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 authors introduce an energy-conscious optimization (ECO) strategy designed to improve the energy efficiency of connected and automated electric vehicles (CAEVs). This is accomplished by addressing both the dynamic constraints of the traffic environment and the limitations of the vehicle's powertrain within a unified framework. To develop the ECO approach, they introduce a novel bias deep compensative estimator for determining the parameters of the vehicle dynamics model. These identified parameters are then used to translate the constraints of the traffic environment into corresponding powertrain constraints specific to CAEVs. In their quest for optimal energy efficiency while adhering to powertrain limitations, they establish a novel velocity-torque coordinate system to normalize these constraints.

The authors are required to compare their results with benchmark data