

Transportation Revenues in a Sustainable Energy and Environmental Future

presented to
TRB 2008 Annual Meeting

presented by
Gary Maring
Cambridge Systematics, Inc.

January 16, 2008

Transportation leadership you can trust.

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Short and Long Term Revenue Challenges

- **Fuel efficiency increases**
 - New CAFE standards
- **Penetration of alternative fuels**
- **Energy price increases**
- **Carbon taxes**
- **Other**
 - Erosion of purchasing power
 - Highway Trust Fund solvency

TRB Policy Study – 2006

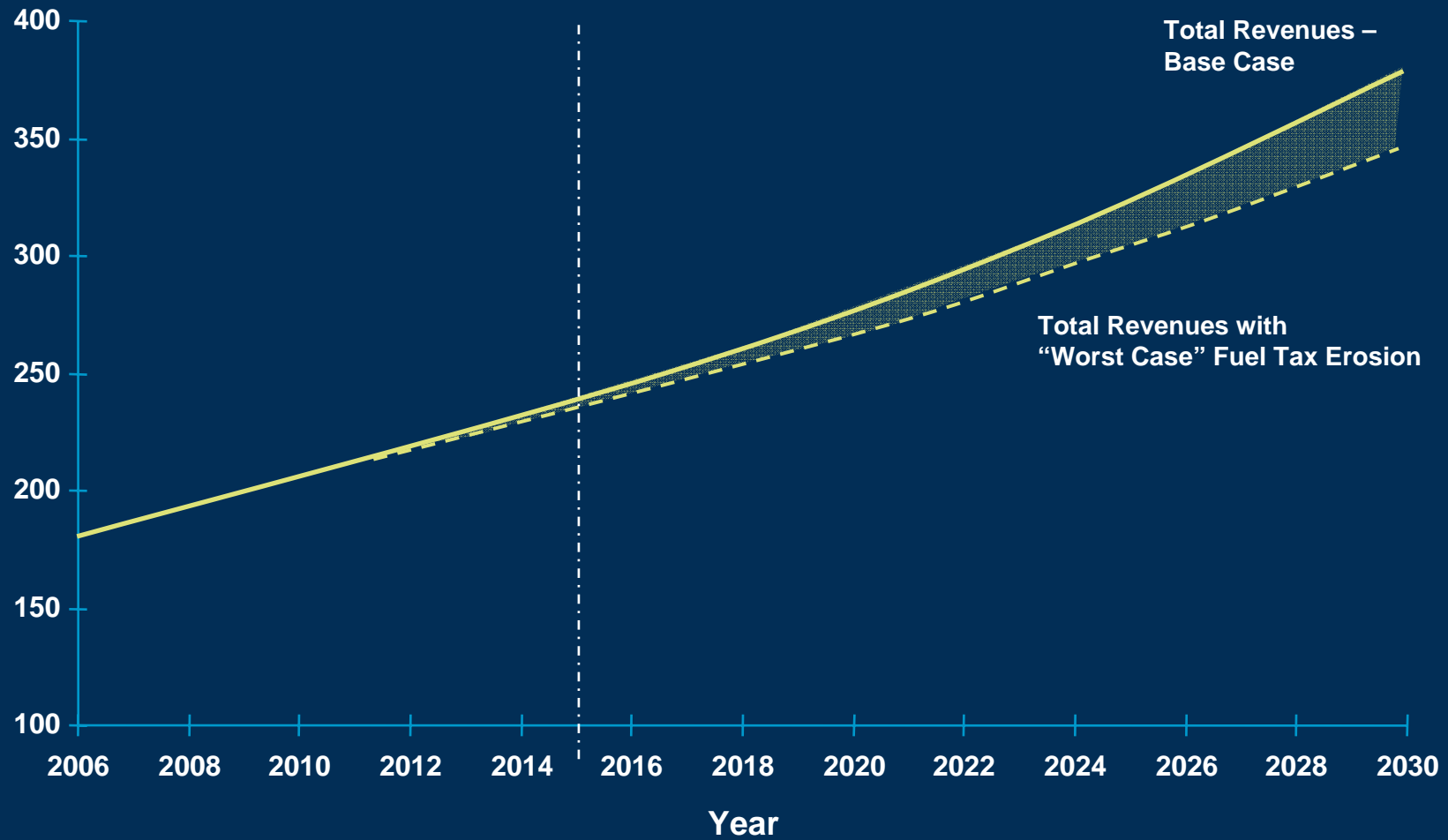
The Fuel Tax and Alternatives for Transportation Funding

● Findings

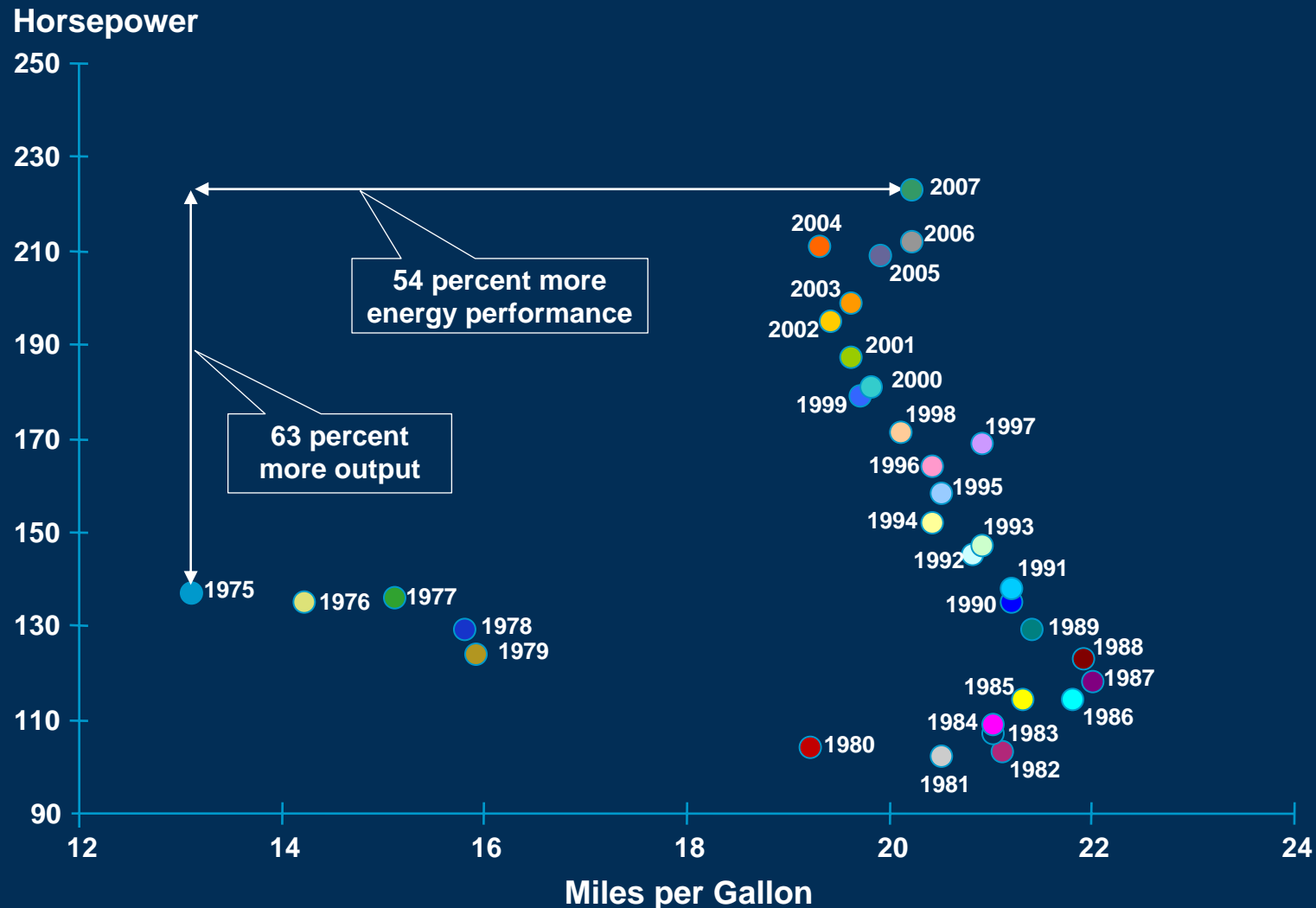
- Fuel consumption per mile could decline 20 percent by 2025
- Present finance system can remain viable for at least another 15 years (although unlikely to provide enough revenue to reduce congestion)
- Longer-term should move to direct user charges, e.g., VMT
- Similar transition envisioned by National Transportation Policy Commission

Fuel Tax Uncertainty

Year of Expenditure Dollars (in Billions)

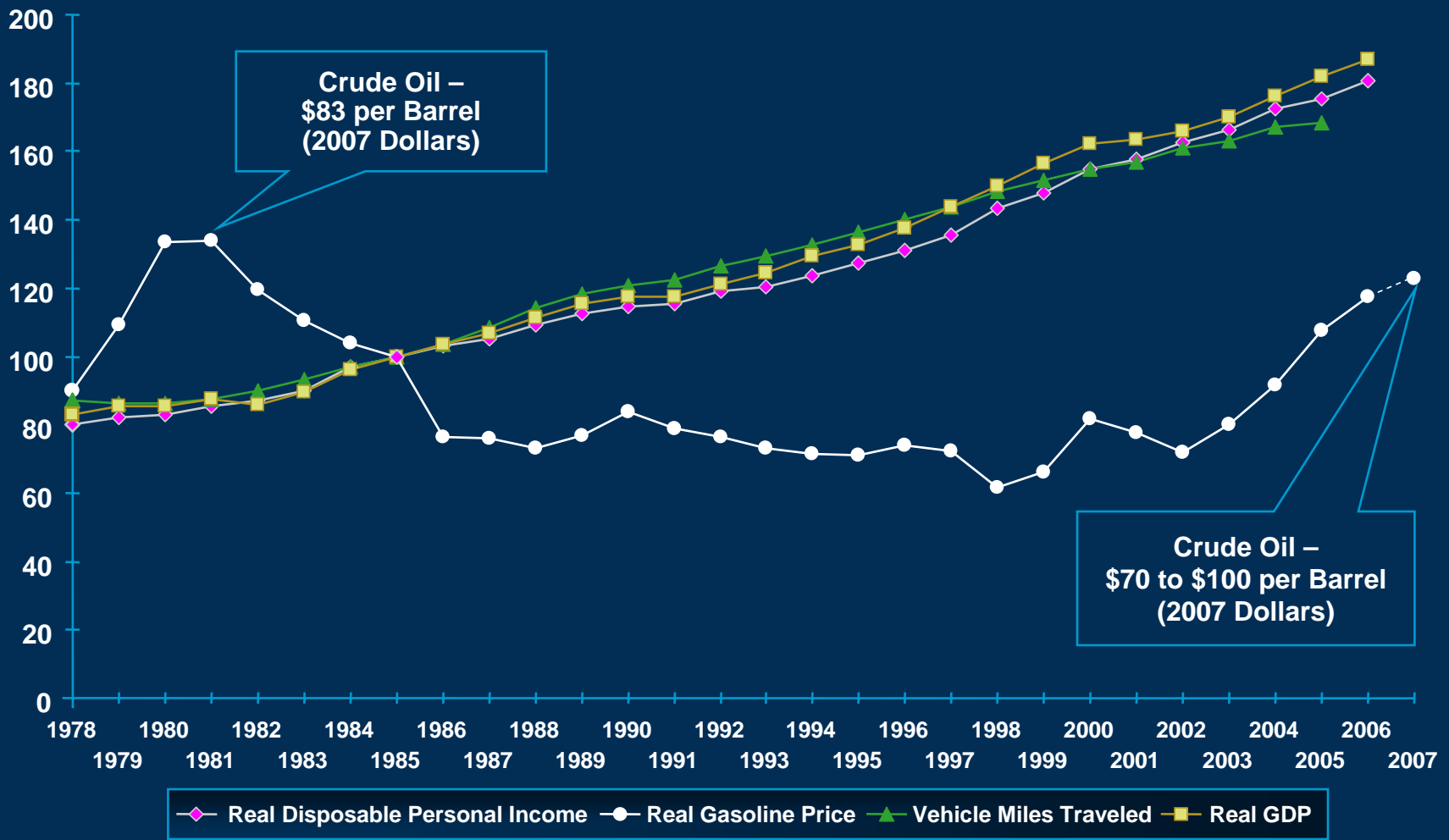


On-Road Fuel Economy for New Light-Duty Vehicles 1975-2006 Model Years Sales-Weighted Horsepower and MPG



Source: Environmental Protection Agency, Light Duty Automotive Technology and Fuel Economy Trends: 1975-2007, September 2007.

Annual Indices of Real Disposable Income, GDP, VMT, and Real Average Retail Gasoline Price 1978-2006, 1985 = 100

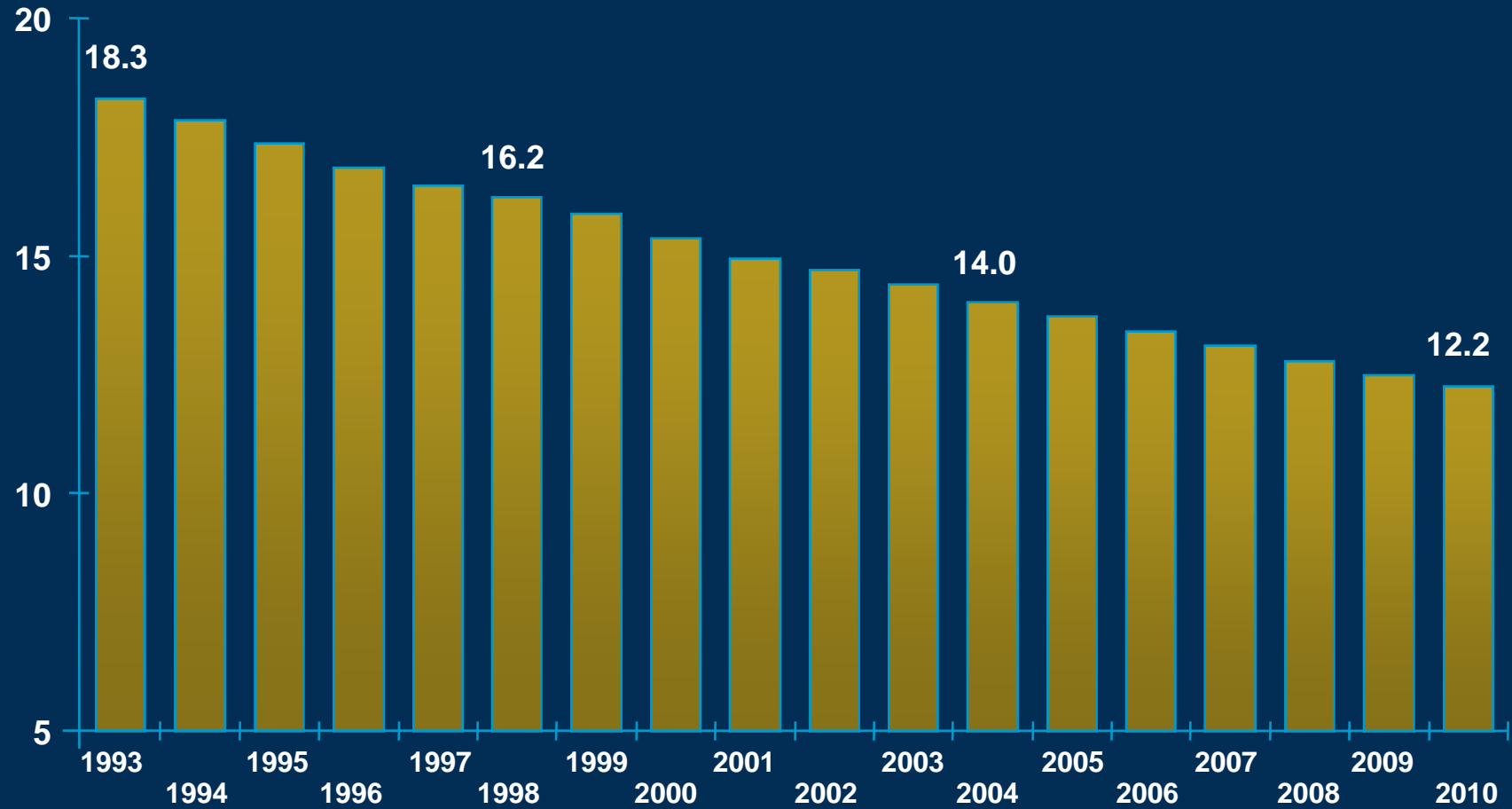


Carbon Tax?

- **\$15 to \$30/ton carbon tax = about 15-30 cents per gallon on motor fuel**
- **Well within range of recent price changes**

Fuel Tax Purchasing Power is Eroding

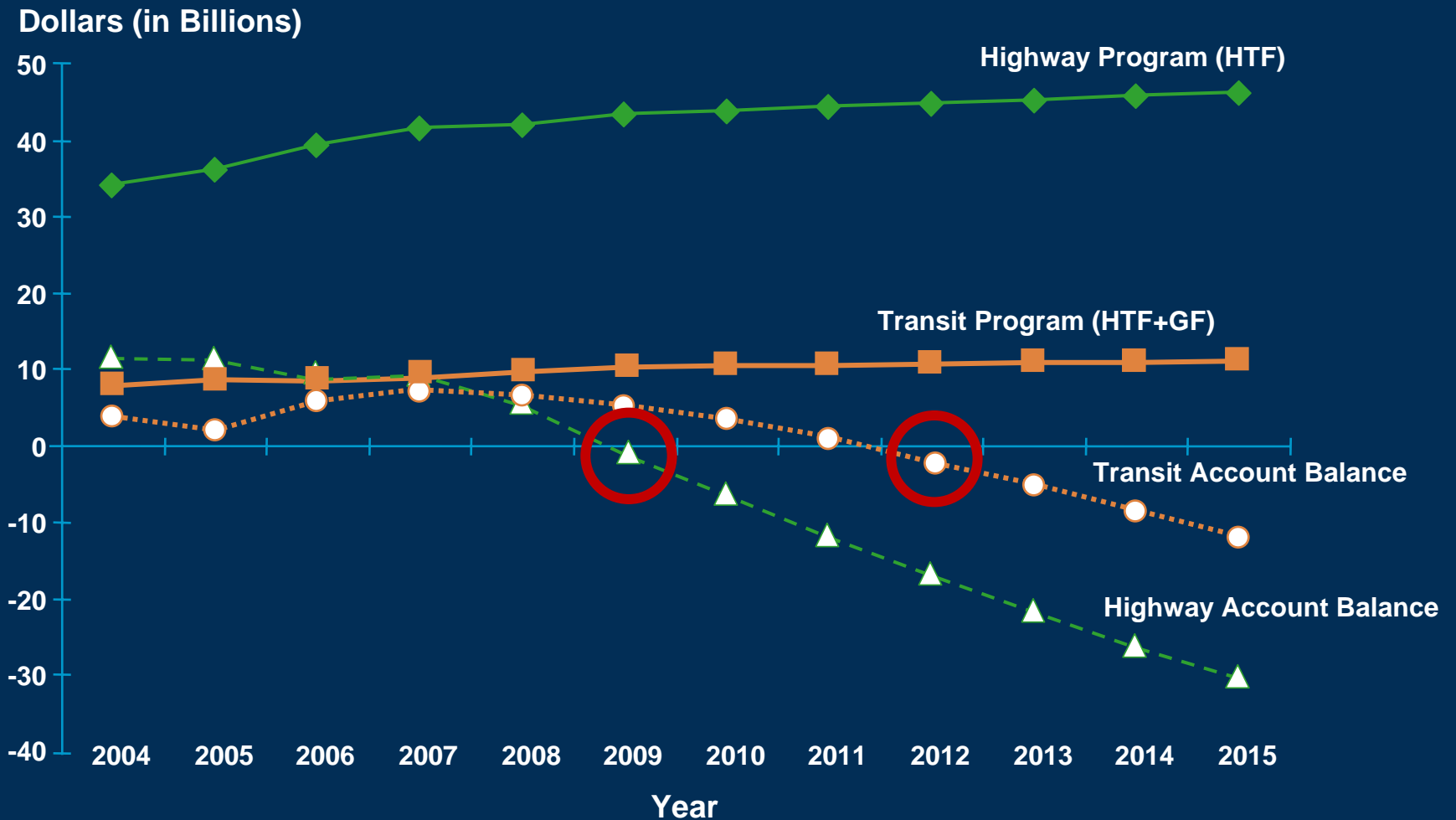
Cents per Gallon



Source: AASHTO.

Highway Trust Fund Solvency

(Estimated Highway and Transit Program Levels and HTF Account Balances Through 2015*)



* Based on 2008 Treasury revenue estimates; Projected spending for 2010-2015 based on current services baseline for discretionary / "other" (non-defense and non-security) outlays assumed to grow 1.15% annually after 2009

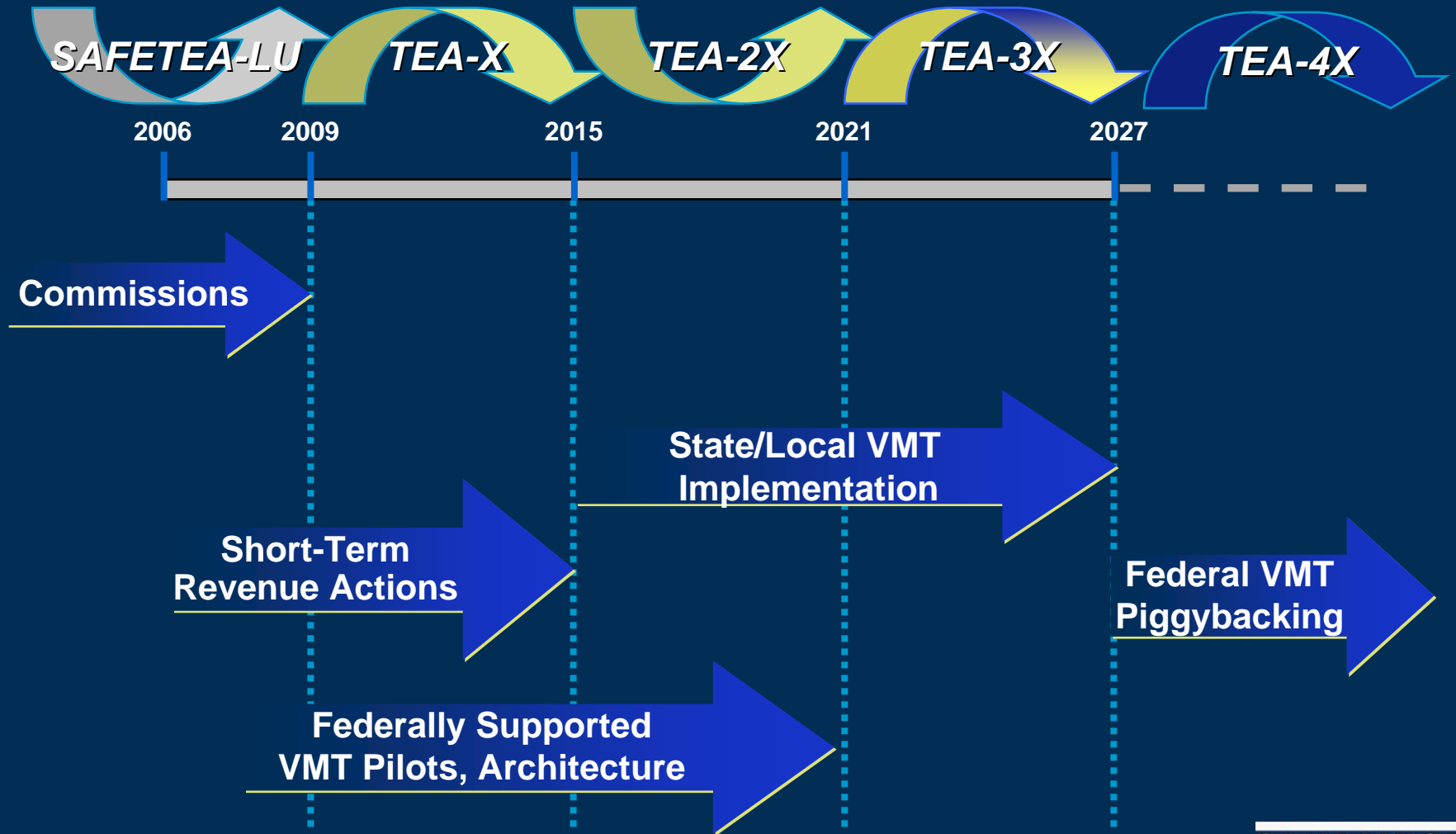
Long-Term Solutions Suggested

(Source: U.S. Chamber Finance Study)

- **States and local governments should implement a two-tier, mileage-based transportation revenue system**
 - **Tier 1 – state-based VMT (vehicle-miles-of-travel) fee; charged for all miles driven**
 - **Tier 2 – a local-option VMT fee; charged for miles driven on congested roadways, to price and manage congestion**
- **States should lead implementation; VMT systems are already under study and development at state level**
- **Federal government should provide strong support for development and testing of the new systems and provide architecture and standards**

Timeframe for Transition

(Source: US Chamber and NCHRP Finance Studies)



Summary of Findings from Recent Policy and Revenue Studies

- Fuel based revenue system can remain viable for short to medium term
- Inflation losses are most critical short term concern
- A fossil fuel based revenue system is not sustainable for long term; it will increasingly encounter conflicts with energy and air quality policies
- A direct user charge-based VMT fee is favored for longer-term sustainability
- New report of National Transportation Policy Commission lays out transition path

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