# Special Issue

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

## 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.We welcome submissions that address, but are not limited to, the following topics: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.

## Guest Editor

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## Deadline for manuscript submissions

closed (30 April 2025)

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# About the Journal

## 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.

## Editor-in-Chief

Prof. Dr. Joeri Van Mierlo
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