehicle to ...

Electric vehicle charging stations (EVCS) that are based on DC microgrids are presented in this research. The system comprises a solar photovoltaic system (SPVS), storage ...

Solar-Power EV Charging System

A multi-vehicle self-contained EV charging platform includes: a solar array configured to convert solar energy into an electrical output signal; a charging system ...





Grid-connected lithium-ion battery energy storage system towards

The patent titled, "Self-Learning Control System for Plug-in Hybrid Vehicles" has the highest forward citation of 165 followed by the patent titled "Electric vehicle having multiple ...

Power Storage Patents: Innovations Shaping the Future of Energy

Why Power Storage Patents Are the Backbone of Clean Energy Imagine a world where your solar-powered home runs seamlessly through rainy weeks or your electric car ...



Multi-port and multi-module fast electric vehicle (ev) charging station

The Disclosed technology proposes a novel fast Electric Vehicle (EV) charging topology with adaptive power management and power sharing between different ports and different charging ...

EP3461679A2

An electric vehicle uses electrical energy as a main energy source, unlike an internal-combustion engine vehicle using fossil fuel as a main energy source. Accordingly, the electric vehicle ...



Charging stations for electric vehicles

The charging station may be used to transfer power to any electric vehicle, hybrid electric vehicle, or any other vehicle that may include a propulsion power source, such as a battery,



Comprehensive review of energy storage systems technologies, ...

The applications of energy storage systems have been reviewed in the last section of this paper including general applications, energy utility applications, renewable ...



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