



CARMAGEDDON: THE IMPENDING IMPACT OF DRIVERLESS CARS – INFRASTRUCTURE FINANCE OVERVIEW



FINANCING AND INFRASTRUCTURE

What Driverless Technology is currently in place/being developed?

- Vehicle-to-Vehicle (“V2V”) systems
- V2V and V2I technology

What Infrastructure is needed?

- Vehicle-to-Infrastructure “V2I” systems connecting cars and roadways (e.g., if a bridge is unexpectedly shut down, it can alert drivers)
- Sensor reflectors or beacons added to existing signage infrastructure are likely to enhance some driverless vehicle operations
- Additional electronic equipment such as controllers may need to be added to transportation infrastructure, probably along existing rights of way
- Dedicated driverless car lanes?



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Transportation Finance Today:

Federal and State Sources

Gas Taxes: Primary Method of Financing Transportation Infrastructure

- Federal excise tax on gasoline is 18.4 cents per gallon and 24.4 cents per gallon for diesel fuel:
 - 15.44 cents of the total gas tax and 21.44 cents of the diesel tax are deposited into the Highway Account
- California also has its own fuel taxes, 69 cents of the total gas tax and 79.5 cents of the diesel tax
- Problems With Fuel Taxes:
 - Reduced by inflation and increased fuel efficiency



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Additional Transportation Funding Sources:

- Locally enacted retail sales taxes (county and city)
- Tolls: for specific toll roads
- Public-private partnerships
- Voter approved debt (i.e. the bullet train)
- Currently Driver's License Fees and Registration Fees are primarily used for operation rather than infrastructure

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How to finance?

- A bill that would allow states to use existing transportation funds from highway-safety and other programs to invest in vehicle-to-infrastructure (V2I) projects
- User Charges: we pay taxes when we use taxis or rent cars, take similar approach with driverless cars
- More Public-private partnerships: fleets of privately owned driverless cars and as a part of the franchise fees
- New systems of user fees, particularly charging drivers on the basis of vehicle miles traveled by driverless cars
- New Driver's License Fees and Registration Fees



QUESTIONS?

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