

TRANSPORTATION FOR TOMORROW



National Surface Transportation Policy and Revenue Study Commission

Steve Heminger
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February 2008



Commissioners

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Statutory Mandate

- Study current condition and future needs of surface transportation system
- Evaluate short-term sources for Highway Trust Fund revenues and long-term alternatives to replace or supplement fuel tax
- Frame policy and funding recommendations for 15-, 30-, and 50-year time horizons
- Report to Congress by January 1, 2008



Field Hearings

- September 20-21, 2006
Dallas, TX
- November 15-16, 2006
New York, NY
Memphis, TN
- February 21-22, 2007
Los Angeles, CA
Atlanta, GA
- March 19, 2007
Washington, DC
- April 18-19, 2007
Chicago, IL
Minneapolis, MN

Freight

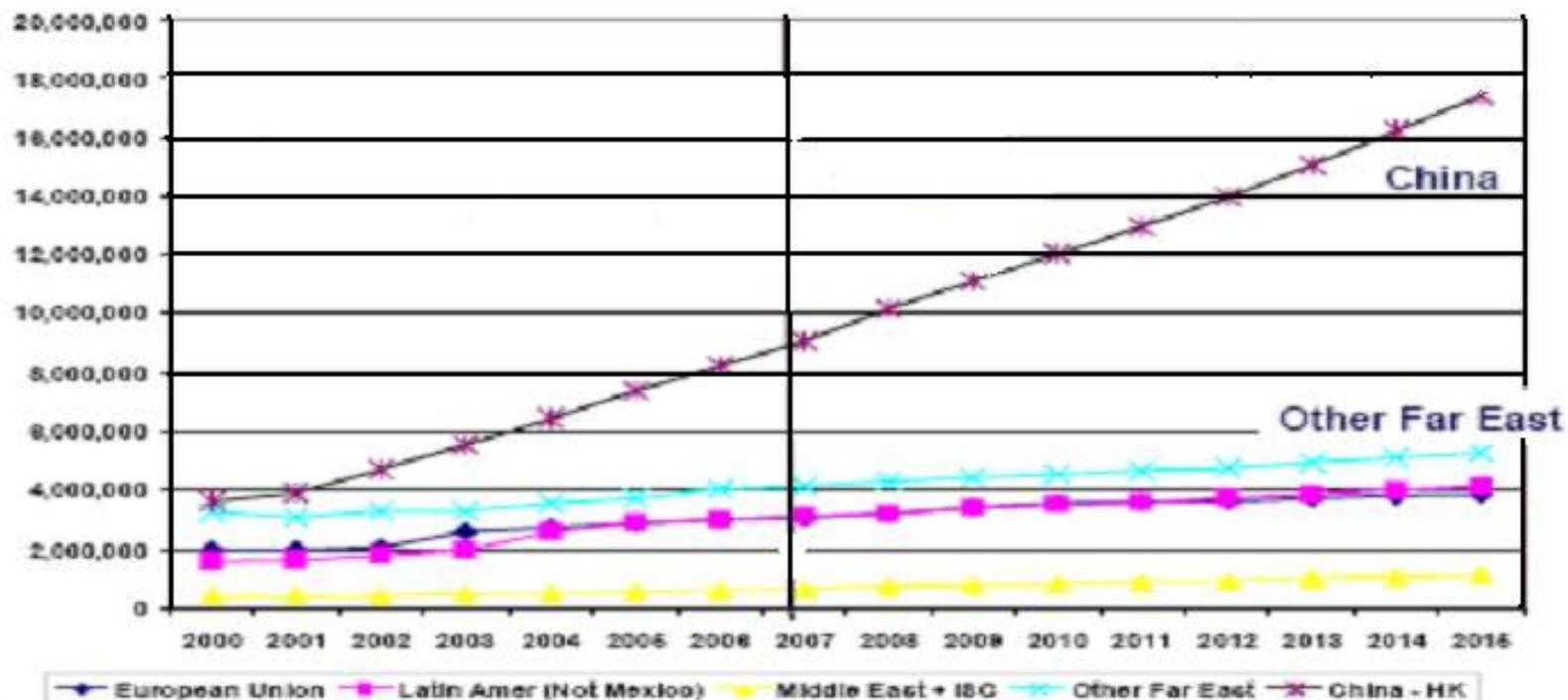


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China was 33% of US imports in 2000 and will be 50% by 2010

U.S. TEU imports will slow to 6.3% in 2007, and 8.3% in 2008. Chinese imports will grow fastest (10% on average).

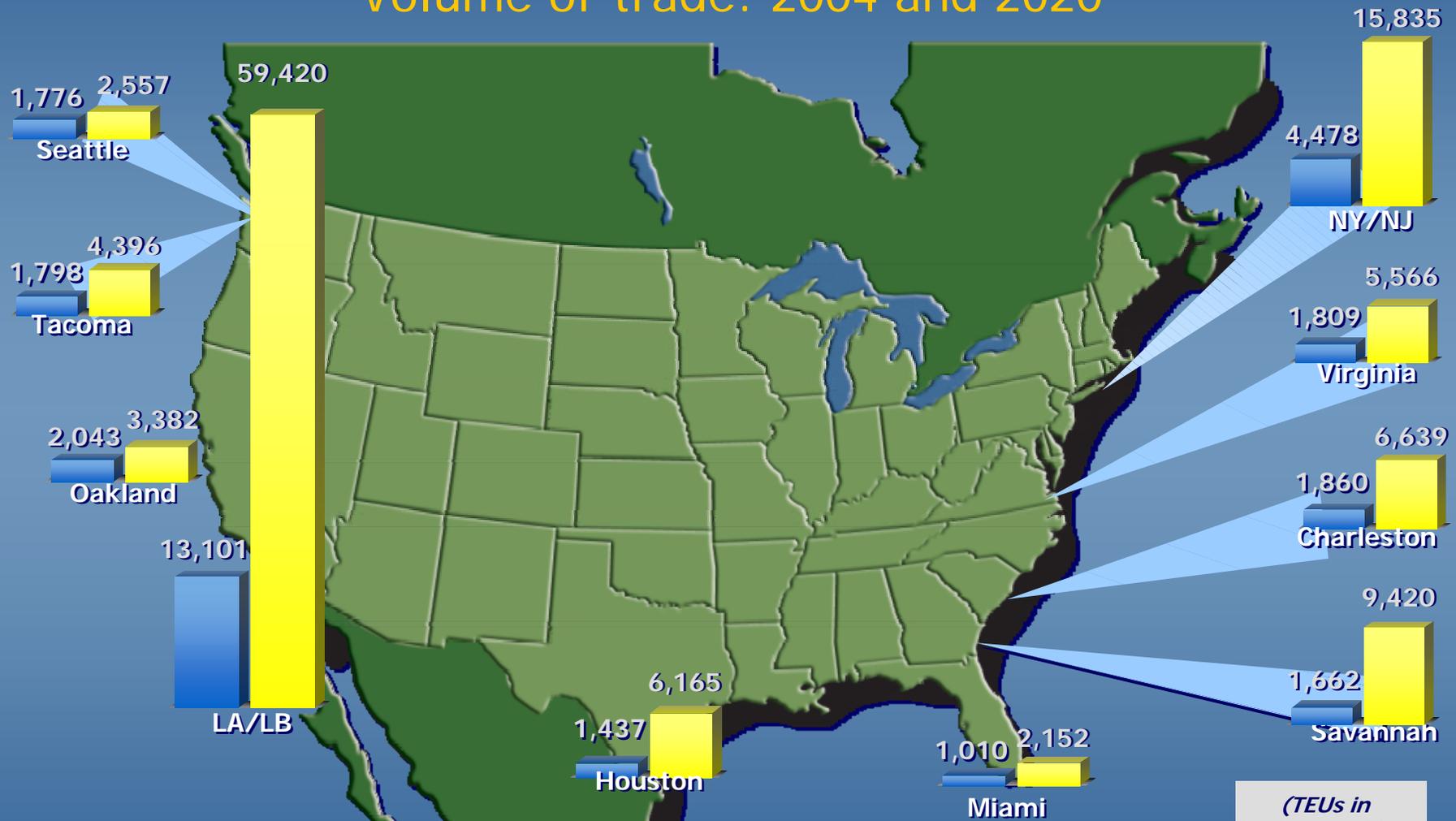
US TEU Imports



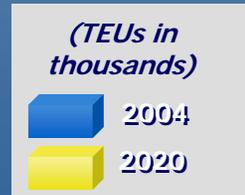
Source: Global Insight World Trade Service

Dramatic Increase in U.S. Maritime Trade

Volume of trade: 2004 and 2020



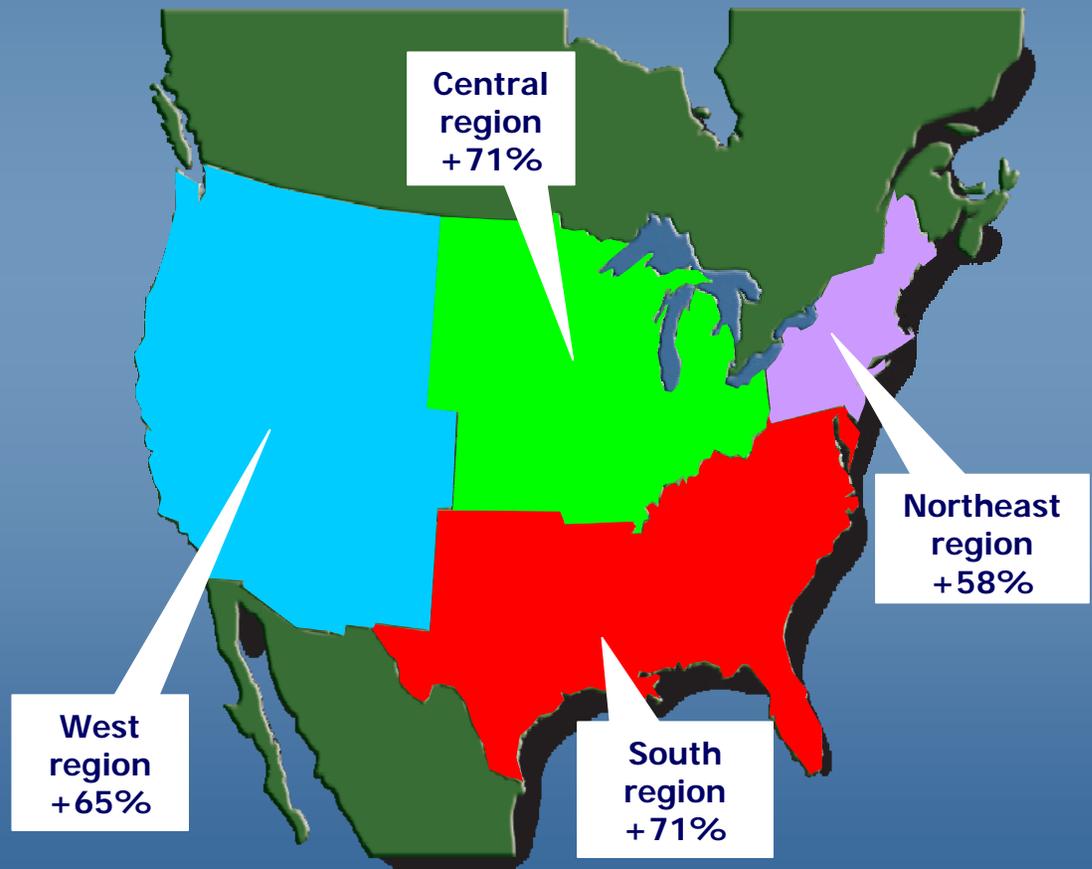
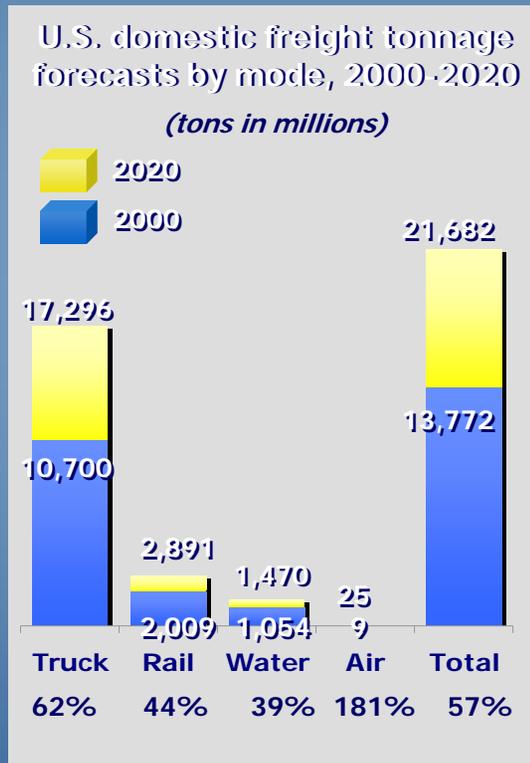
Forecast figures based on 10-year linear regression



Source: U.S. DOTv

More trade means more domestic freight movements

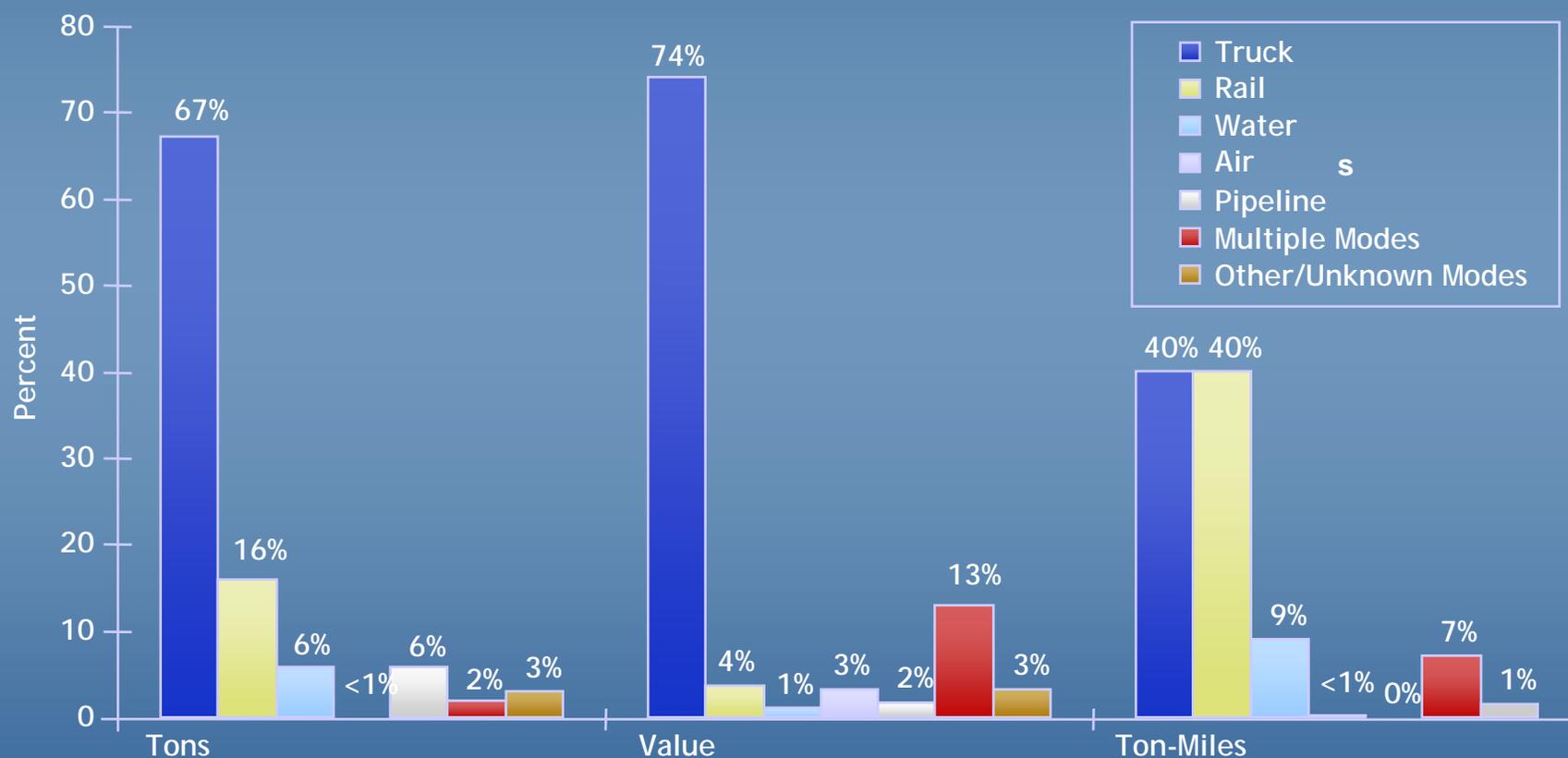
U.S. domestic freight tonnage growth forecast, 2000-2020



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Freight Tons, Value, and Ton-Miles, 2002

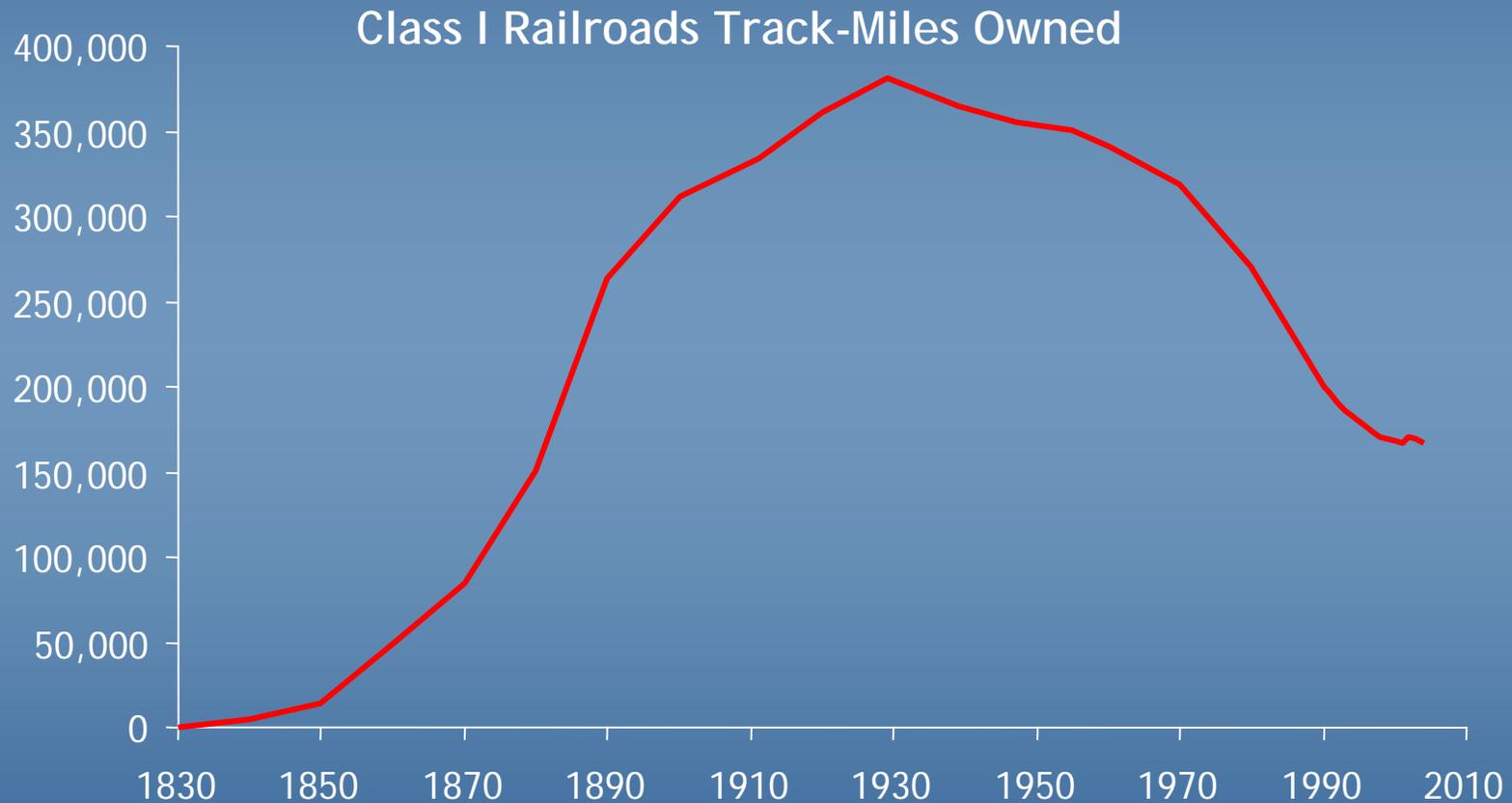
Trucking dominates domestic freight movement; rail is critical to the movement of bulky, lower-value commodities and for heavy shipments moving long distances



Source: Bureau of Transportation Statistics and U.S. Census Bureau, "2002 Economic Census, Transportation, 2002 Commodity Flow Survey," Table 1b.

Rail Network Today

Today's rail network has been rationalized and downsized to a core network that is descended directly from the 19th Century design



Sources: L. Thompson/World Bank and American Association of Railroads

Metro Mobility



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In Congestion for At Least 40 Hours Annually

1982



2005



10 Emerging Megaregions

Cascadia
 The vision for Cascadia links Seattle, Portland, and Vancouver, British Columbia with high-speed rail, while protecting the area's unique and pristine environment. Other strategies highlight these cities' shared high-tech competencies, commitment to environmental sustainability, and creative clusters in film, music, and green building.

Northern California
 The high quality of life, cultural heritage, and environmental assets of the Northern California region make it an attractive – and expensive – place to live. How can sustainable land use strategies be employed while limiting the skyrocketing cost of living?

Texas Triangle
 By 2050 about 35 million people, or 70 percent of the population of Texas, will live in the metropolitan areas that compose the Texas Triangle. Three of the nation's 10 largest cities are in the Triangle, including Houston, which has a port that handles more foreign tonnage than any other in the U.S. Cultural cohesion creates the potential for collaboration among the metro regions of the Triangle to address land use, transportation, and environmental concerns.

Great Lakes
 The Great Lakes megaregion is exploring ways to grow its economy in face of the shrinking role of the manufacturing sector. The region's assets include the environmental resources and amenities of the Great Lakes and a strong research and cultural tradition tied to its leading public universities.

Northeast
 The Northeast is a powerhouse of density and economic output, producing 20 percent of the nation's Gross Domestic Product with 18 percent of the population and only two percent of the nation's land area. Over the next generation, the Northeast will add 18 million new residents. This population growth will demand infrastructure investments and economic growth to accommodate these new residents while preserving quality of life.

Southern California
 With some of the largest ports in the nation, the economy of Southern California is closely tied to the logistics and goods movement industry. This region is taking aggressive action to build infrastructure that enhances its role as a global gateway while providing opportunities for its fast-growing native-born and immigrant populations.

Arizona Sun Corridor
 The Sun Corridor is equivalent to Indiana in size and population but will add another Indiana's worth of residents by 2040. Located in a desert environment, Phoenix and Tucson – the megaregion's biggest metropolitan regions – have instituted water conservation requirements and are promoting the use of desert landscaping. These efforts provide the two metros with enough water for perhaps up to twenty million people, preparing the Sun Corridor for current and future growth.

Gulf Coast
 The devastation of Hurricanes Katrina and Rita and the displacement of victims along the I-10 corridor highlighted the environmental, transportation, and economic links of the Gulf Coast. Despite the recent destruction, the region is expected to grow due to the continued in-migration of retirees from the Midwest.

Piedmont Atlantic
 The low cost of living and high quality of life in the Southeast are two reasons for this megaregion's booming population, which is anchored by Atlanta but stretches east to Raleigh, North Carolina and west to Birmingham, Alabama. The region is facing challenges associated with its growing population, such as increased traffic congestion, runaway land consumption, and inadequate infrastructure, which it hopes to address with sustainable solutions.

Florida
 The Florida megaregion is one of the fastest growing in the nation and possesses a wealth of diversity, with six of every 10 new residents in the last decade coming from foreign countries. It is both dense and populous, with the major international city of Miami acting as a gateway to Latin America. Regional strategies to protect the Everglades have preserved the natural heritage of the state.



Source: America 2050

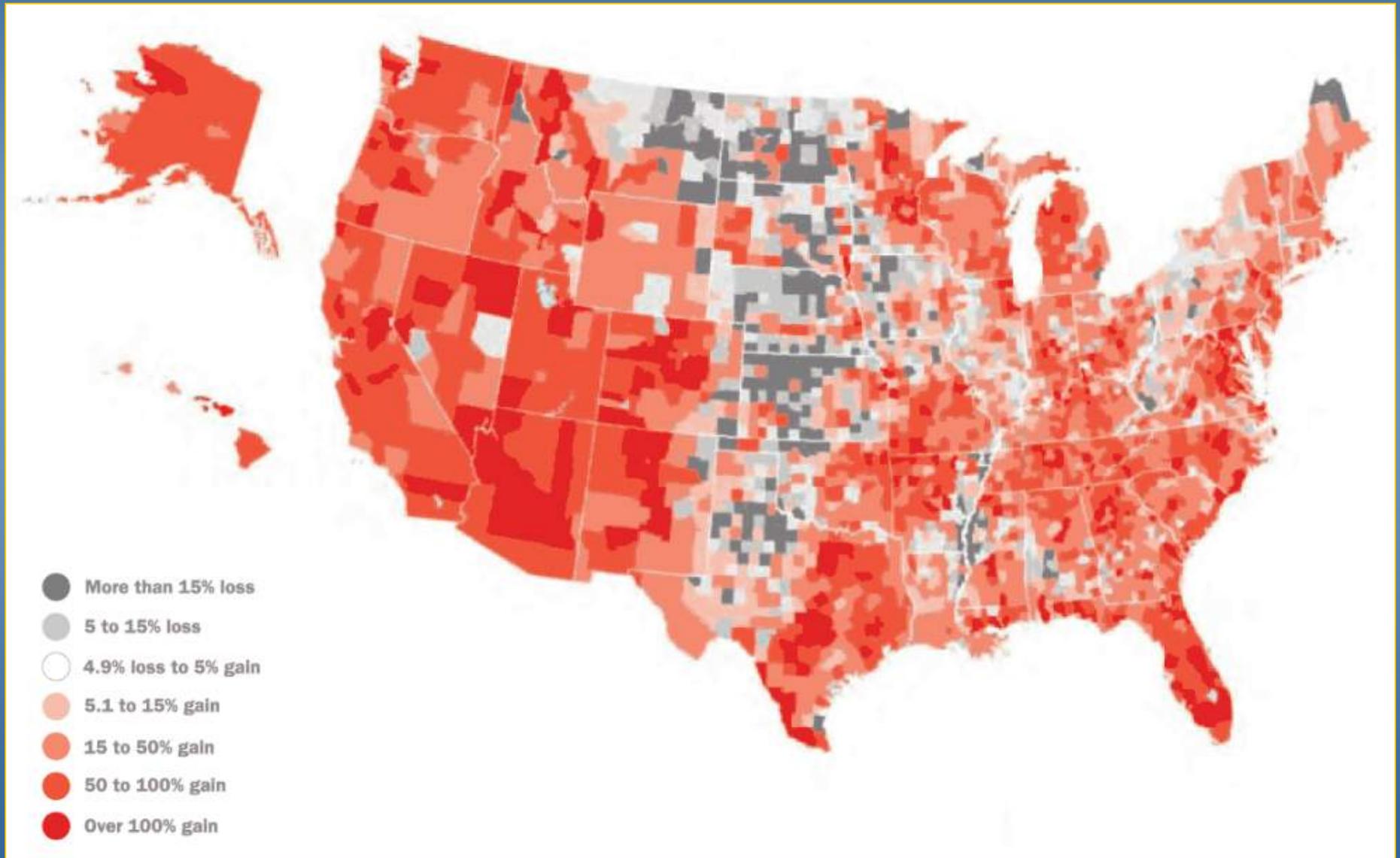
Metros Capture Huge Market Share

	10 Megaregions	Metro Areas >1 Million
1 Share of U.S. Population	68%	58%
2 Share of Traffic Congestion	92%	97%
3 Share of GDP	78%	61%
4 Share of Transit Ridership	93%	92%
5 Share of Population Exposure to Criteria Pollutants	94%	88%



Sources: U.S. Census, Texas Transportation Institute, U.S. Conference of Mayors, EPA

U.S. Population Change, 2000–2050



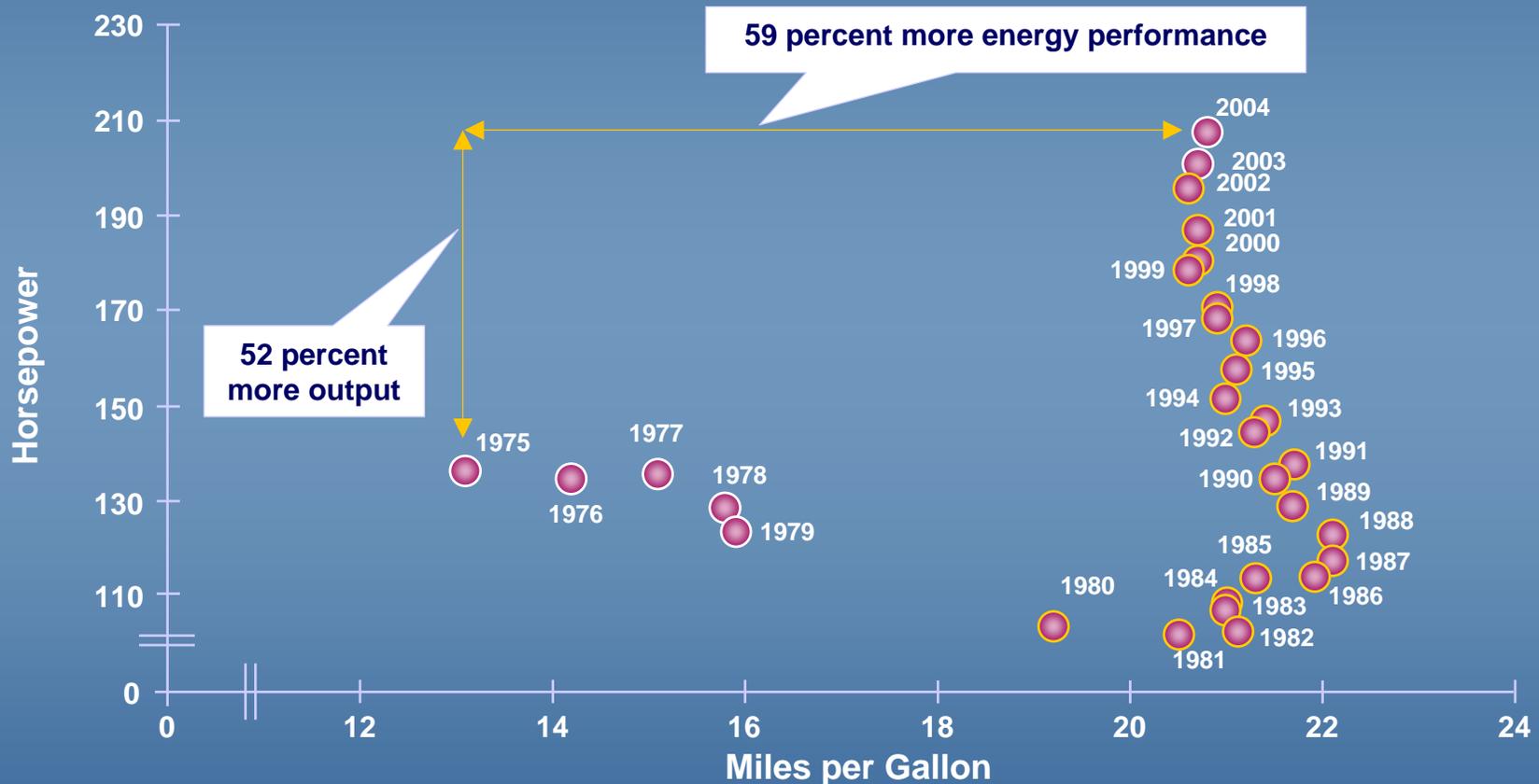
Fuel Efficiency ("Energy Independence")



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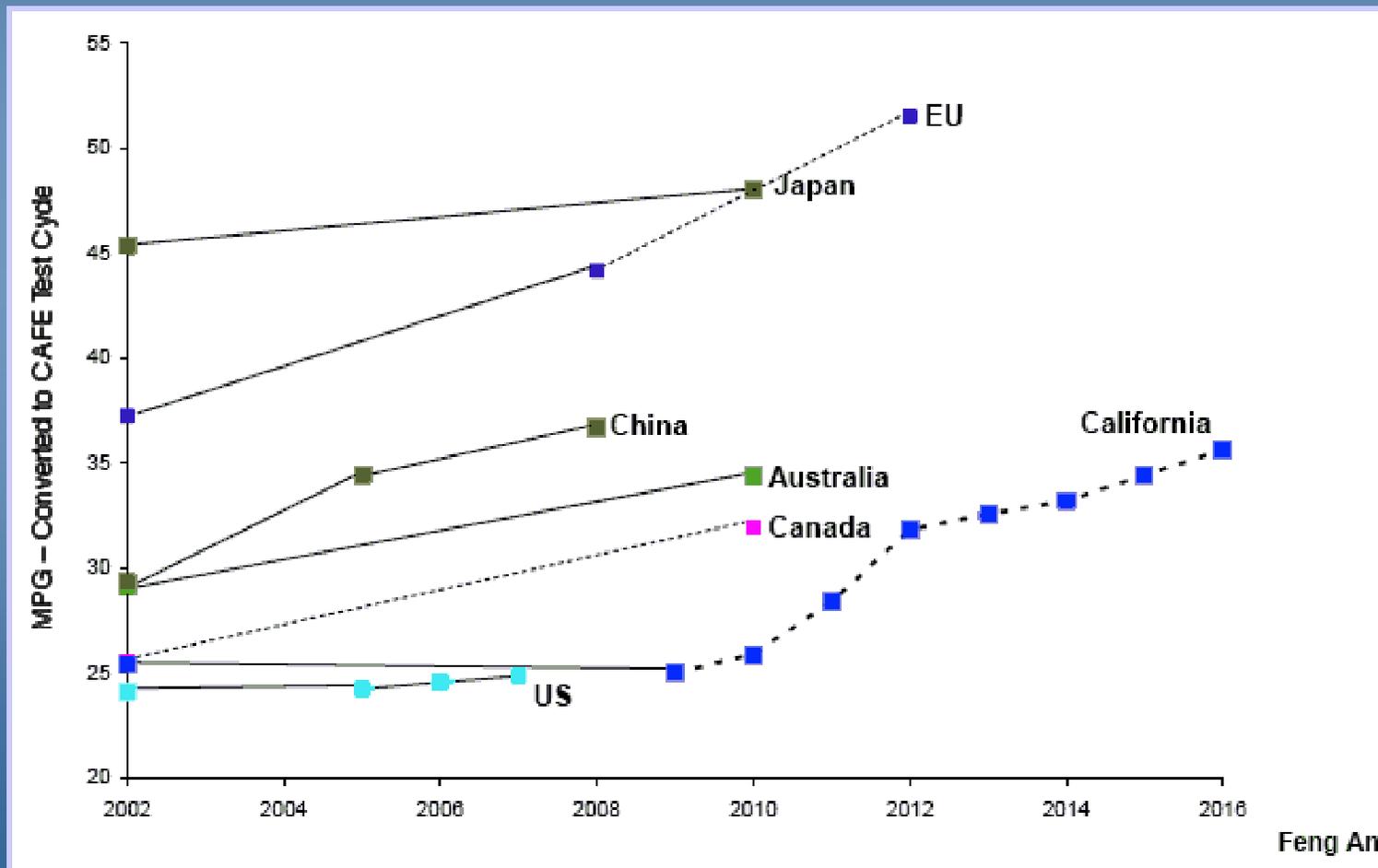
U.S. Fuel Economy for New Light-Duty Vehicles

1975-2004 Model Years Sales-Weighted Horsepower and MPG



International Fuel Economy Comparison

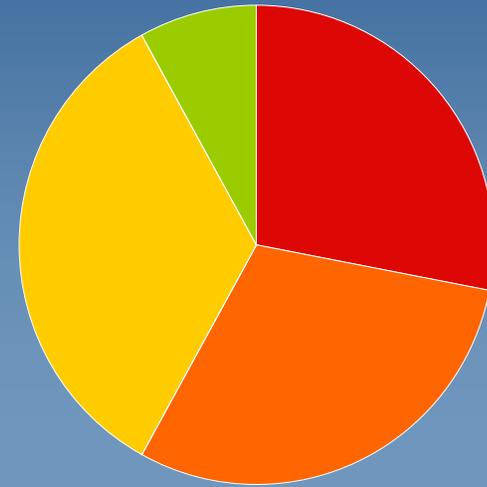
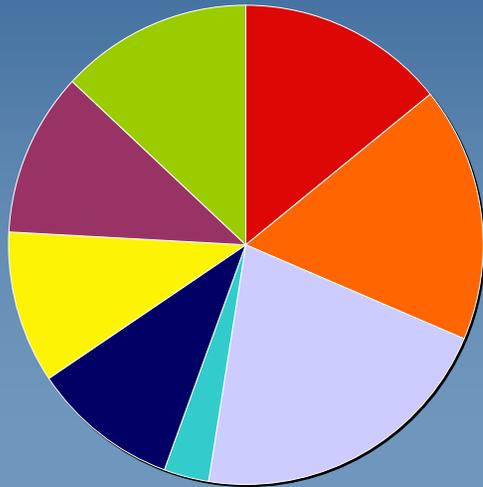
Comparison of fleet average fuel economy and GHG emission standards for new-sale light-duty vehicles



Source: UC Berkeley

Feng An

World and U.S. Greenhouse Gas Emissions Compared



World		U.S.
14%	Transportation	28%
17%	Industrial	30%
22%	Power Stations	NA
3%	Waste Disposal/Treatment	NA
10%	Land Use & Biomass Burning	NA
10%	Residential & Commercial	34%
11%	Fossil Fuel Production	NA
13%	Agricultural Byproducts	8%

Sources: US DOE and EPA

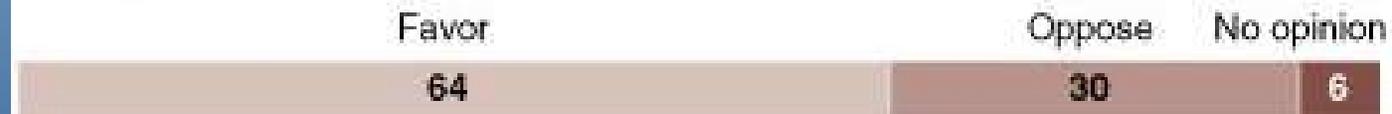
Is the Public Ready for Change?

Views on the Environment

Would you be willing or not willing to pay higher taxes on gasoline and other fuels if the money was used for research into renewable energy sources like solar and wind?



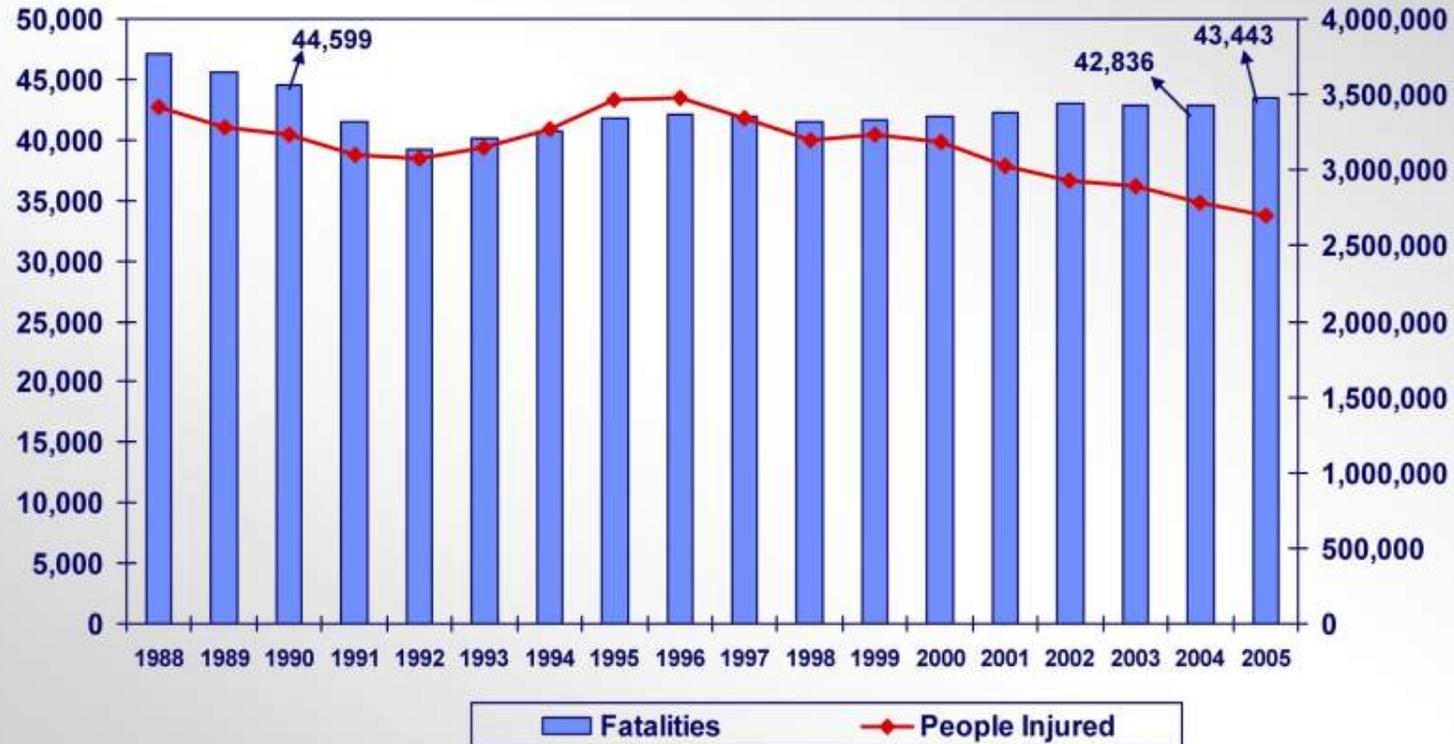
If an increased tax on gasoline would reduce the United States' dependence on foreign oil, would you favor or oppose an increased federal tax on gasoline?



Source: The New York Times / CBS News Poll, April 2007

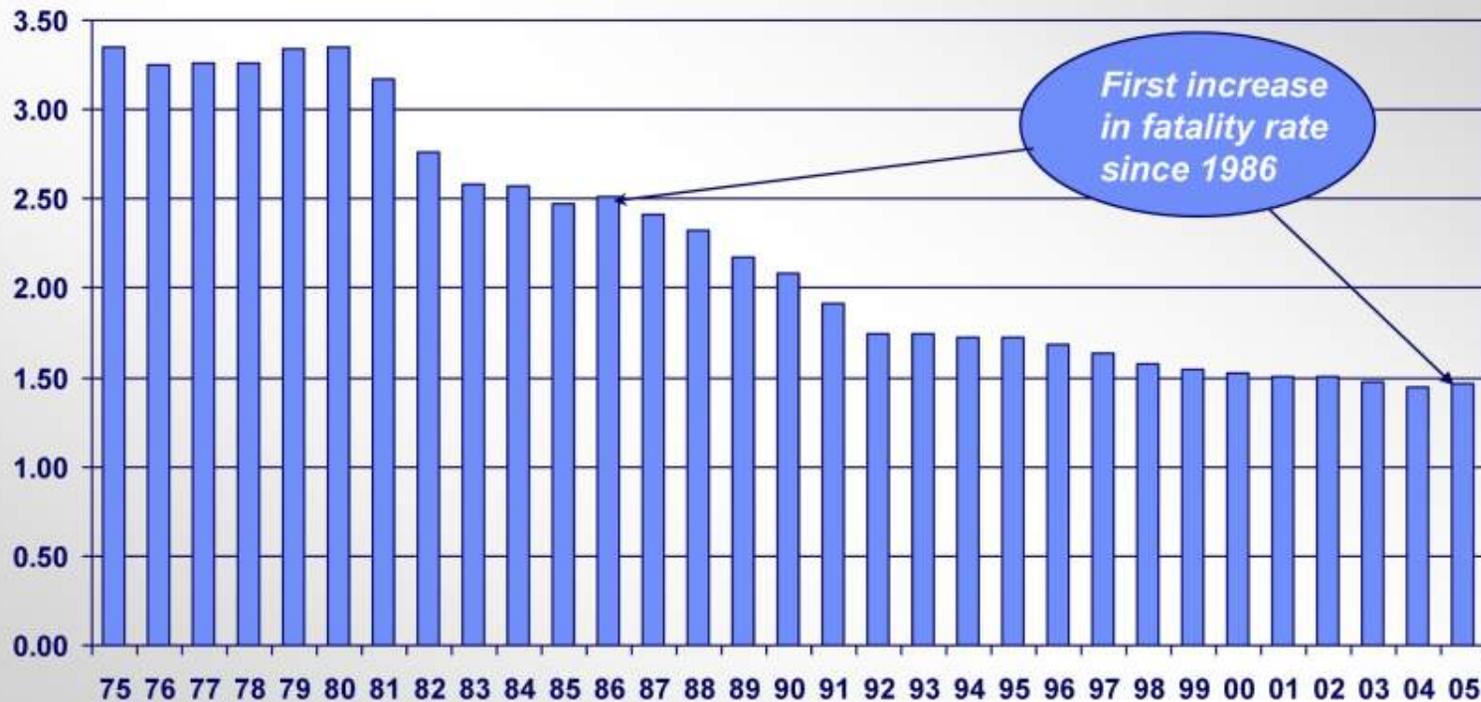
Safety

People Killed and Injured In Traffic Crashes, by Year



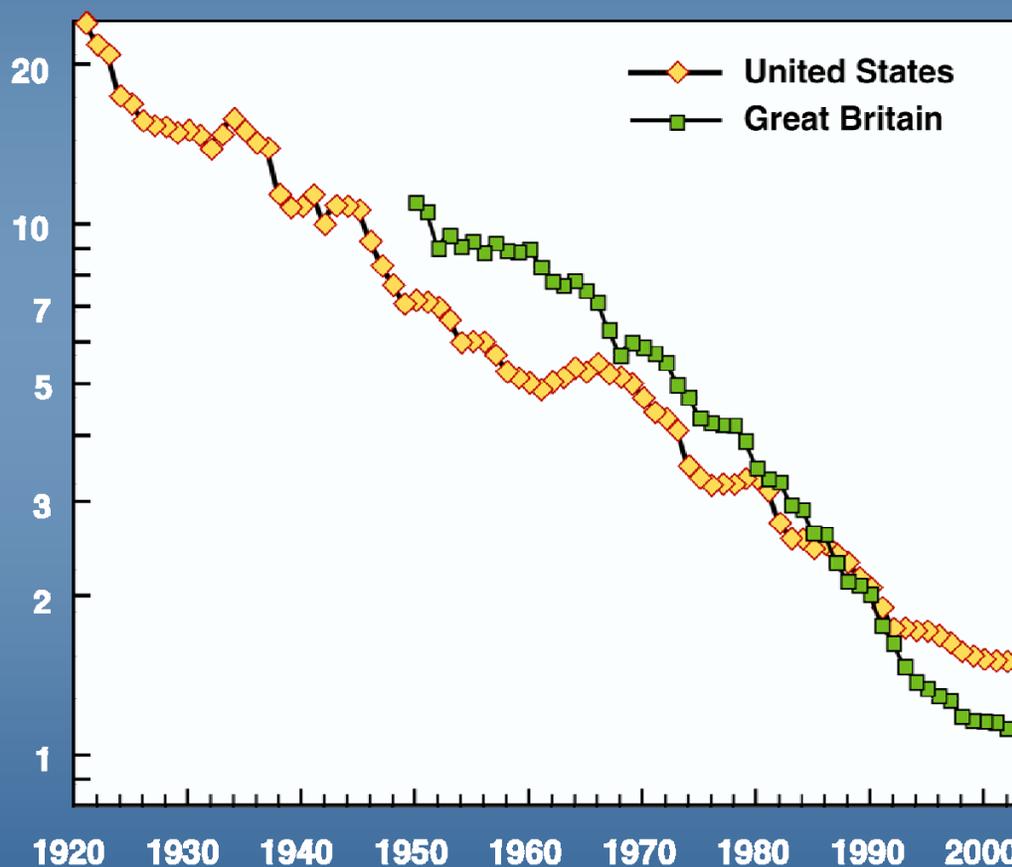
Source: FARS

Fatality Rate Per 100 Million VMT, by Year

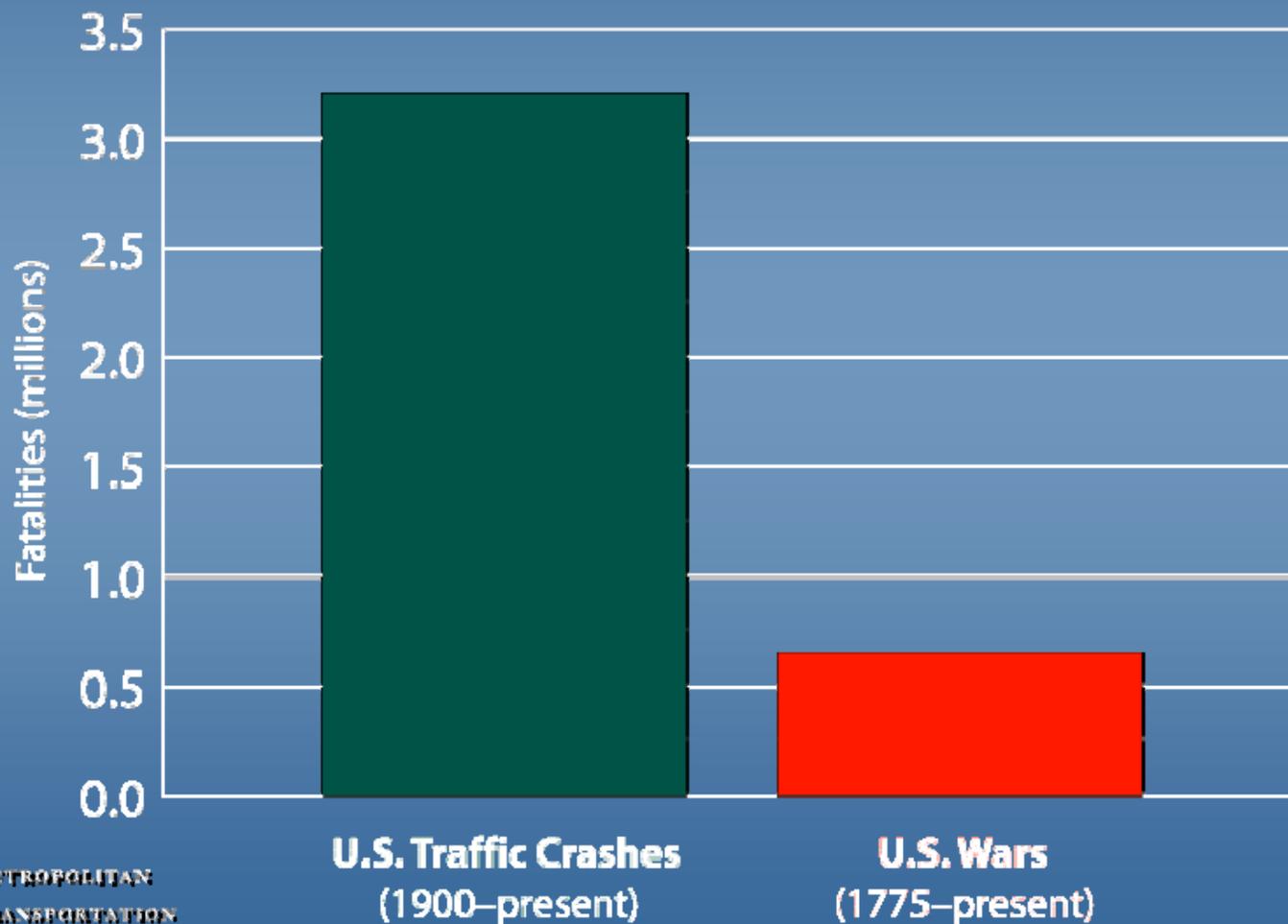


Sources: FARS, FHWA

U.S. and G.B. Traffic Fatalities Per 100 Million VMT



U.S. Traffic Deaths Far Exceed Casualties of War



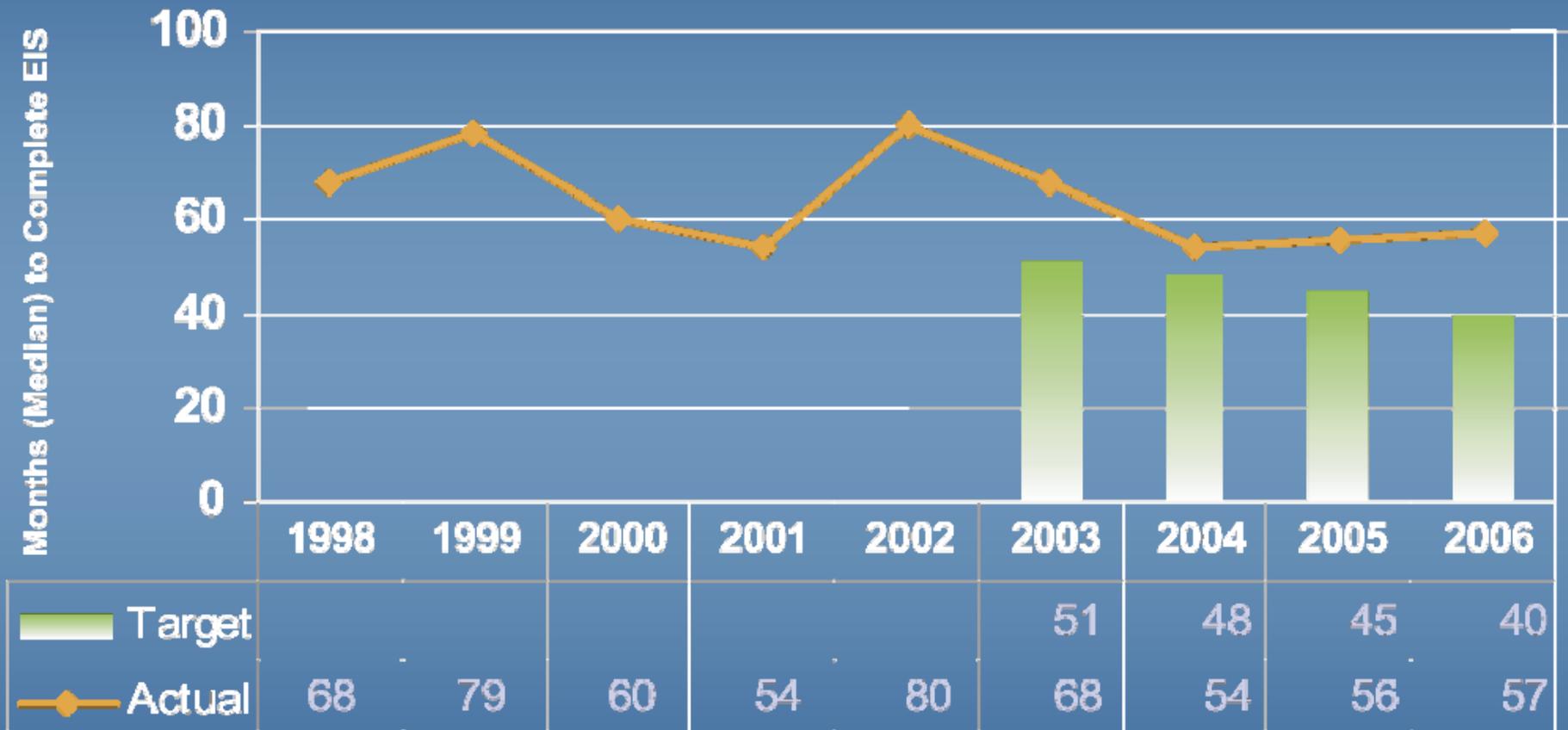
What's Broken?



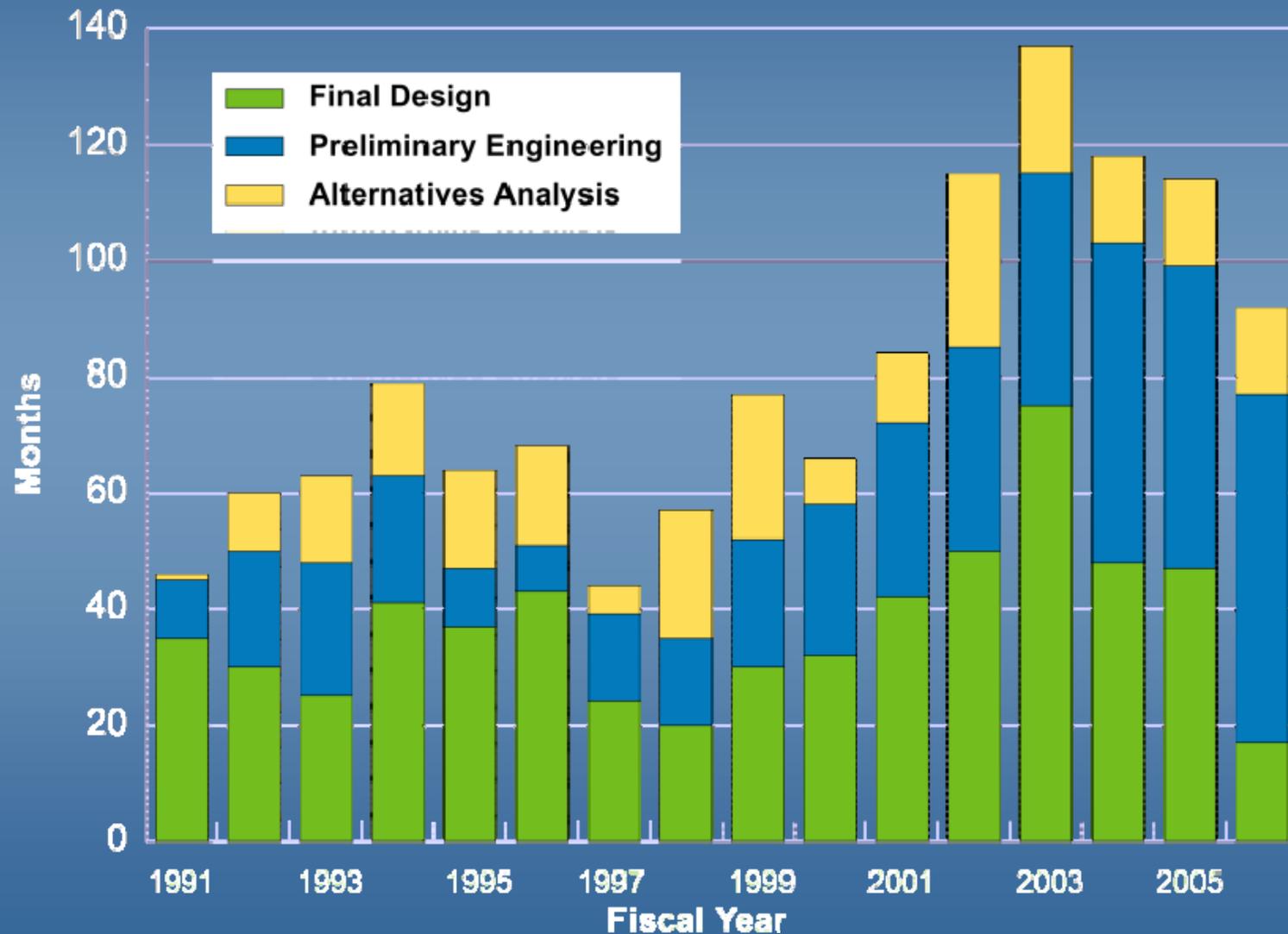
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Environmental Impact Statement

Processing Time (FY 1998–2006)

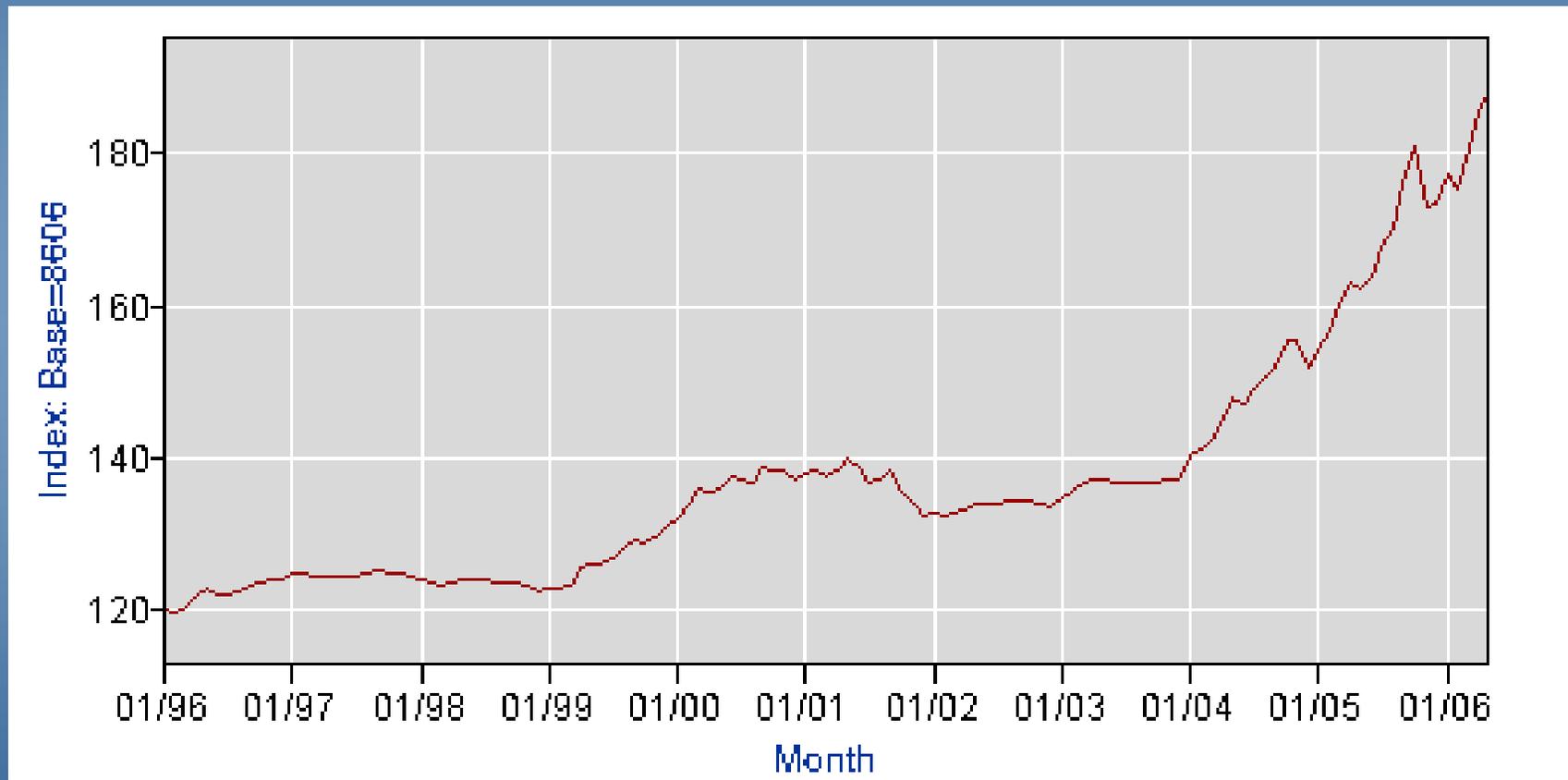


Length of Time to Complete the New Starts Process



Source: Holland & Knight

Street and Highway Construction Costs Have Increased Dramatically Over the Past Few Years

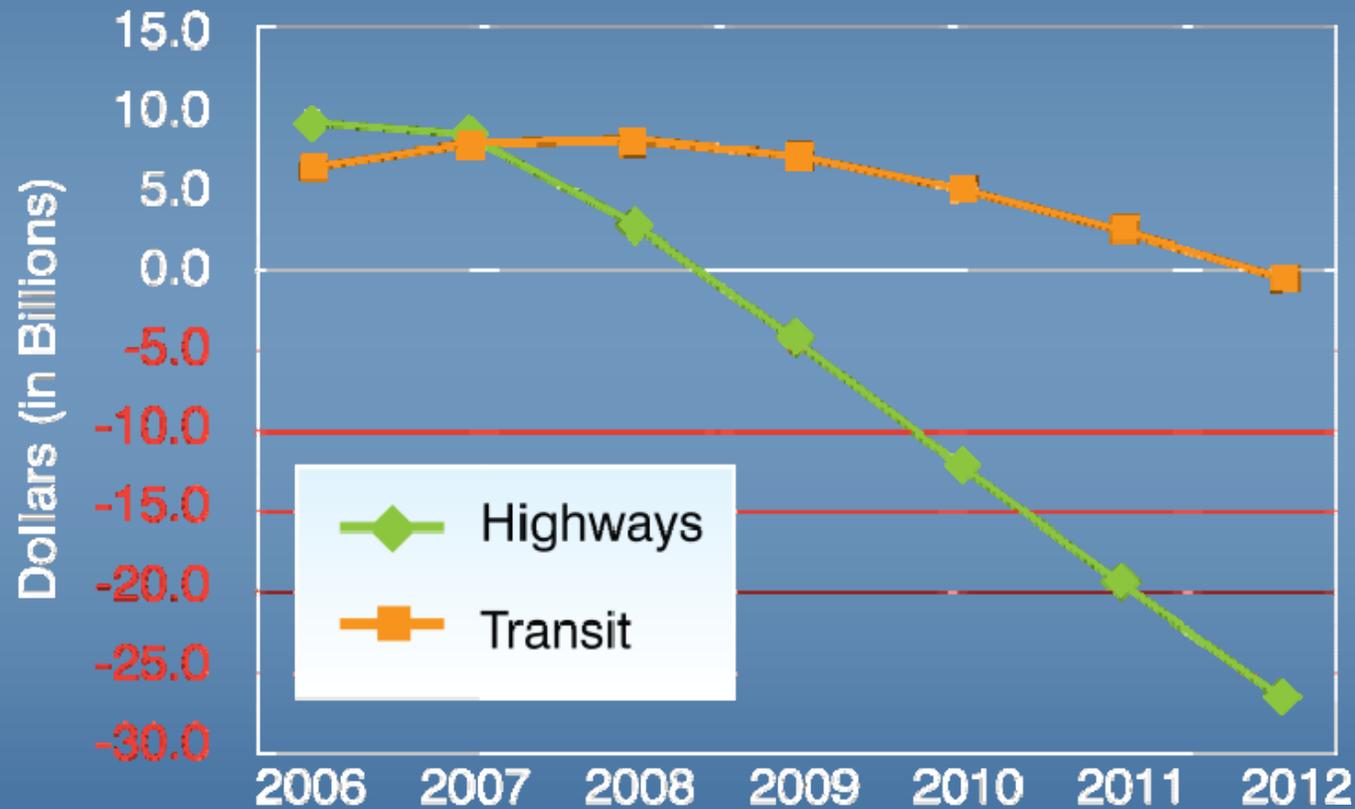


Finance

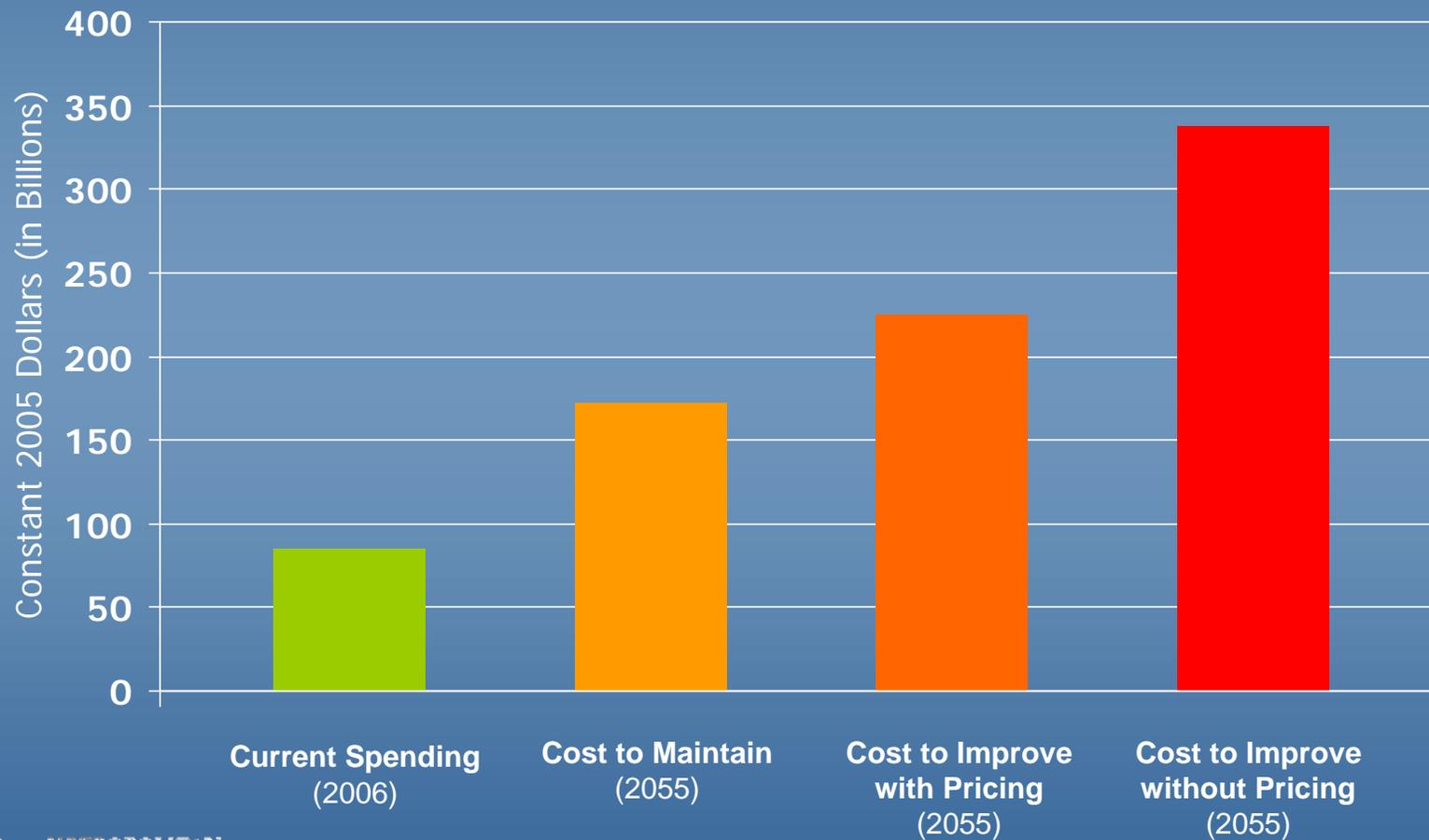


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Projected Highway and Transit Account Balances Through 2012



Annual National Funding Gap



Major Recommendations

1. The federal surface transportation program should not be reauthorized in its current form. Instead, we should make a new beginning.
2. The federal program should be performance-driven, outcome-based, generally mode-neutral, and refocused to pursue objectives of genuine national interest.

Major Recommendations

3. The 108 separate highway, transit, railroad, and safety funding categories in federal law should be consolidated into the following 10 new federal programs:

Current Federal Surface Transportation Programs	
Federal Highway Administration	62 programs
Federal Transit Administration	20 programs
Federal Railroad Administration	6 programs
National Highway Traffic Safety Administration	12 programs
Federal Motor Carrier Safety Administration	8 programs
Total	108 programs

Proposed Federal Surface Transportation Programs

1. **Rebuilding America** — state of good repair
2. **Global Competitiveness** — gateways and goods movement
3. **Metropolitan Mobility** — congestion relief in major urban areas
4. **Connecting America** — connections to smaller cities and towns
5. **Intercity Passenger Rail** — regional networks in high growth corridors
6. **Highway Safety** — incentives to save lives
7. **Environmental Stewardship** — both human and natural environments
8. **Energy Security** — development of alternative transportation fuels
9. **Federal Lands** — providing public access on federal property
10. **Research & Development** — a coherent national research program

Major Recommendations

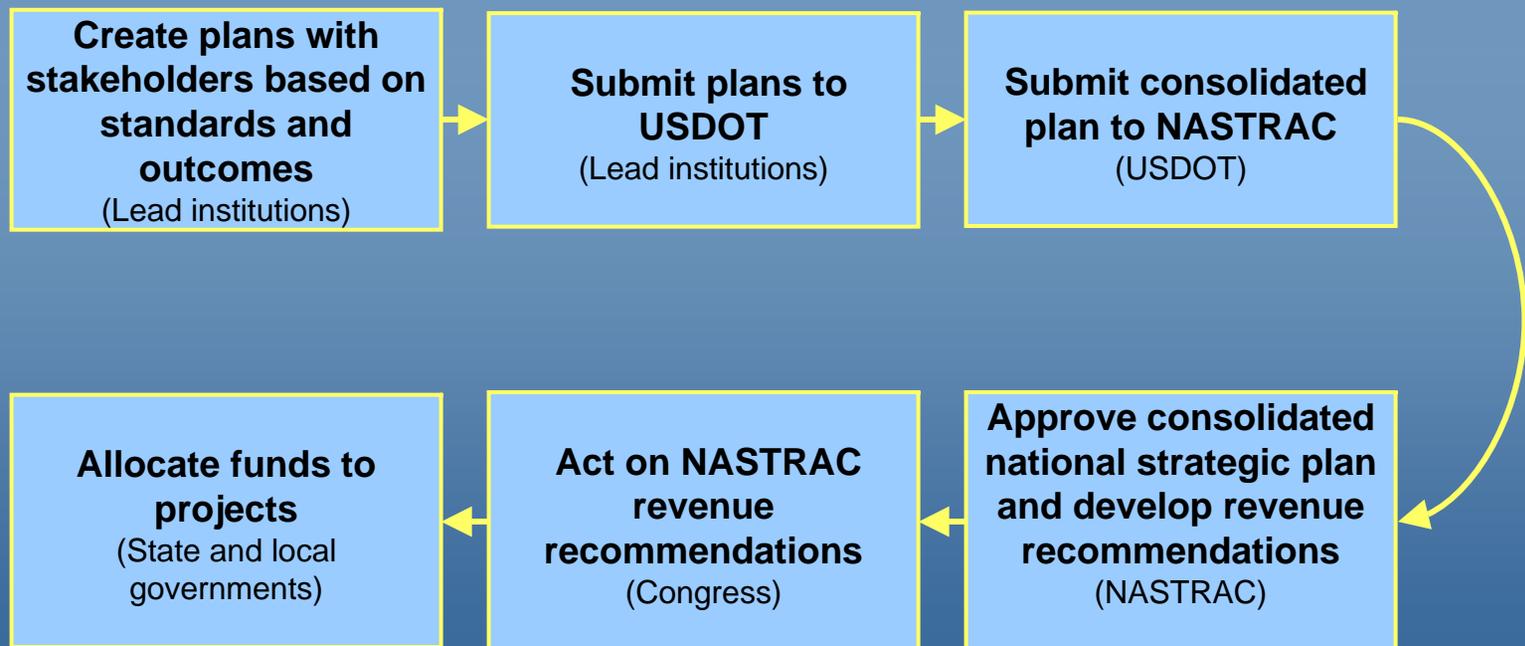
4. The various modal administrations of the U.S. Department of Transportation should be reorganized into functional units.

U.K. Model	
Former	New
Road	City/Regional Networks
Rail	National Networks
Air	International
Sea	Networks



Major Recommendations

5. Congress should establish an independent National Surface Transportation Commission (NASTRAC). The new federal commission would perform two principal planning and financial functions as shown below:



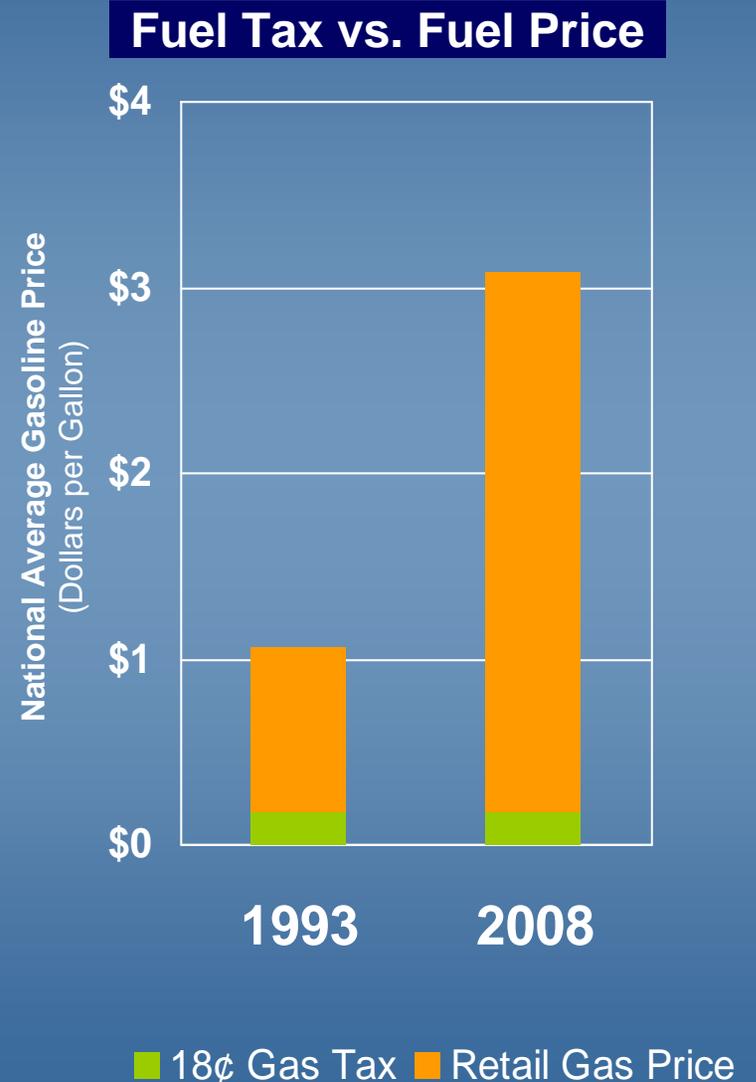
Major Recommendations

6. The project delivery process should be reformed by retaining all current environmental safeguards, but significantly shortening the time it takes to complete reviews and obtain permits.
7. The annual investment shortfall to improve the condition and performance of all modes of surface transportation – highway, bridge, public transit, freight rail, and intercity passenger rail – ranges between \$140-250 billion.



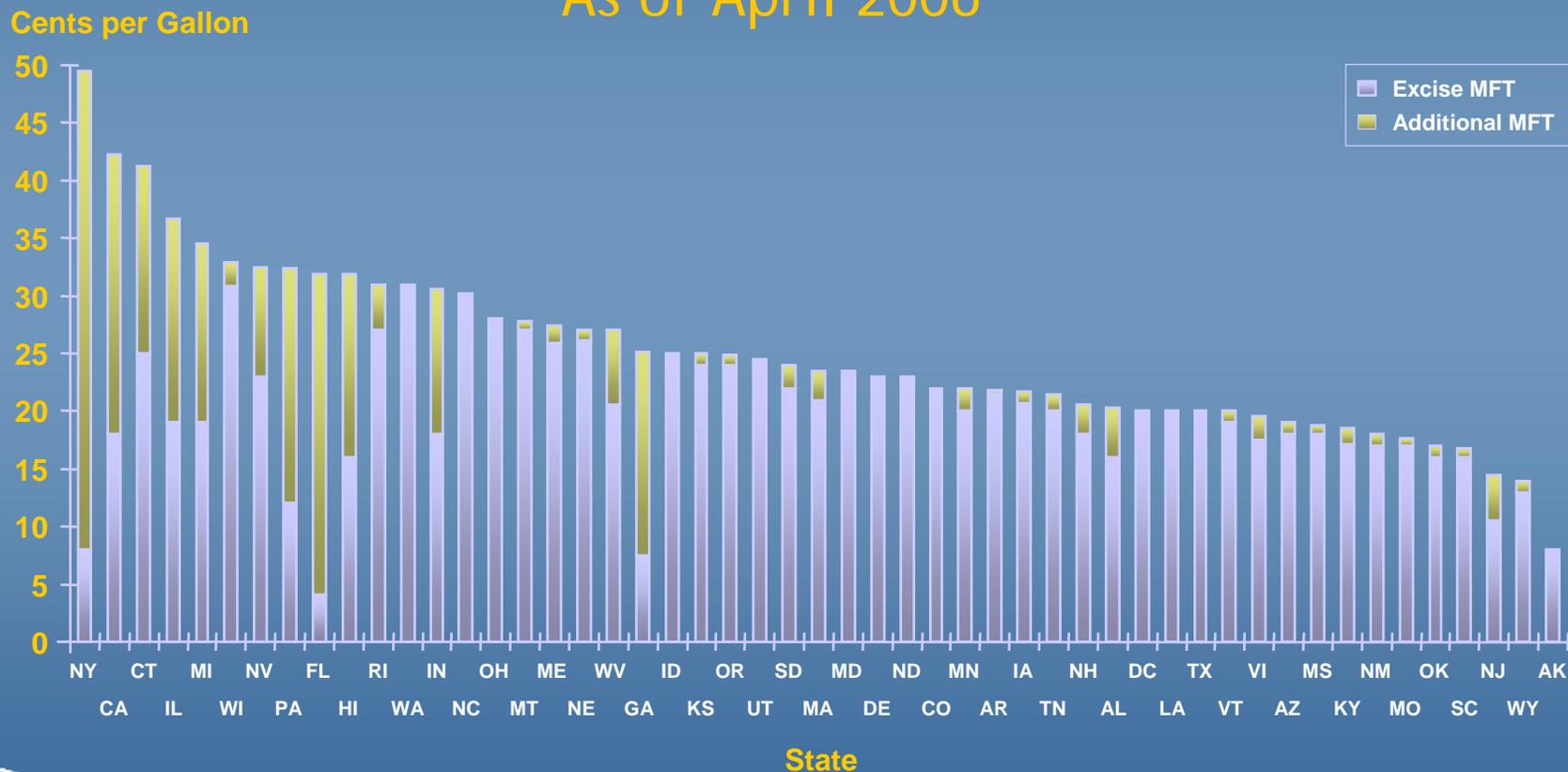
Major Recommendations

8. To address this investment shortfall by providing the traditional federal share of 40% of total transportation capital funding, the federal fuel tax needs to be raised by 25-40 cents per gallon. This rate increase should be indexed to the construction cost index and phased in over a period of years.



State Gasoline Tax Rates including Sales and Petroleum Taxes Plus Local Option Gas Tax

As of April 2006



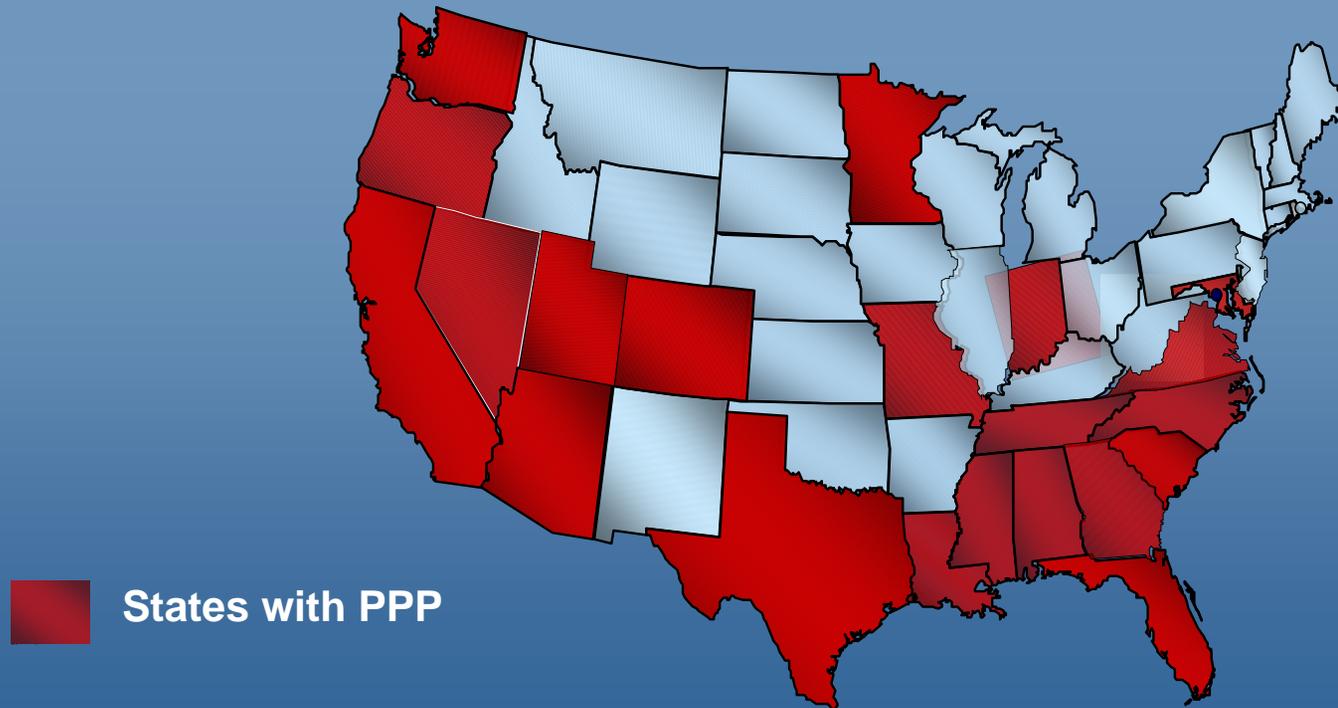
Source: American Petroleum Institute

Major Recommendations

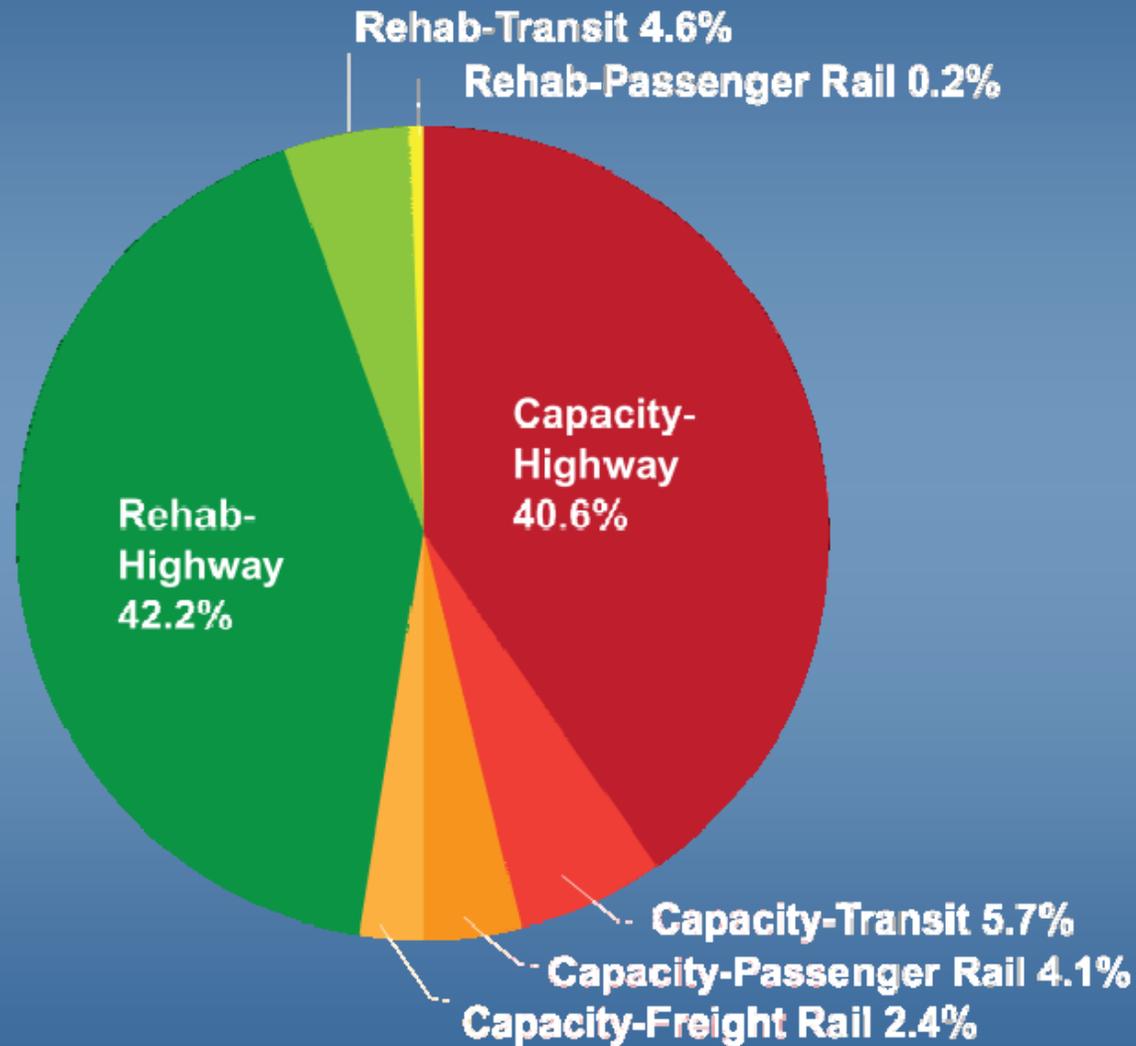
9. Other federal user-based fees also should help address the funding shortfall, such as a container fee for freight projects and a ticket tax for passenger rail improvements.
10. The fuel tax continues to be a viable revenue source for surface transportation at least through 2025. Thereafter, the most promising alternative revenue measure appears to be a vehicle miles traveled (VMT) fee, provided that substantial privacy and collection cost issues can be addressed.
11. The deployment of peak-hour “congestion pricing” on Interstate highways in major metropolitan areas should be permitted, provided that revenues generated by this strategy are restricted to transportation purposes in the travel corridors where the fees are imposed.

Major Recommendations

12. Public-Private Partnerships should be encouraged as a means of attracting additional private investment to the surface transportation system, provided that conditions are included to protect the public interest and the movement of interstate commerce.



Cost to Improve by Category



“Our unity as a nation is sustained by free communication of thought and by easy transportation of people and goods... Together the unifying forces of our communication and transportation systems are dynamic elements in the very name we bear — United States. Without them, we would be a mere alliance of many separate parts.”

— Dwight D. Eisenhower, 1955





National Surface Transportation Policy
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For More Information:

www.transportationfortomorrow.org