

Aiming at the community integrated energy system, a day-ahead scheduling model for residential users based on shared energy storage was proposed, which verifies that shared energy storage can effectively benefit the overall income of residential users while creating profit space for shared energy storage operators (SESSO) .

The emergence of the shared energy storage mode provides a solution for promoting renewable energy utilization. However, how establishing a multi-agent optimal operation model in dealing with benefit distribution under the shared energy storage is ...

XL Qiao Xiang, Xi Chen, Linghe Kong, Lei Rao ... On-line event-driven scheduling for electric vehicle charging via park-and-charge. F Kong, Q Xiang, L Kong, X Liu. 2016 IEEE Real-Time Systems Symposium (RTSS), 69-78, 2016. 47: 2016: ... Proceedings of the 2015 ACM Sixth International Conference on Future Energy ...

Electric vehicles (EVs) have been rapidly developed during the last few years due to the low-carbon industry and smart grid initiatives. ... Yue Xiang. College of Electrical Engineering and Information Technology, Sichuan University, Chengdu, 610065 People's Republic of China ... With the evolution of energy storage technology, EVs could be ...

For plug-in hybrid electric vehicle (PHEV), using a hybrid energy storage system (HESS) instead of a single battery system can prolong the battery life and reduce the ...

Accurately predicting the state of charge (SOC) of lithium-ion batteries in electric vehicles is crucial for ensuring their stable operation. However, the component values related to SOC in the circuit typically require estimation through parameter identification. This paper proposes a three-stage method for estimating the SOC of lithium batteries in electric vehicles. ...

The previous section specified that increased specific energy or lower energy storage cost (in comparison to Li-ion batteries) is essential for EVs with longer driving ranges and lower cost, while fast charging, power grid compatibility and safe operation are crucial for high-utilization EVs.

Electric vehicles play a crucial role in reducing fossil fuel demand and mitigating air pollution to combat climate change [1]. However, the limited cycle life and power density of Li-ion batteries ...

Electric vehicles (EVs) are playing an increasingly important role in decarbonizing the transportation sector. They constitute a promising solution to a set of global challenges such as climate change and air pollution. EVs are an integration of a wide spectrum of techniques, such as battery monitoring, battery safety and vehicle energy management.

Adoption of the hybrid energy storage system (HESS) brings a bright perspective to improve the total economy of plug-in hybrid electric vehicles (PHEVs). This paper proposes ...

Adoption of the hybrid energy storage system (HESS) brings a bright perspective to improve the total economy of plug-in hybrid electric vehicles (PHEVs). This paper proposes a novel energy management method to improve the total economy of PHEV by exploiting the energy storage capability of HESS.

This article presents the various energy storage technologies and points out their advantages and disadvantages in a simple and elaborate manner. It shows that battery/ultracapacitor hybrid ...

This paper presents a cutting-edge Sustainable Power Management System for Light Electric Vehicles (LEVs) using a Hybrid Energy Storage Solution (HESS) integrated with ...

DOI: 10.1016/j.energy.2021.122120 Corpus ID: 244233963; An adaptive firework algorithm optimization-based intelligent energy management strategy for plug-in hybrid electric vehicles

Chen Xiang, President of EVE Energy Storage, was invited to attend the event and delivered a speech at the closing ceremony on the topic of "Technology and Quality: ...

With modern society's increasing reliance on electric energy, rapid growth in demand for electricity, and the increasingly high requirements for power supply quality, sudden power outages are bound to cause damage to people's regular order of life and the normal functioning of society. Currently, the commonly used emergency power protection equipment is ...

@article{RezaeeJordehi2023IndustrialeEH, title={Industrial energy hubs with electric, thermal and hydrogen demands for resilience enhancement of mobile storage-integrated power systems}, author={Ahmad Rezaee Jordehi and Seyed Amir Mansouri and Marcos Tostado-Veliz and Atif Iqbal and Mousa Marzband and Francisco Jurado}, journal ...

In addition to policy support, widespread deployment of electric vehicles requires high-performance and low-cost energy storage technologies, including not only batteries but also alternative electrochemical devices.

DOI: 10.1016/j.jretconser.2024.103830 Corpus ID: 268935655; Compatible electric vehicle charging service: Blessing or curse? @article{Chen2024CompatibleEV, title={Compatible electric vehicle charging service: Blessing or curse?}, author={Feng Chen and Suxiu Xu and Yu Ning and Xiang Ji and Yaping Ren}, journal={Journal of Retailing and Consumer Services}, year={2024}, ...

DOI: 10.1109/TSG.2014.2374592 Corpus ID: 9185047; Electric vehicle charging stations with renewable power generators: A game theoretical analysis @article{Lee2015ElectricVC, title={Electric vehicle charging stations with renewable power generators: A game theoretical analysis}, author={Woongsup Lee and Lin

Xiang and Robert Schober and Vincent W. S. ...

This paper provides a solution for the automatic demand response of pure electric vehicle with battery energy storage system based on blockchain technology, which firstly introduces the fit between blockchain and the system, then constructs the node model of the system, and studies the price formation mechanism, finally the automatic demand ...

Xiang Chen's 6 research works with 31 citations and 88 reads, including: The Capacity Degradation Path Prediction for the Prismatic Lithium-Ion Batteries Based on the Multi-Features Extraction ...

The concept and principle of confidence interval of "probability event" and "likelihood energy" proportion of braking and a new optimized ESS concept under the frame of a battery/ultra-capacitor (UC) hybrid energy storage system (HESS) combined with two critical speeds are proposed. Efficient regenerative braking of electric vehicles (EVs) can enhance the ...

Power flow optimization control, which governs the energy flow among engine, battery, and motor, plays a very important role in plug-in hybrid electric vehicles (PHEVs). Its performance directly affects the fuel economy of PHEVs. For the purpose of improving fuel economy, the electric system including battery and motor will be frequently scheduled, which ...

The emergence of large-scale energy storage systems is contingent on the successful commercial deployment of TES techniques for EVs, which is set to influence all forms of transport as vehicle electrification progresses, including cars, buses, trucks, trains, ships, and even airplanes (see Fig. 4).

A deep review of the various EMSs for both conventional HEV/PHEV and that using V2I/V2V information is presented, providing a thorough survey of EMSs using different methodologies. Efficient operation technique has always been one of the common goals for researches both in automobile industrial and academic areas. With the great progress of ...

Battery, plug-in hybrid and hydrogen fuel-cell EVs are all included in these data. The scenario data are from ref. 22. Here, we evaluate the potential of batteries and hydrogen fuel cells for improving the performance and reducing the cost of EVs.

Banvait H., Anwar S., and Chen Y.: "A rule-based energy management strategy for plug-in hybrid electric vehicle (PHEV)". Proc. American Control Conf., St. Louis, MO, USA June 2009, pp. 3938-3943 ... "Optimal energy management of HEVs with hybrid storage system", Energy Convers. ... "Predictive energy management strategy for ...

For example, decommissioned batteries can be used as energy storage for power grids or as power supply batteries for 5G base stations to fully utilize the value of decommissioned batteries [72 ...

The fire risk hinders the large scale application of LIBs in electric vehicles and energy storage systems. This manuscript provides a comprehensive review of the thermal ...

: Rechargeable batteries and supercapacitors are widely investigated as the most important electrochemical energy storage devices nowadays due to the booming energy demand for electric vehicles and hand-held electronics. The large surface-area-to-volume ratio and internal surface areas endow two-dimensional (2D) materials with high mobility and high energy density; ...

These converters have the potential to improve power density and reduce component stress, thereby enhancing the overall efficiency and reliability of PV-assisted EV drives. Innovative battery management techniques also offer promising avenues for future research.

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