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Hydrogen Internal Combustion Engine Vehicle

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Abstract: *The need to decarbonize transportation is becoming more urgent, which has increased interest in essential energies like hydrogen. Hydrogen internal combustion engine vehicles (HICEVs) present a potentially reciprocal strategy, although hydrogen energy cell vehicles (FCEVs) have received a lot of attention. This essay offers a critical analysis of HICEV technology as it exists today, highlighting its potential, difficulties, and role in the transition to sustainable mobility. We start by describing the fundamental ideas behind HICEVs and stressing the similarities and contrasts with gasoline-powered vehicles. We also delve into the environmental advantages of HICEVs, highlighting their almost zero tailpipe emissions and implied carbon neutrality based on the types of hydrogen products they produce. However, we also acknowledge that HICEVs have drawbacks, such as reduced efficiency when compared to FCEVs, more complex engineering, and logistical difficulties with hydrogen.*

Keywords: Hydrogen, Internal Combustion Engine, HICEV, FCEV, Sustainable Transportation, Decarbonization, Emissions, Engine Efficiency, Hydrogen Infrastructure

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