

# Review of: "Optimizing Energy Efficiency for Connected and Autonomous Electric Vehicles in the Context of Vehicle-Traffic Interaction"

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Potential competing interests: No potential competing interests to declare.

The research topic is energy efficiency optimization of connected and autonomous electric vehicles (CAEVs).

An new optimization strategy called Energy-conscious Optimization (ECO) is proposed, which considers the relationship between vehicle dynamics and traffic conditions.

The structure of CAEV system and drive system model are described, and the correlation between traffic environment and powertrain system is elucidated.

A method to transform traffic constraints to powertrain constraints is presented.

The V-T coordinate system and iterative search algorithm are used to find the most efficient point of the powertrain system.

An electric motor efficiency map is established to realize electric motor torque tracking control.

The strategy is verified through experiments, and the results show it can improve the energy efficiency of CAEVs compared with other methods.

The references are from diverse sources with solid theoretical foundations.

Overall, the topic is clear and reasoning is rigorous, but the expression of the paper and experimental design can be optimized.

In summary, this article mainly introduces an energy efficiency optimization strategy ECO that considers vehicle dynamics and traffic limitations. Through theoretical derivation and empirical analysis, it demonstrates the strategy can improve the energy operation efficiency of CAEV systems and provides a new perspective for CAEV energy management.