





an Open Access Journal by MDPI

The Energy Efficiency of Electric Vehicle Charging Stations with Minimal Grid Impact

Guest Editor:

Dr. Javier Martínez-Gómez

Departamento de Teoría de la Señal y Comunicación, (Área de Ingeniería Mecánica) Escuela Politécnica, Universidad de Alcalá, 28805 Alcalá de Henares, Spain

Deadline for manuscript submissions:

20 September 2024

Message from the Guest Editor

As the global transition towards sustainable transportation accelerates, the role of electric vehicles (EVs) becomes increasingly significant. The efficiency and impact of EV charging infrastructure on the power grid are critical aspects that need to be addressed to ensure the sustainability and reliability of this emerging technology. <false,>We welcome submissions that address, but are not limited to, the following topics:<false,>Advanced charging algorithms and control strategies for optimal energy usage. Integration of renewable energy sources and energy storage systems with EV charging infrastructure.

Smart grid technologies and demand-response mechanisms for grid stability and load balancing.

Energy management systems for EV fleets and their impact on the grid.

Case studies and empirical data analysis of real-world EV charging stations and their grid interactions.

The lifecycle assessment and environmental impact of EV charging stations.

Regulatory frameworks and policy recommendations for promoting energy-efficient charging infrastructure.

Economic analysis of energy-efficient charging solutions and their market viability.











an Open Access Journal by MDPI

Editor-in-Chief

Prof. Dr. Joeri Van Mierlo

MOBI—Electromobility Research Centre, Department of Electrical Engineering and Energy Technology, Faculty of Engineering Sciences, Vrije Universiteit Brussel, 1050 Brussel, Belgium

Message from the Editor-in-Chief

The World Electric Vehicle Journal is the official journal of the World Electric Vehicle Association (WEVA) and its members the European Association for Electromobility (AVERE), the Electric Drive Transportation Association (EDTA), and the Electric Vehicle Association of Asia Pacific (EVAAP). Since its foundation in 2007, the journal has aimed to provide a publishing platform for the academic and industrial world to share the latest developments and knowledge about electric vehicles. If you are developing Electric, Plug-in Hybrid, Hybrid Electric, or Fuel Cell Vehicles, we cordially invite you to consider us as the place for you to publish your latest results and innovations.

Author Benefits

Open Access: free for readers, with article processing charges (APC) paid by authors or their institutions.

High Visibility: indexed within Scopus, ESCI (Web of Science), Ei Compendex, and other databases.

Journal Rank: JCR - Q2 (*Transportation Science and Technology*) / CiteScore - Q2 (*Automotive Engineering*)

Contact Us