

Prospects For Alternative Transportation Fuels

John J. Conti

Energy Information Administration

john.conti@eia.doe.gov

CENTRA Technology Alternative Fuels Seminar

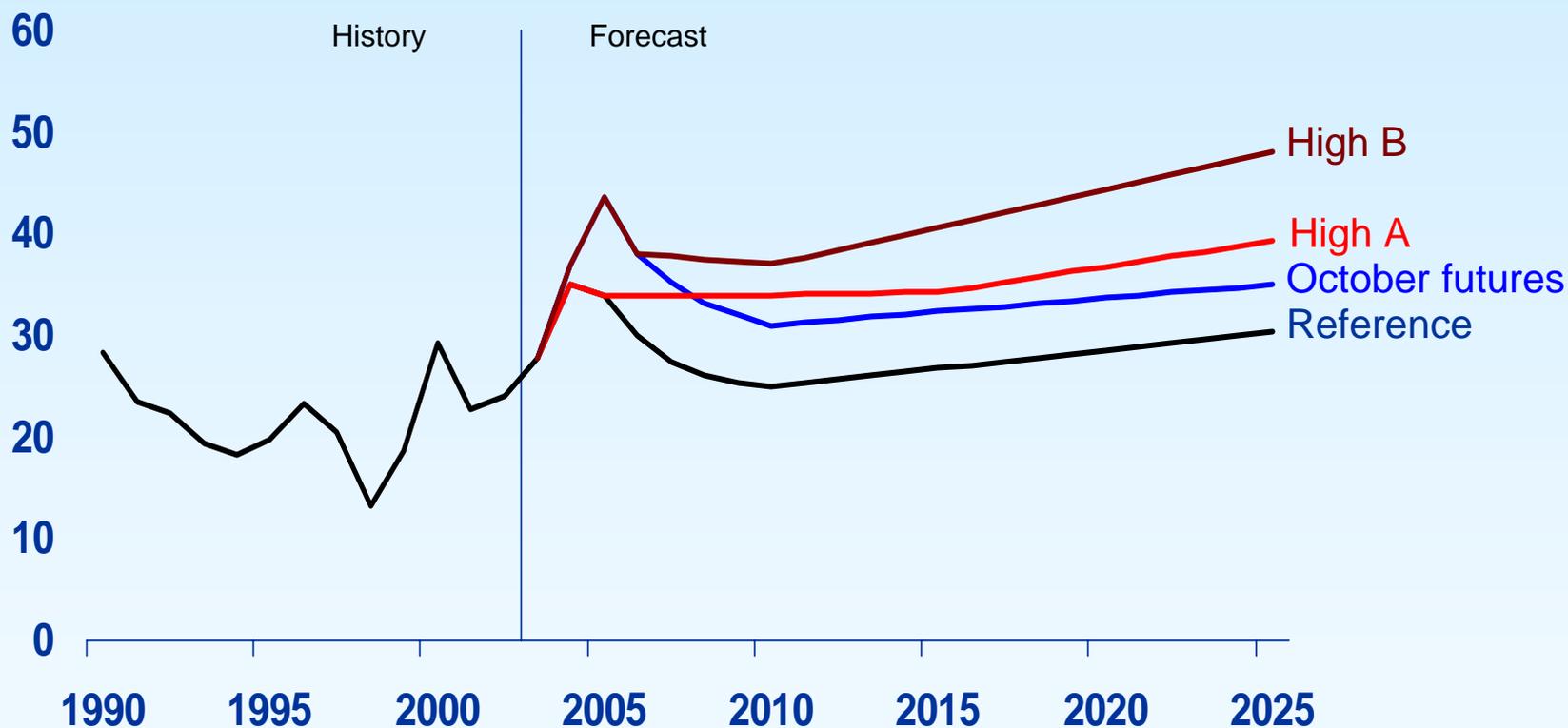
February 25, 2005

Arlington, Virginia

Nonconventional Often Evolves Into Conventional Production

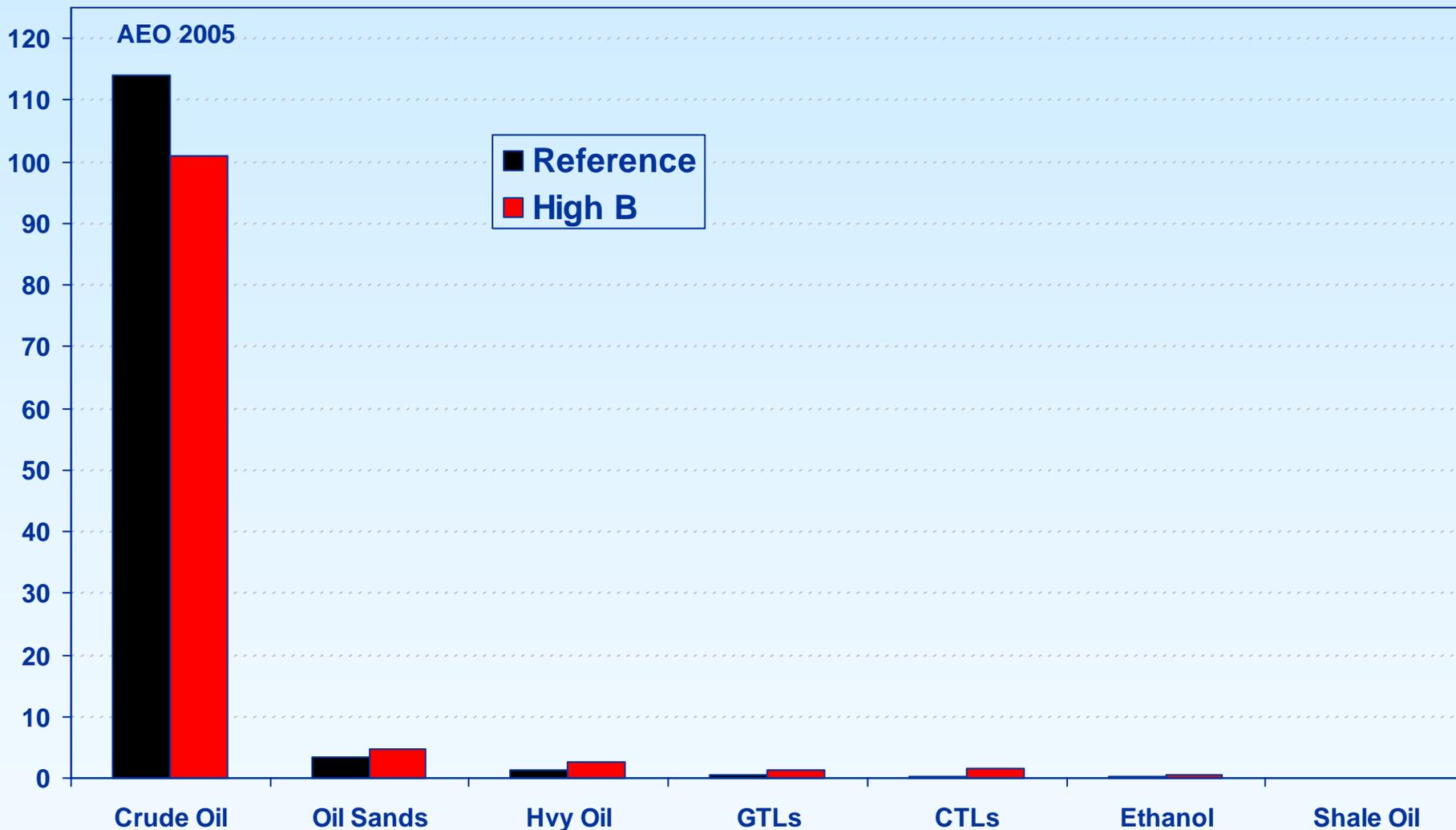
- Technology allows yesterday's "exotic" production to become today's "ordinary" production. Recent examples include:
 - *Deepwater Gulf of Mexico*
 - *Enhanced Oil Recovery (EOR)*
 - *Coalbed Methane*
- Today, nonconventional frequently includes:
 - *Oil Sands*
 - *Heavy Oil*
 - *GTLs*
 - *CTLs*
 - *Energy Crops*
 - *Ethanol*
 - *Biodiesel*
 - *Shale Oil*

World Oil Prices, 1990-2025 (2003 dollars per barrel)



Source: *Annual Energy Outlook 2005*

World Conventional and Nonconventional Production, 2025 (million barrels per day)

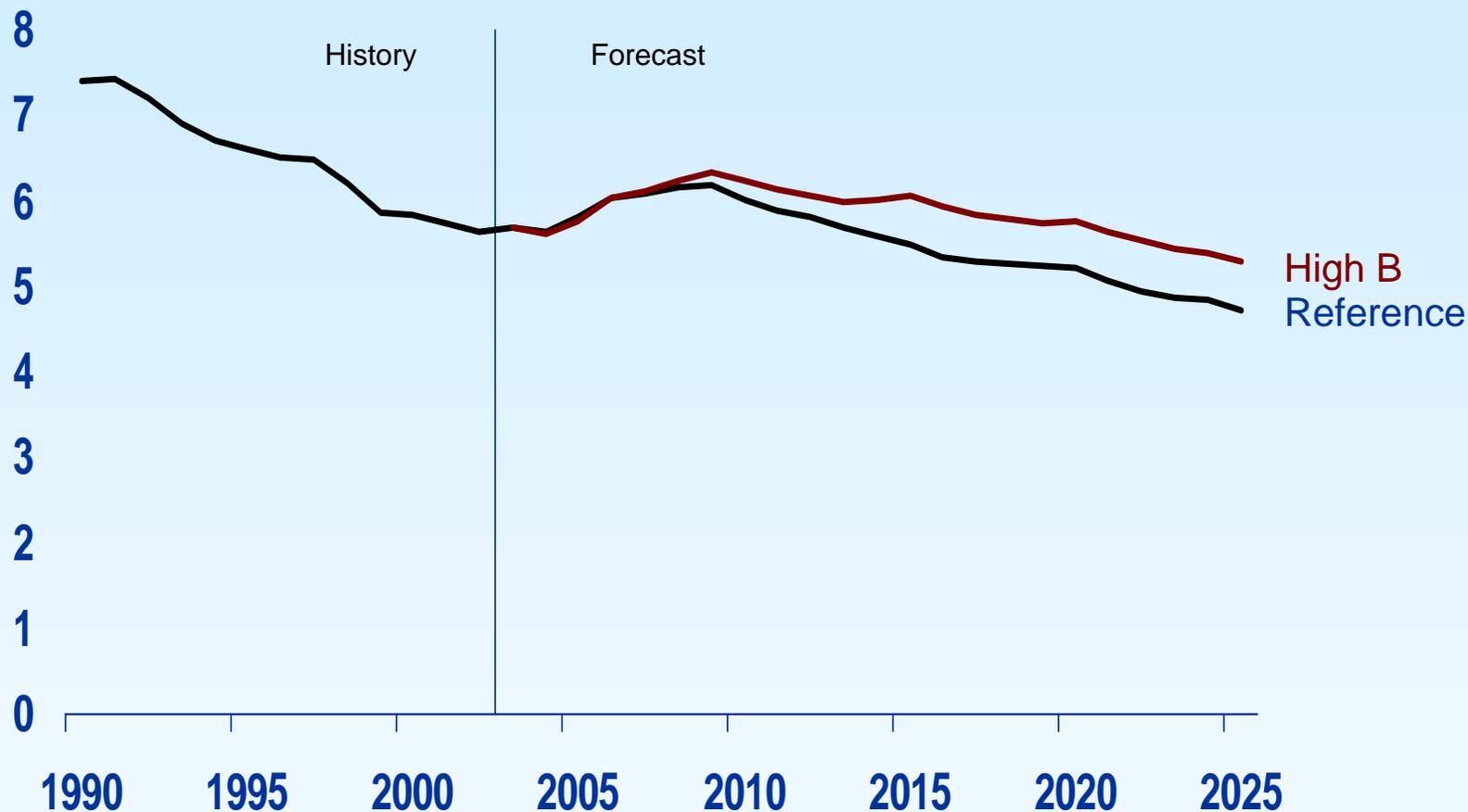


Source: *Annual Energy Outlook 2005*

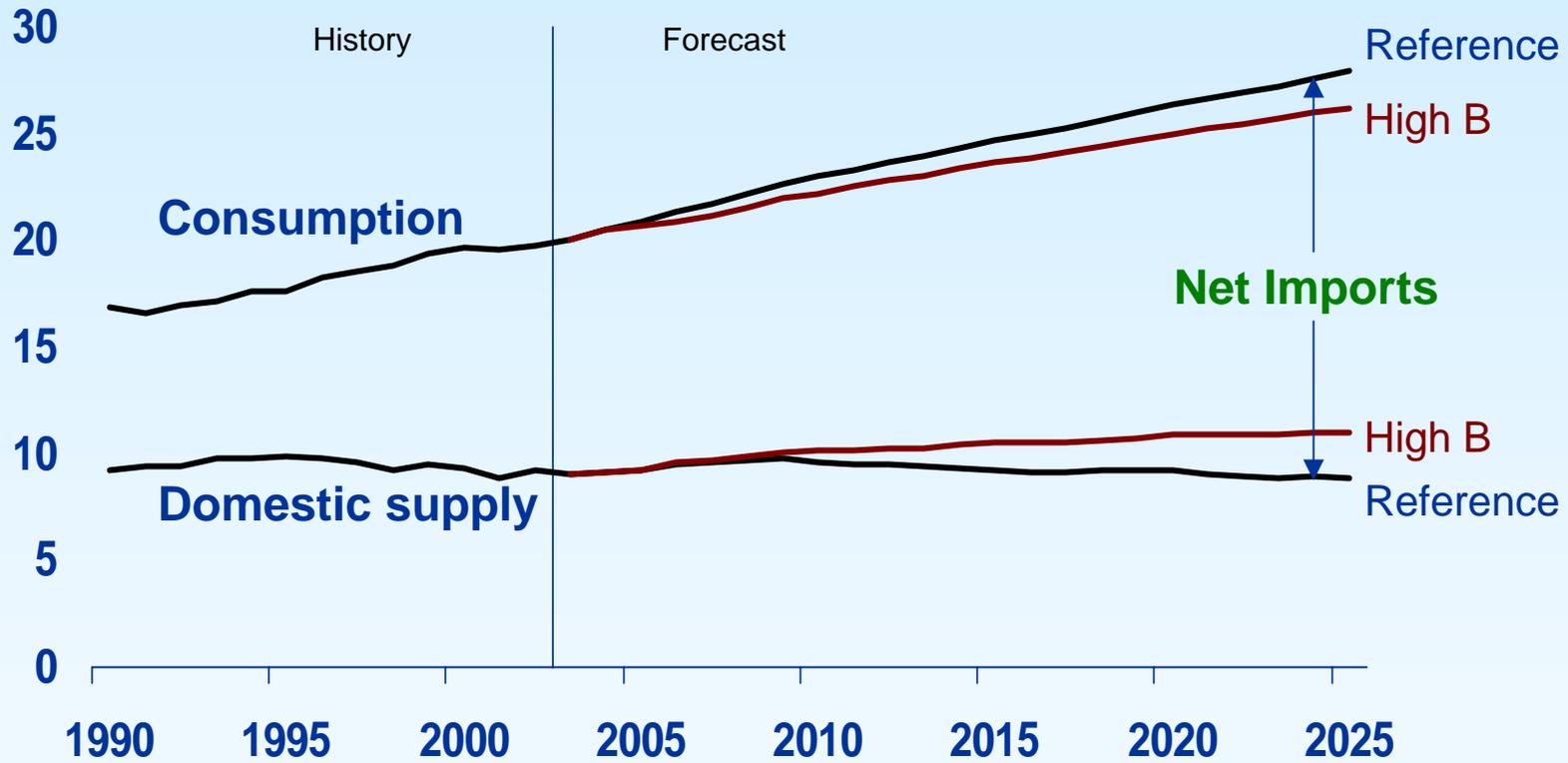
Key Sources of World Nonconventional Production High B Case, 2025 (million barrels per day)

	Oil Sands	Heavy Oil	GTLs	CTLs	Ethanol	Shale Oil
Canada	4.688					
United Kingdom			0.069			
Norway			0.015			
Estonia						0.009
Russia			0.075			
Malaysia			0.109			
Australia						0.007
Qatar			0.561			
Algeria			0.166			
South Africa				0.515		
Brazil					0.409	
Venezuela		2.581				
United States			0.208	0.982	0.553	
Total	4.688	2.581	1.203	1.497	0.962	0.016

Domestic Crude Oil Production, 1990-2025 (million barrels per day)

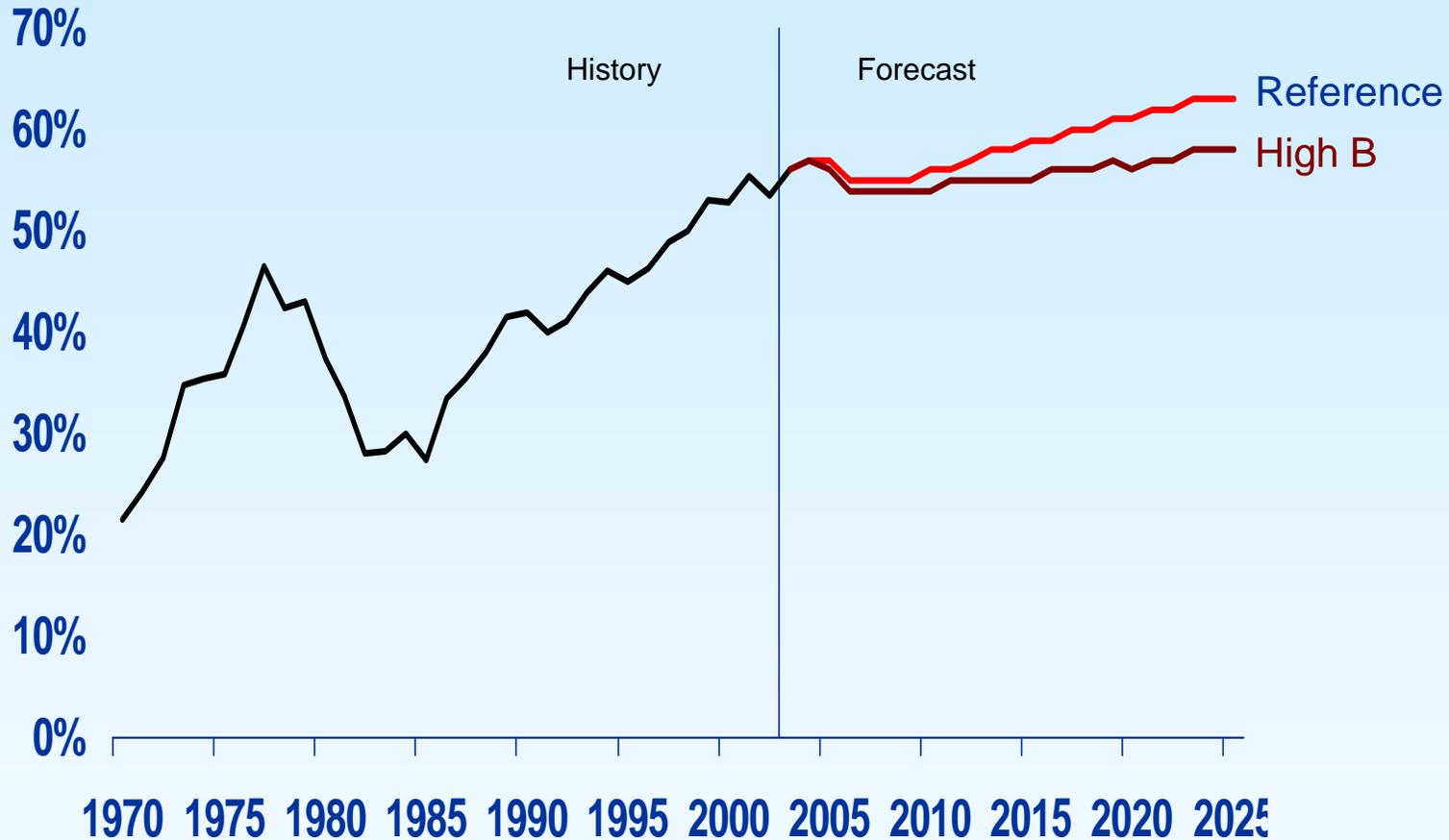


Petroleum Supply, Consumption, and Imports, 1990-2025 (million barrels per day)

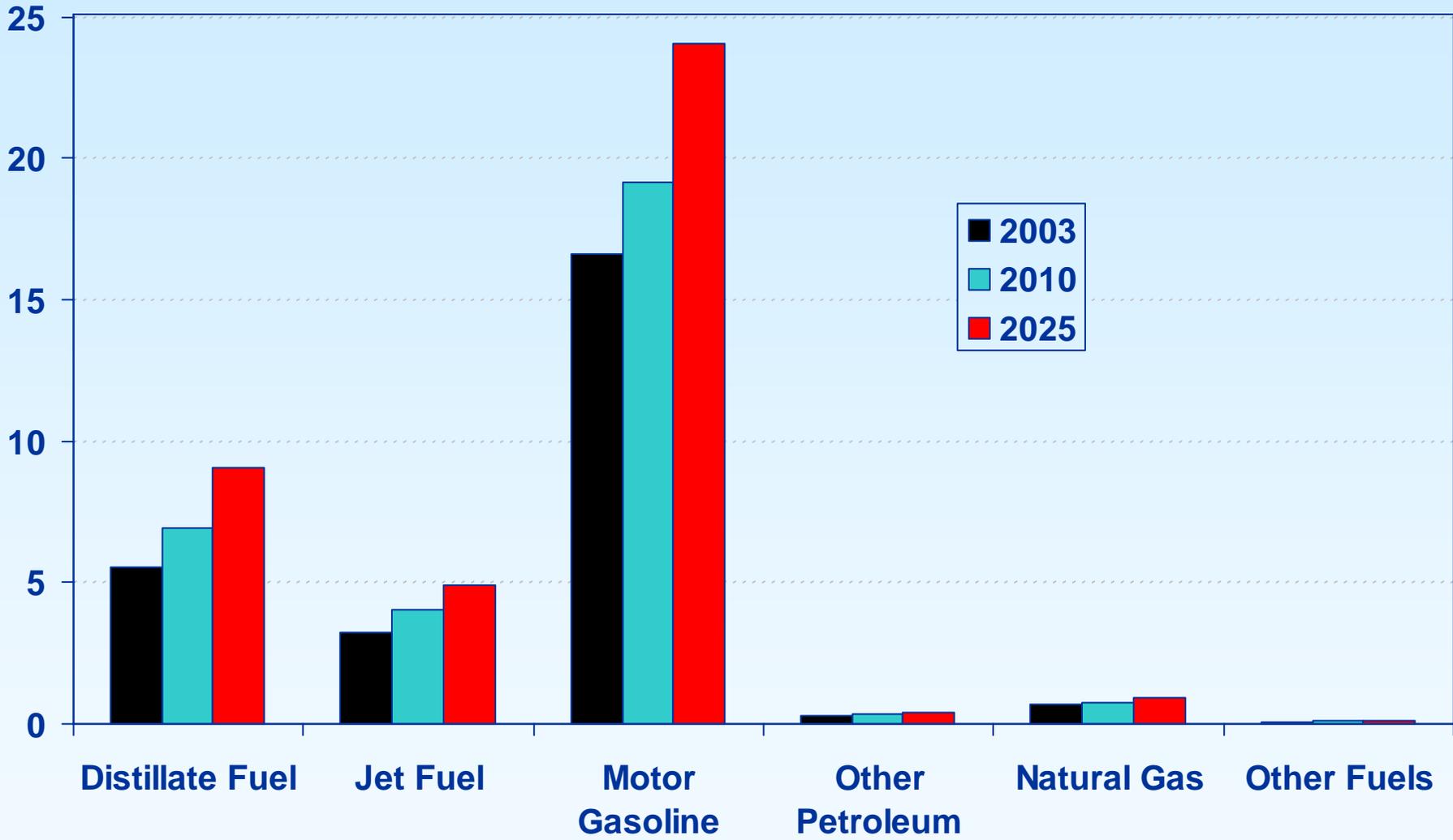


Source: Annual Energy Outlook 2005

Import Share of Products Supplied, 1990-2025 (percent)

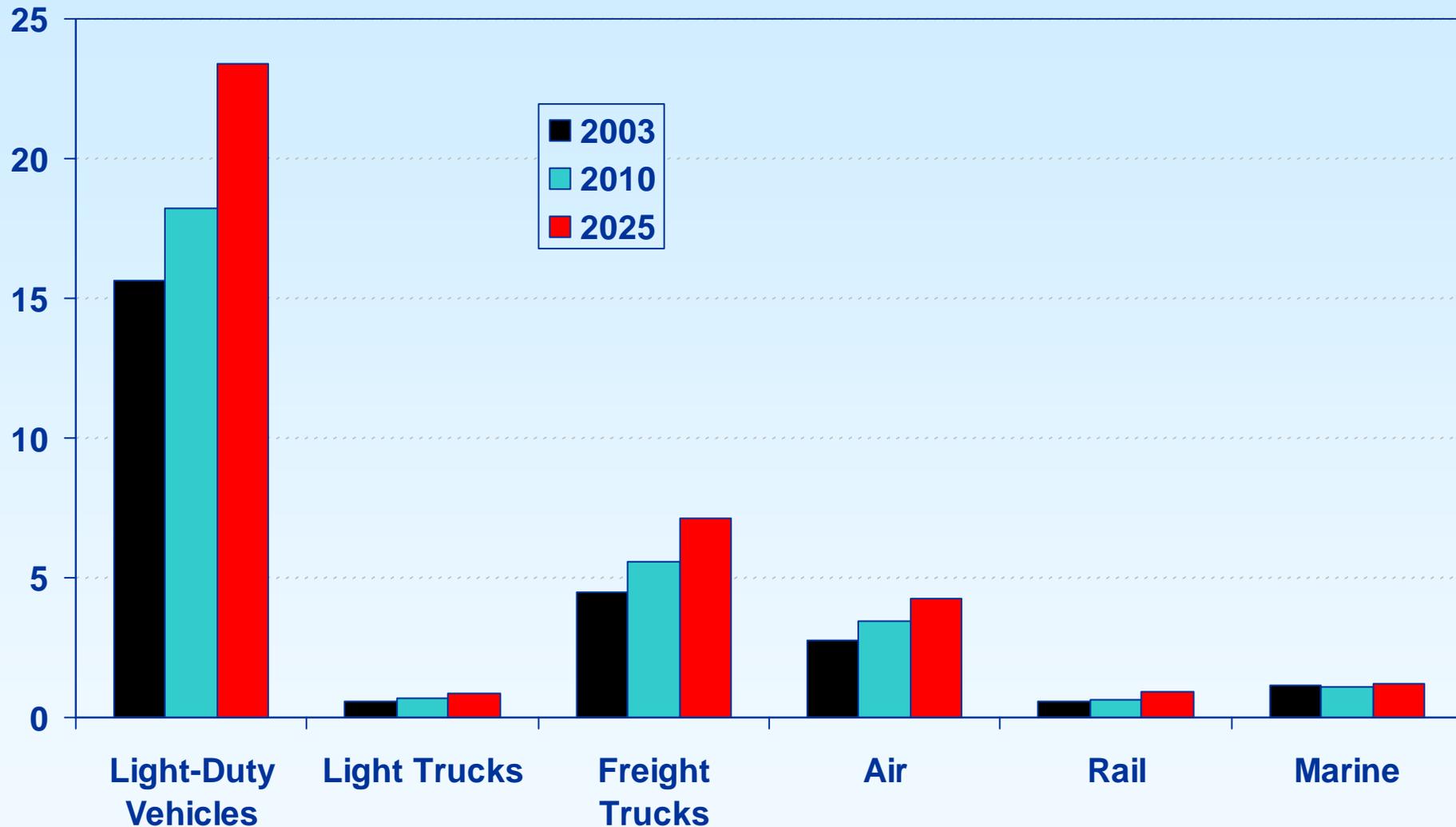


Reference Case Transportation Energy Consumption by Fuel, 2003, 2010, and 2025 (quadrillion Btu)



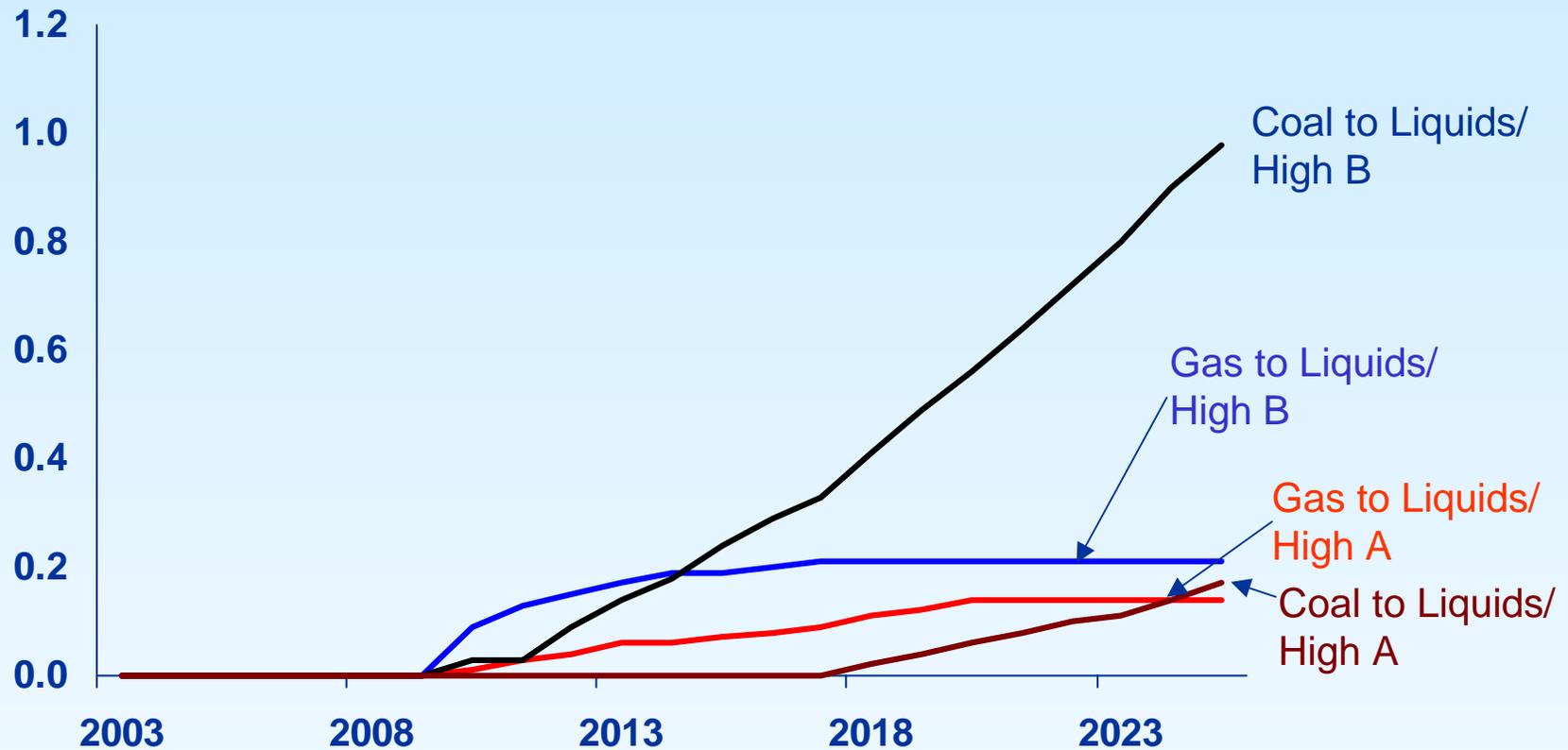
Source: Annual Energy Outlook 2005

Reference Case Transportation Energy Consumption by Mode, 2003, 2010, and 2025 (quadrillion Btu)



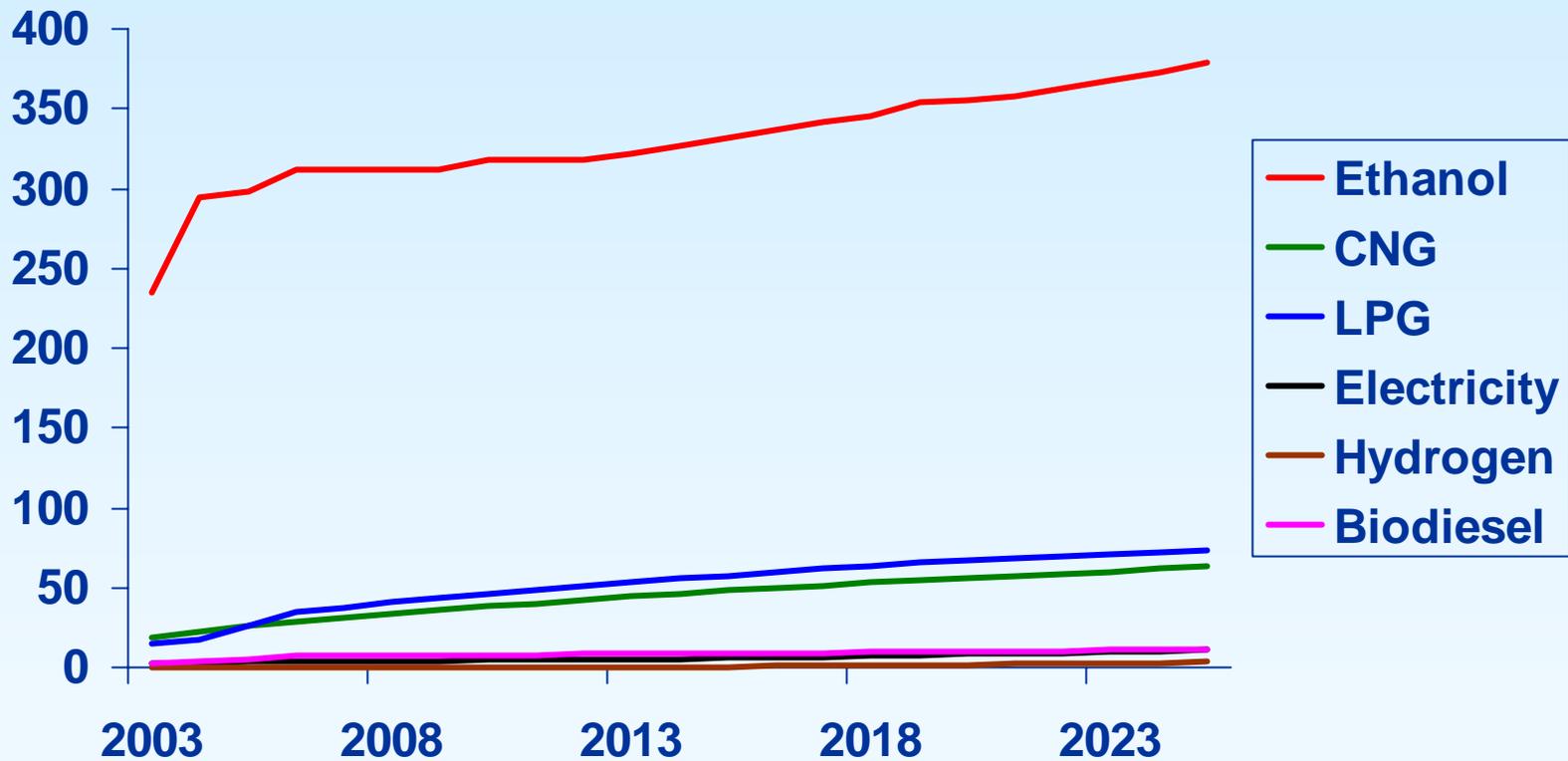
Source: *Annual Energy Outlook 2005*

Gas-to-Liquids and Coal-to-Liquids Production in High Oil Price Cases, 1990-2025 (million barrels per day)

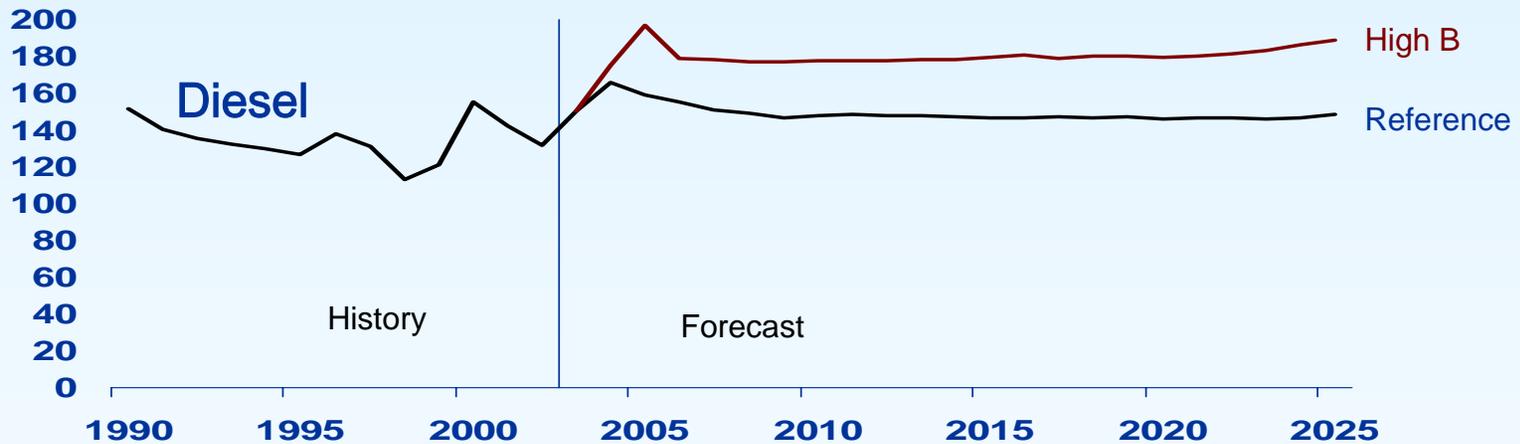
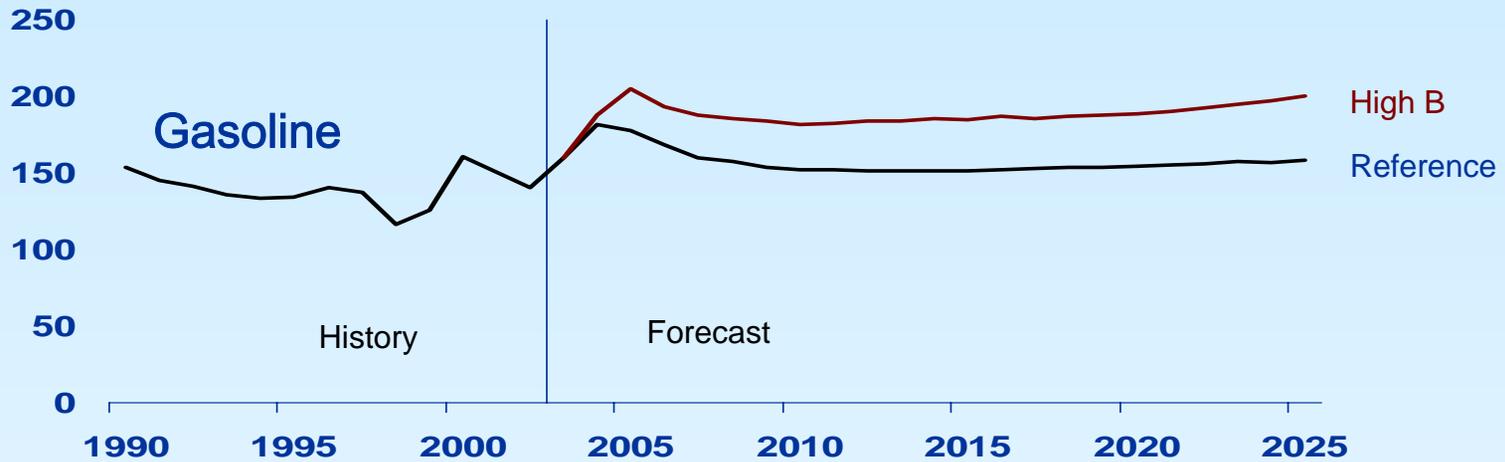


Source: *Annual Energy Outlook 2005*

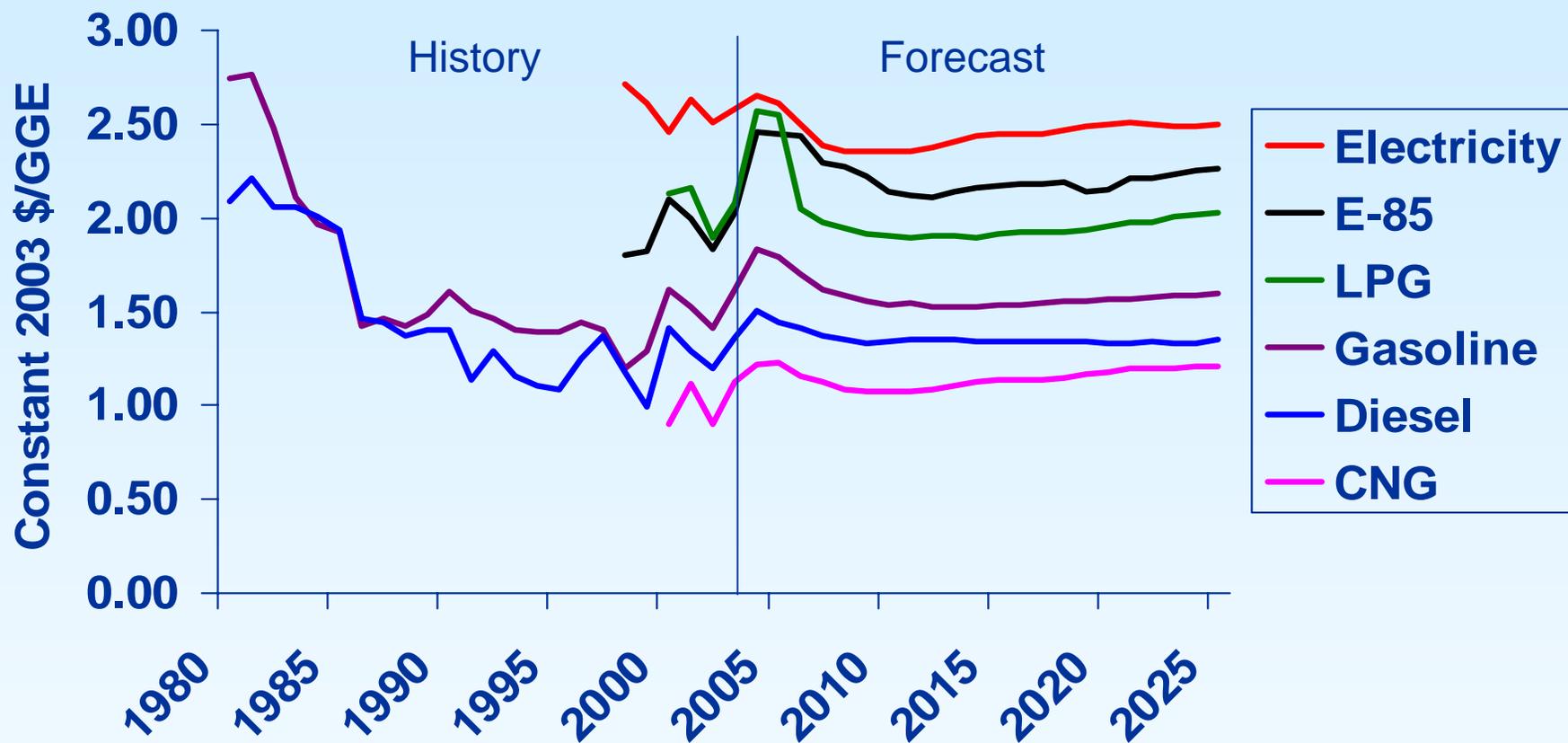
Light Duty Vehicle Alternative Fuel Consumption, 2003-2025 (trillion Btu)



Gasoline and Diesel Prices, 1990-2025 (2003 cents per gallon)



Reference Case Fuel Prices, 1980-2025 (2003 dollars per gasoline equivalent gallon)



Conclusions

- Higher oil prices benefit CTL and GTL by over 2 million bpd.
- Higher oil prices reduce transportation consumption by 1 million bpd.
- Ethanol expands market share from 2 to 4.5 percent of a shrinking gasoline market.
- Biodiesel remains flat at 5,900 bpd production contribution.
- Higher oil prices add 570,000 bpd of additional domestic production above the reference case.
- Energy independence remains elusive--at best holding the line at the 58 percent import level (High B case).
- Short-term, the blended fuels (ethanol and biodiesel) have the edge.
- CNG, propane, and electricity are projected to remain flat.



www.eia.doe.gov



Energy Information Administration