

# Regenerative Braking in Electric Vehicle

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**Abstract:** Regenerative braking is an important technology in electric vehicles that helps to improve energy efficiency by capturing kinetic energy during braking and storing it in the battery. This paper provides an overview of regenerative braking technology in electric vehicles, discusses its benefits and limitations, and analyzes its impact on vehicle performance. The study includes a review of literature, a survey of available technologies, and an analysis of real-world use cases. The results indicate that regenerative braking can improve vehicle efficiency, reduce energy consumption, and extend battery life, but it also has limitations that need to be addressed. The study concludes that regenerative braking is a promising technology for improving the performance of electric vehicles, but further research is needed to optimize its effectiveness.

**Keywords:** E-Vehicle, Flywheel, Speed Controller, Regenerative Braking.

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