

Annual Energy Outlook 2012

Fuel Demand in the Transportation Sector

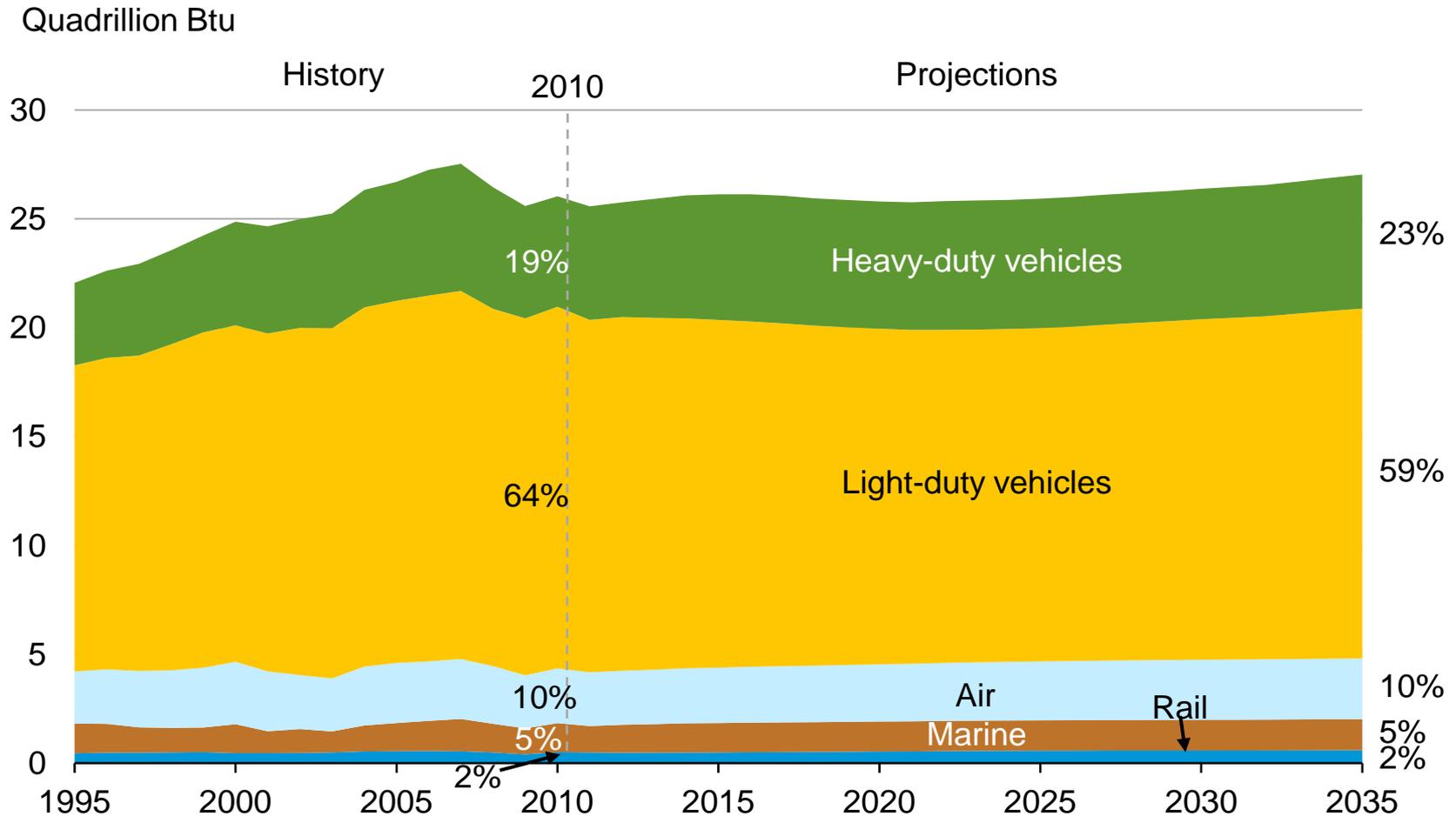


Bipartisan Policy Center

Jim Turnure, Director, Office of Energy Consumption and Efficiency Analysis

June, 2012 | Washington, DC

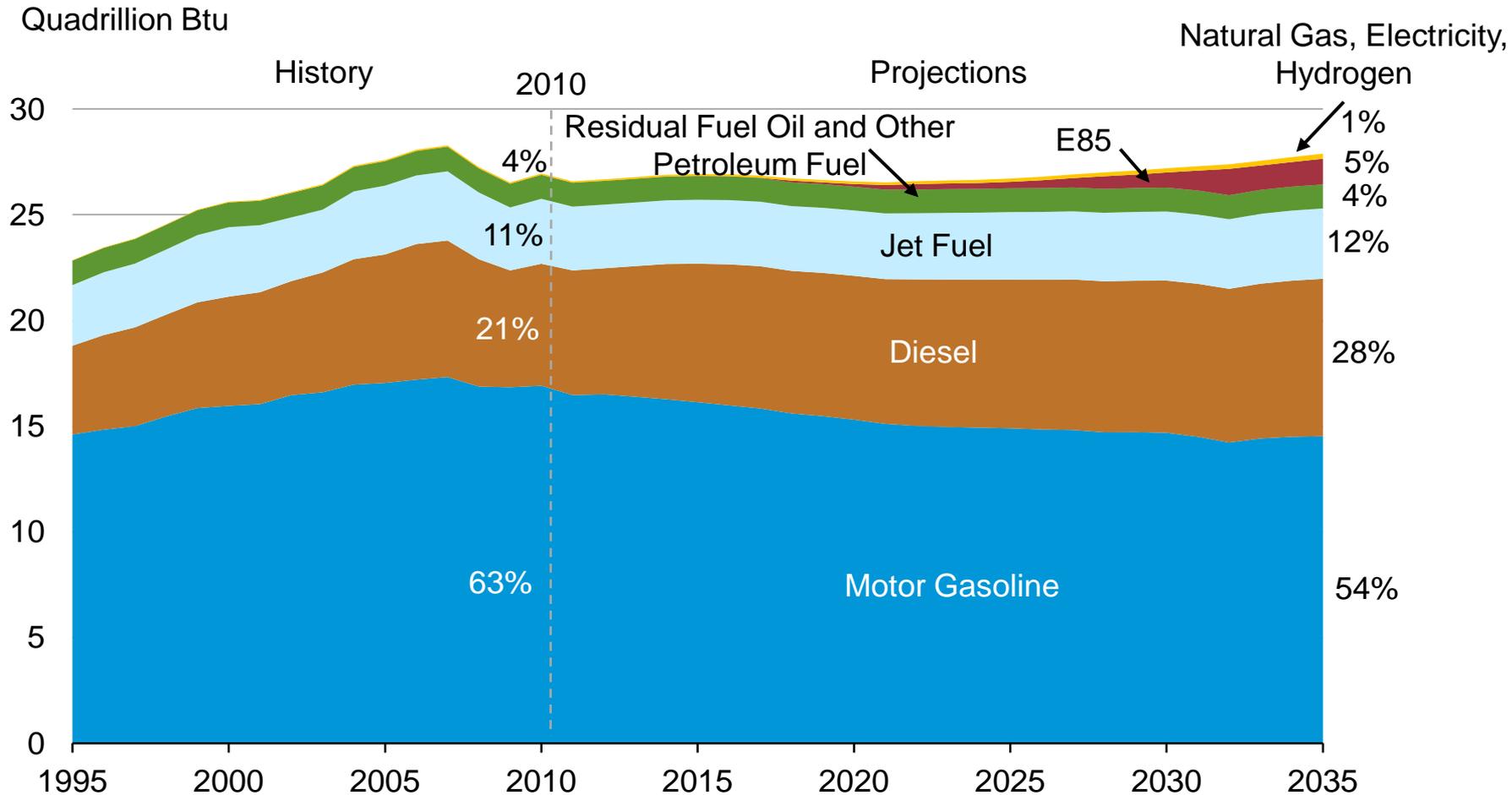
Transportation energy consumption projected to grow slowly through 2035



Source: EIA, Annual Energy Outlook 2012 Reference case

Excludes pipeline, lubricants, and military

Petroleum products continue to dominate transportation fuel consumption



Source: EIA, Annual Energy Outlook 2012 Reference case

Excludes pipeline

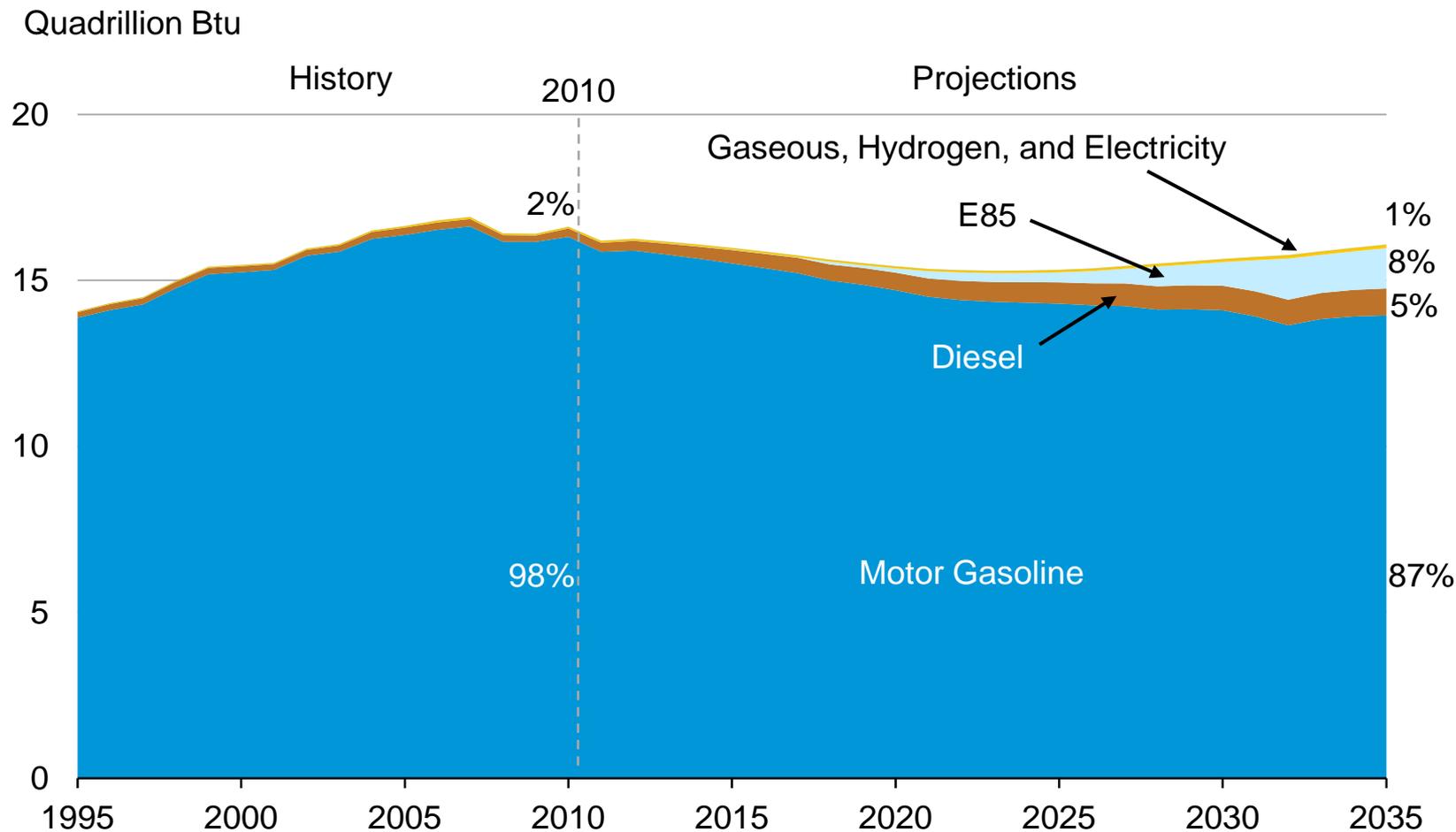
Efficiency improvements by highway vehicles mostly offset underlying drivers of growth in energy consumption

	2010	2035	Growth (2010-2035)
Light duty vehicles			
Fuel consumption (quadrillion Btu)	16.6	16.1	-3%
Number of licensed drivers (millions)	210	269	28%
Miles per licensed driver	12,700	13,300	5%
Efficiency of vehicle stock (mpg)	20.4	28.2	38%
Heavy duty vehicles			
Fuel consumption (quadrillion Btu)	5.1	6.2	22%
Manufacturing output (billion 2005 dollars)	4,260	6,285	48%
Number of heavy-duty vehicles* (millions)	8.9	12.5	40%
Miles per vehicle	26,200	27,600	5%
Efficiency of vehicle stock (mpg)	6.7	8.1	21%

*Excludes buses

Source: EIA, Annual Energy Outlook 2012 Reference case

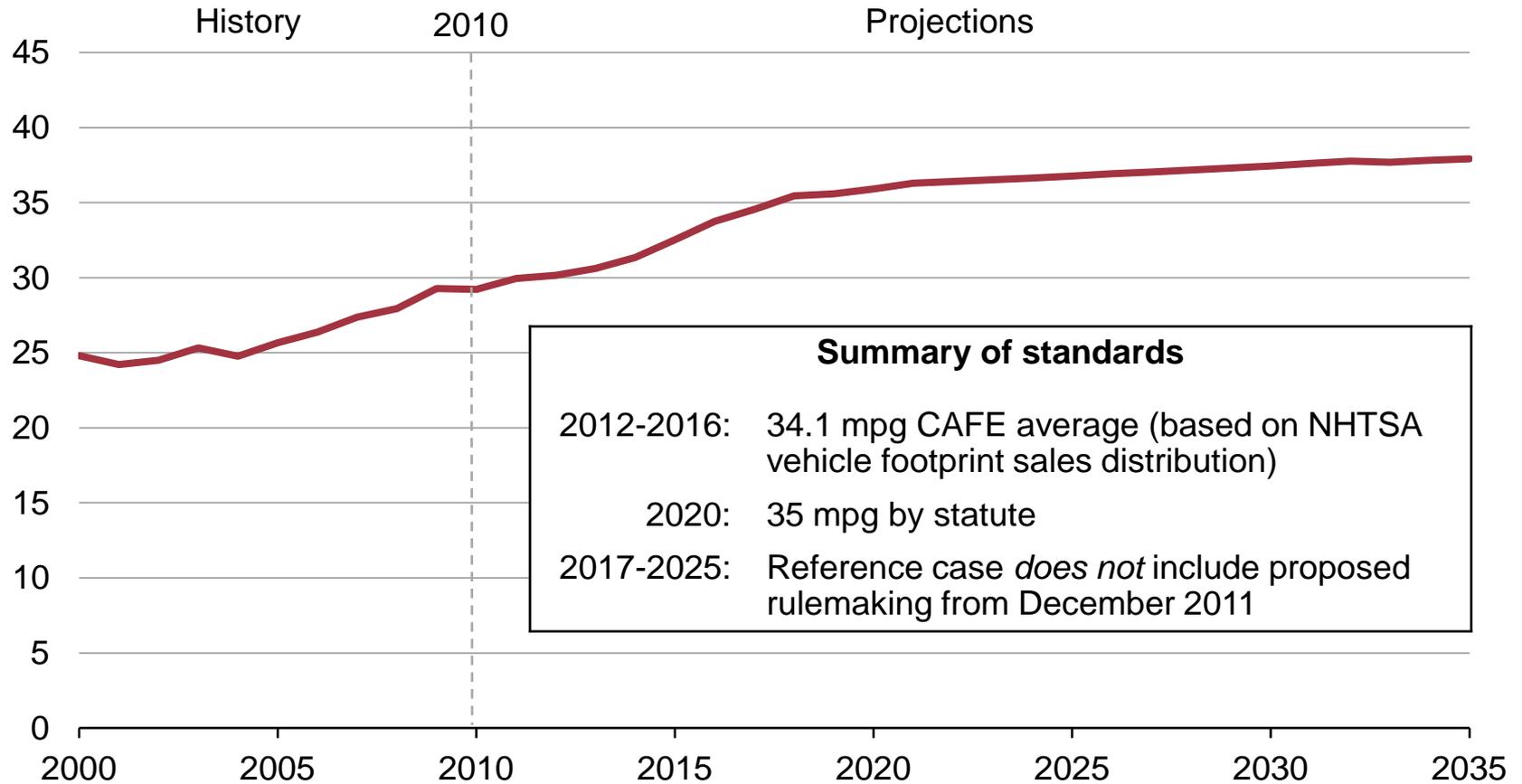
Light-duty vehicle energy consumption declines but motor gasoline remains the primary fuel



Source: EIA, Annual Energy Outlook 2012 Reference case

New light-duty vehicle fuel economy reaches almost 38 mpg by 2035 in the Reference case, which does not include proposed standards for MY2017 to MY2025 vehicles

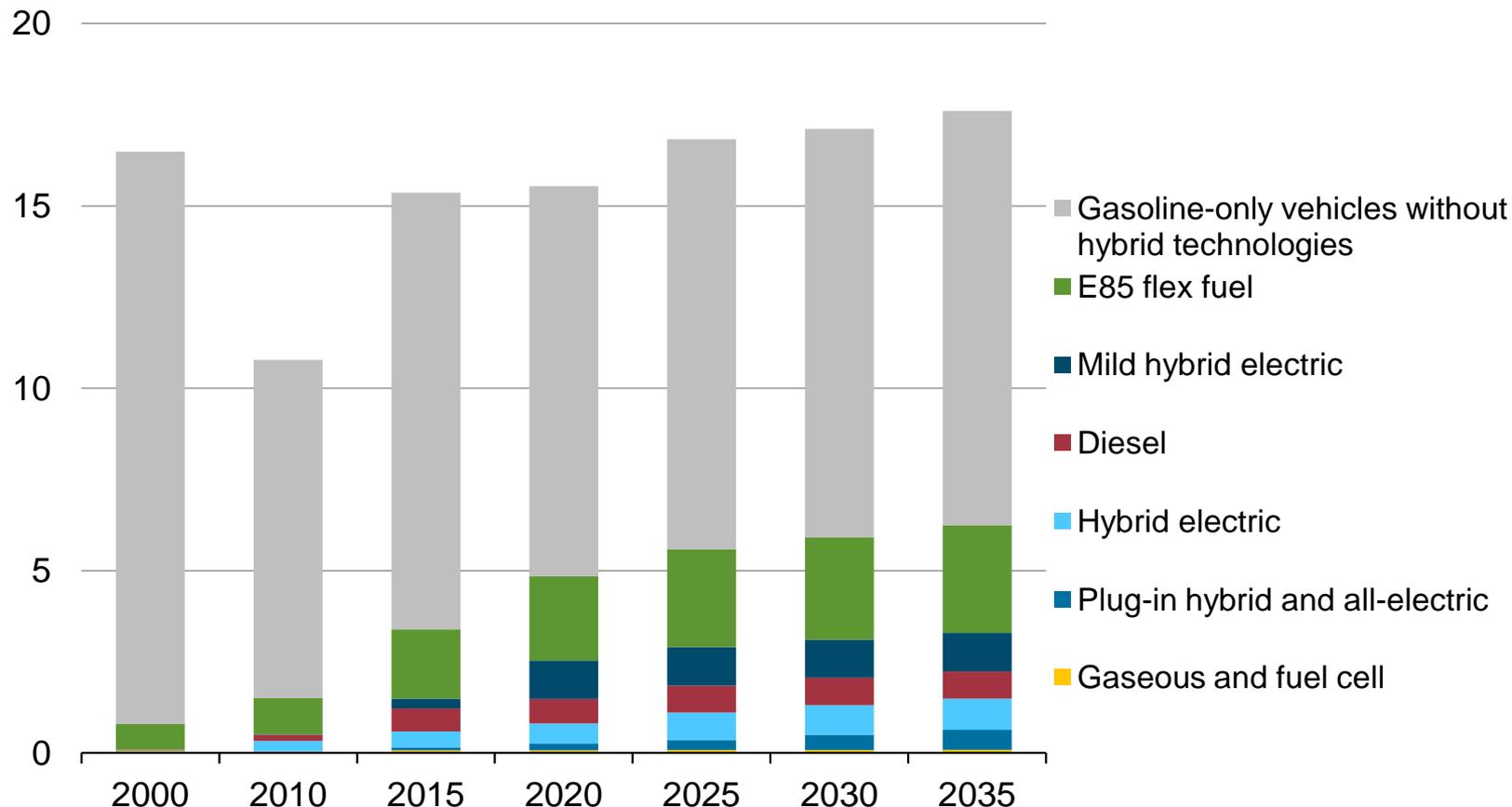
miles per gallon



Source: EIA, Annual Energy Outlook 2012 Reference case

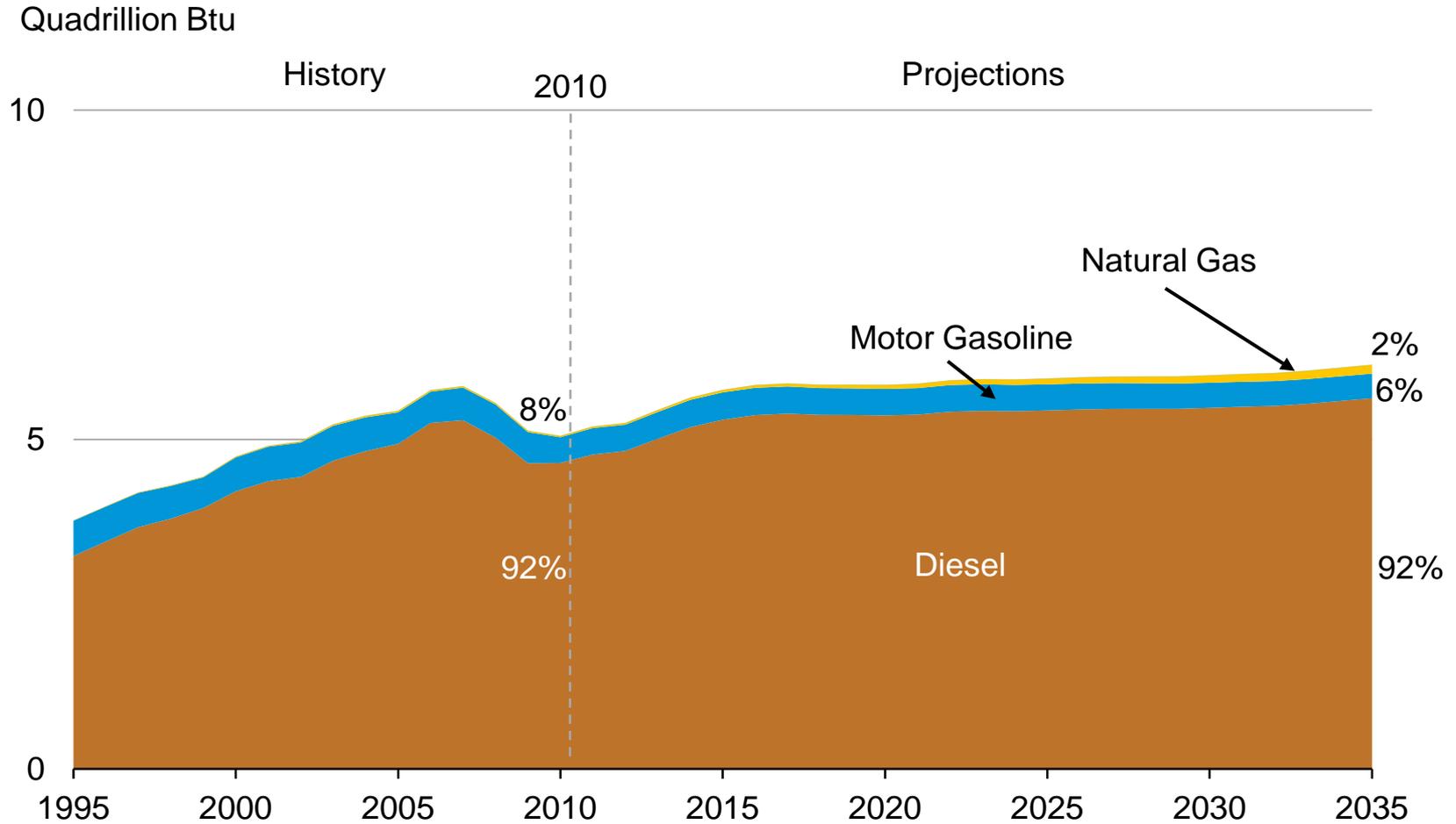
Gasoline-only vehicles without hybrid technologies decline as a share of new vehicle sales, but remain the largest share

U.S. light car and truck sales
millions



Source: EIA, Annual Energy Outlook 2012 Reference case

Heavy-duty vehicle energy consumption grows due to rising VMT and met primarily by diesel fuel



Source: EIA, Annual Energy Outlook 2012 Reference case

AEO2012 transportation side cases

- CAFE Standards case

- Explores energy impacts assuming that light-duty CAFE and greenhouse gas emissions standards proposed for model years 2017-2025 are enacted.

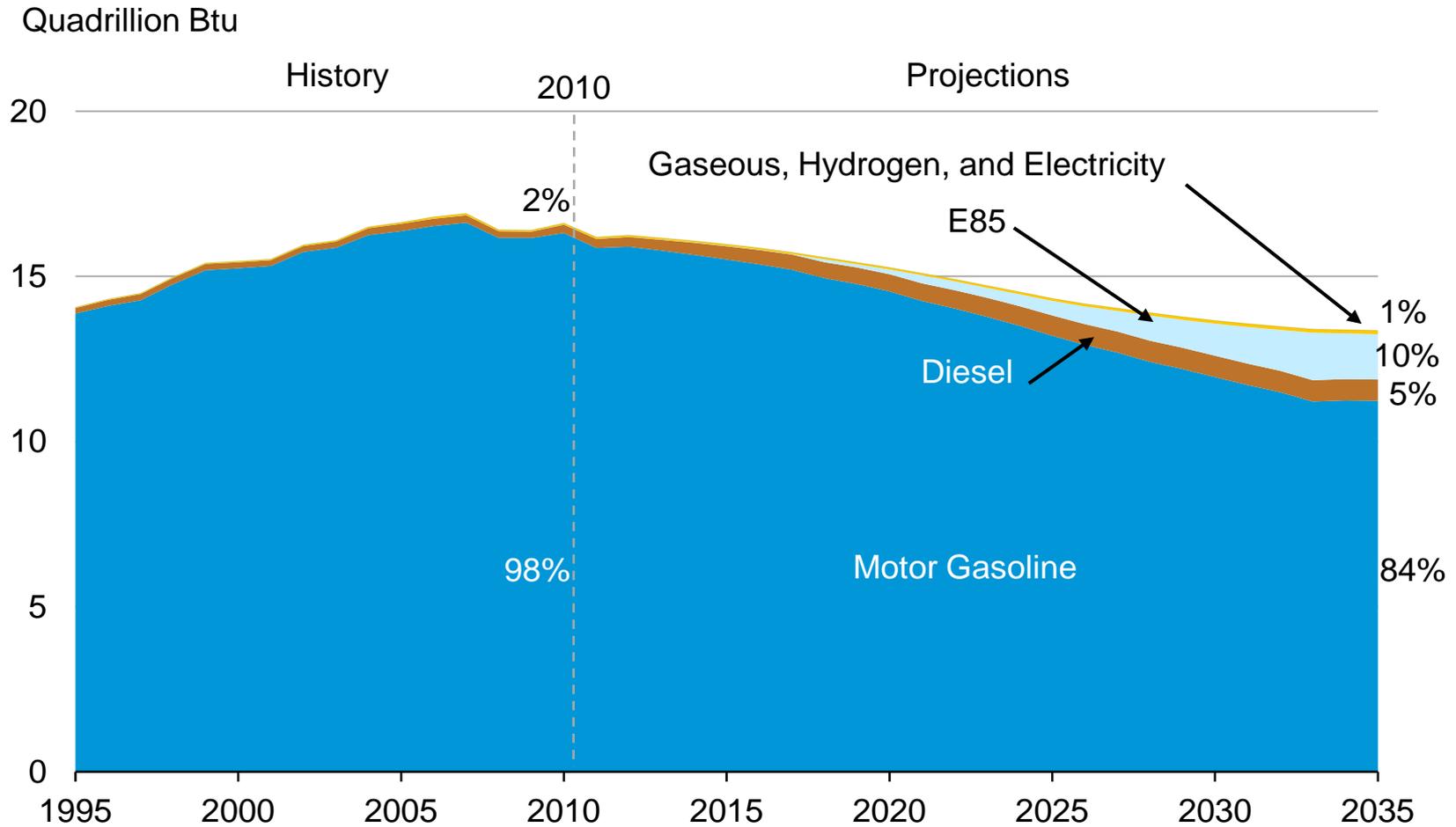
- High Technology Battery case

- Explores the impact of significant improvement in vehicle battery and non-battery system cost and performance for light-duty vehicles.

- HD NGV potential case

- Incorporates revised CNG and LNG pricing assumptions and heavy-duty vehicle market acceptance and explores energy and market issues associated with the assumed expansion of natural gas refueling infrastructure for heavy-duty vehicles.

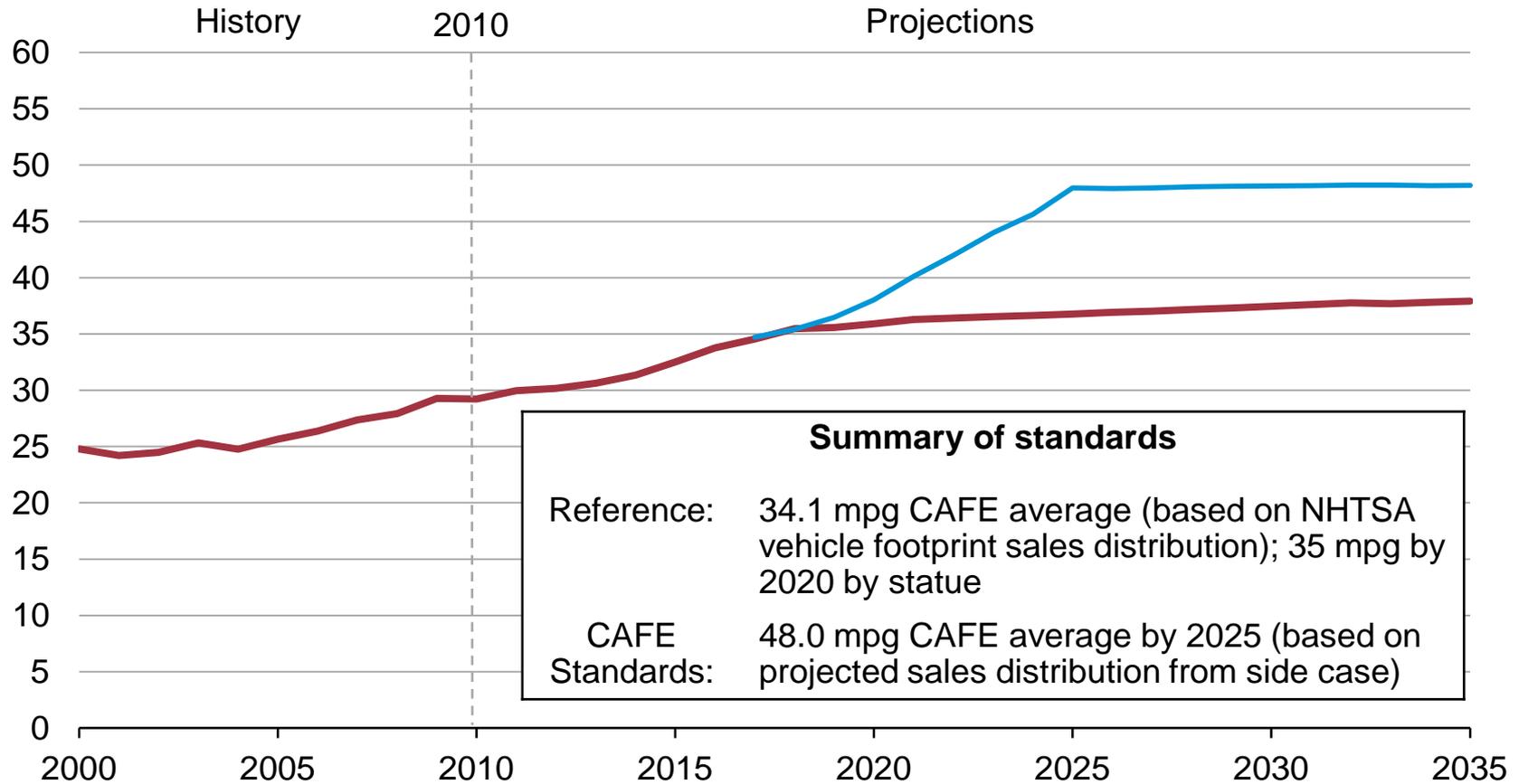
Light-duty vehicle energy consumption declines substantially in CAFE Standards case



Source: EIA, Annual Energy Outlook 2012 CAFE Standards case

New light-duty vehicle fuel economy in CAFE standards case compared to Reference case

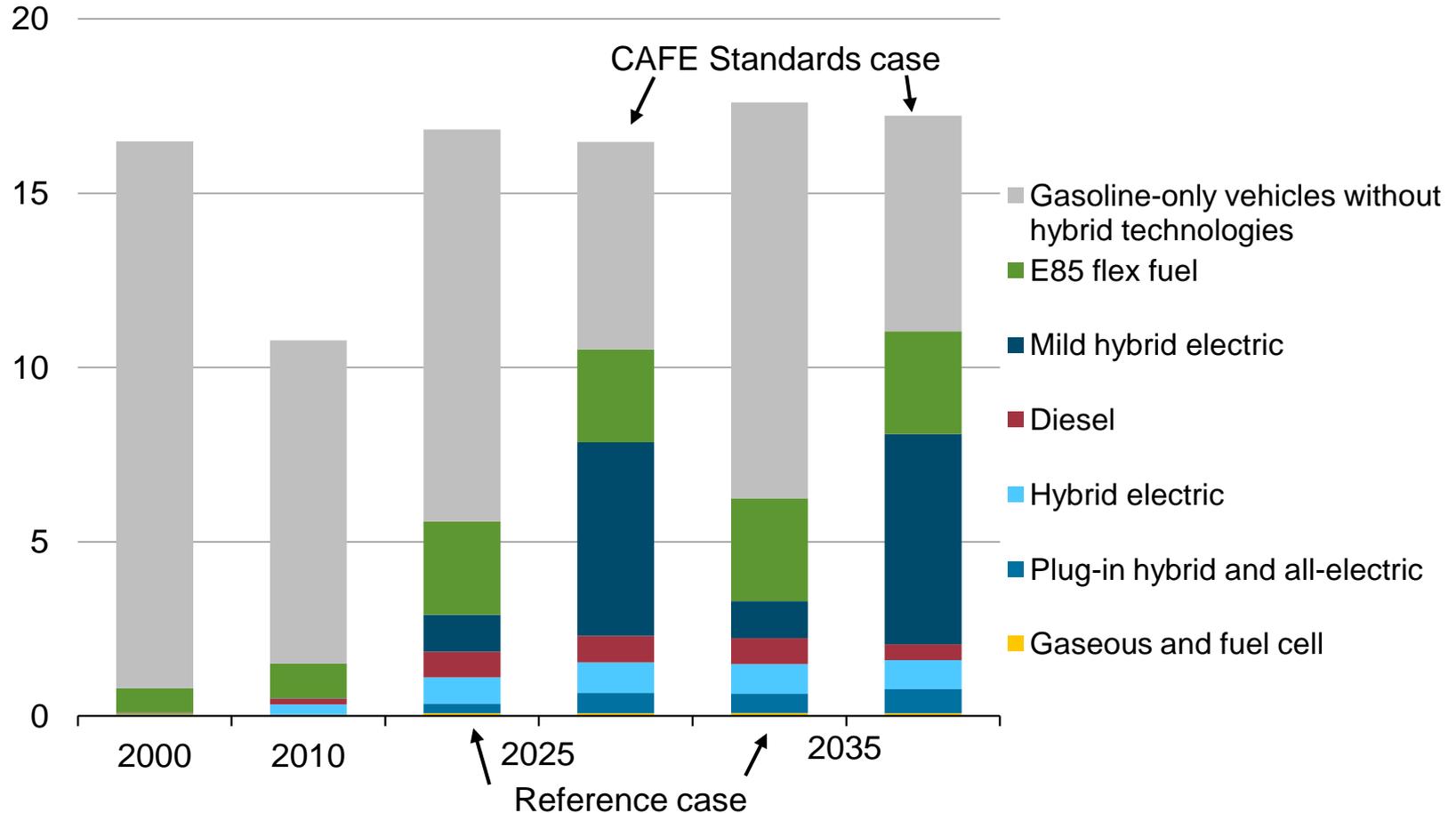
miles per gallon



Source: EIA, Annual Energy Outlook 2012 Reference case and CAFE Standards case

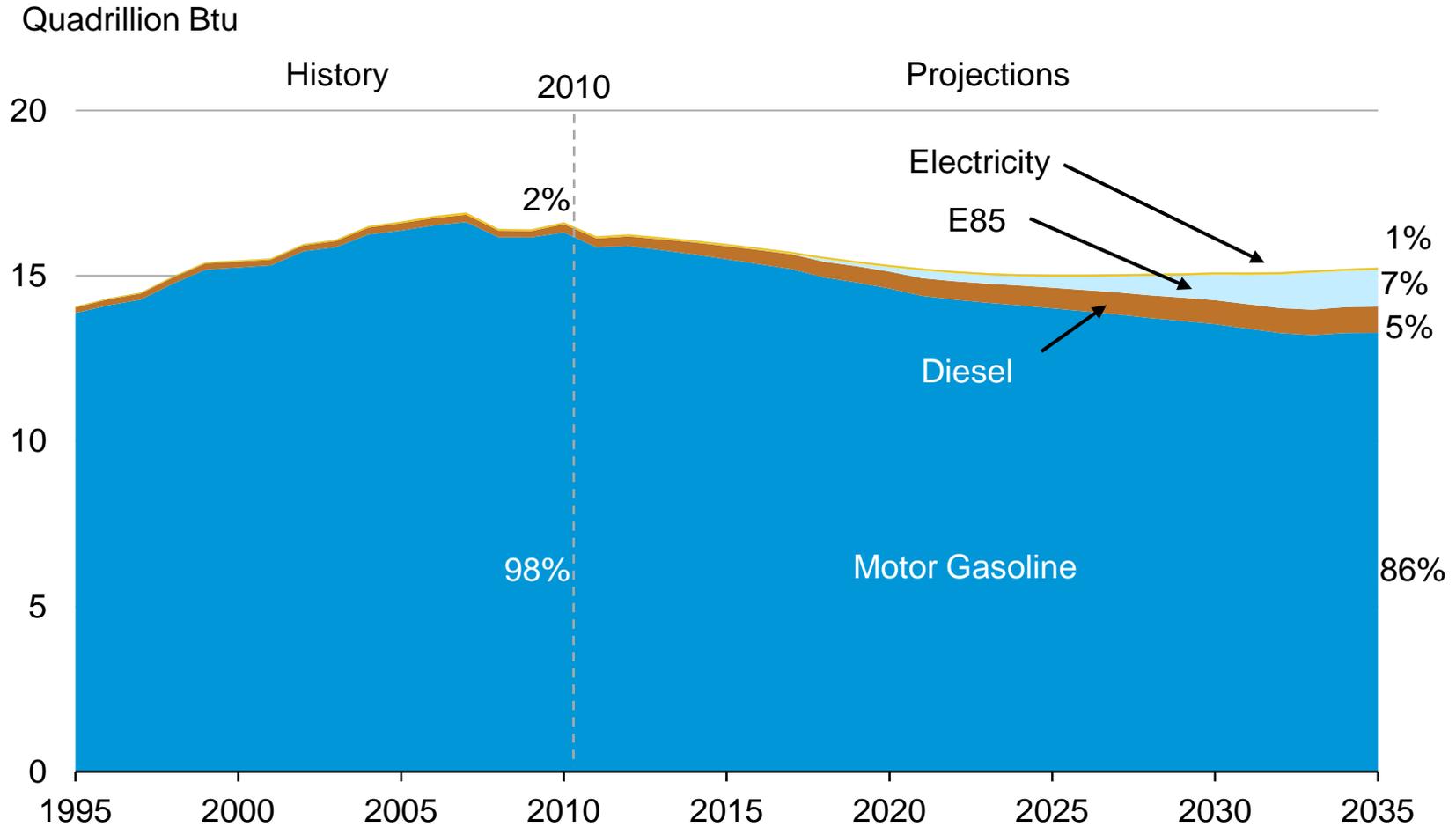
Gasoline-only vehicles decline as a share of new sales in CAFE Standards case

U.S. light car and truck sales
millions



Source: EIA, Annual Energy Outlook 2012 Reference case and CAFE Standards case

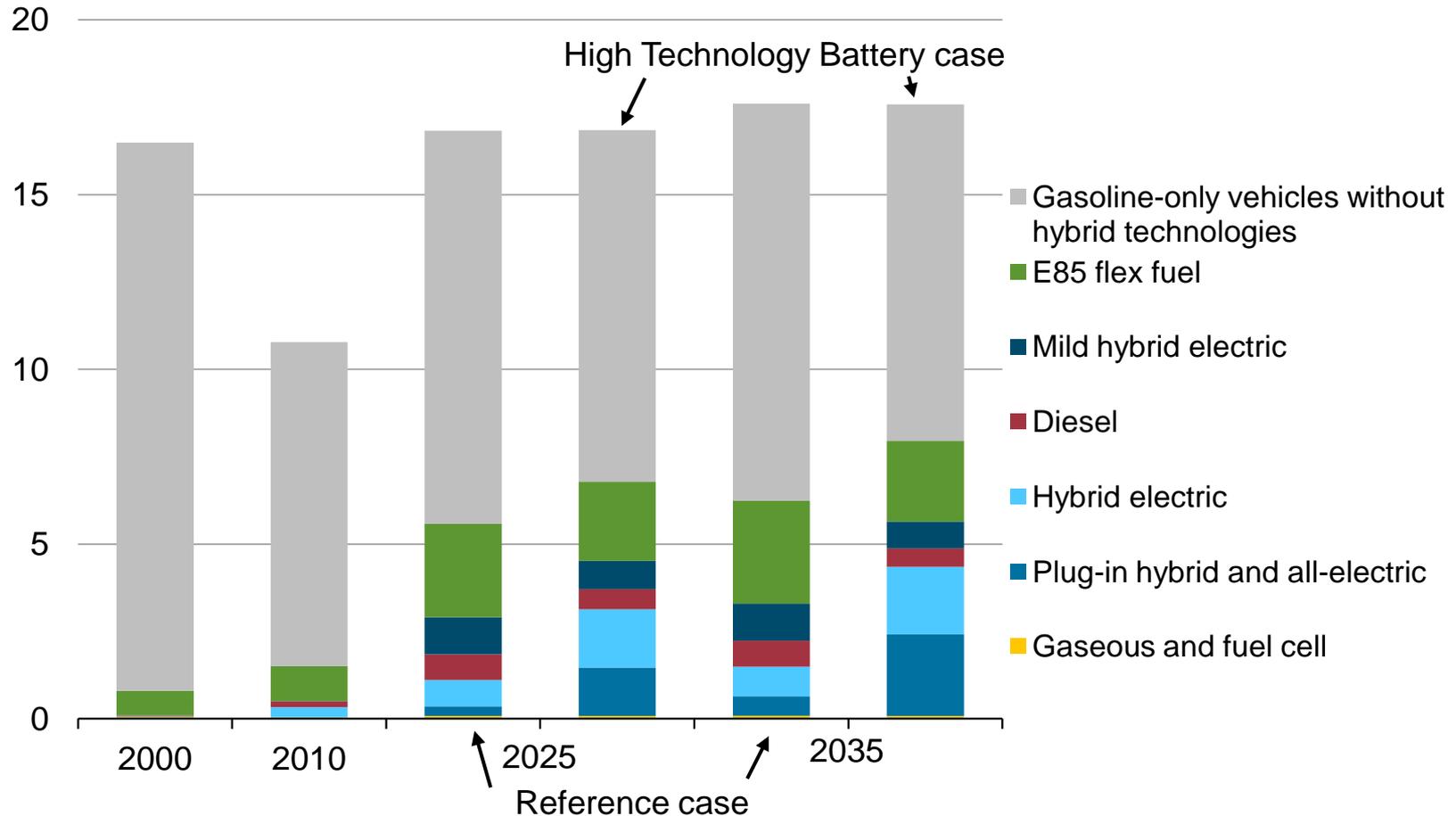
Battery technology breakthrough leads to relatively little change in light-duty vehicle energy consumption mix



Source: EIA, Annual Energy Outlook 2012 High Technology Battery case

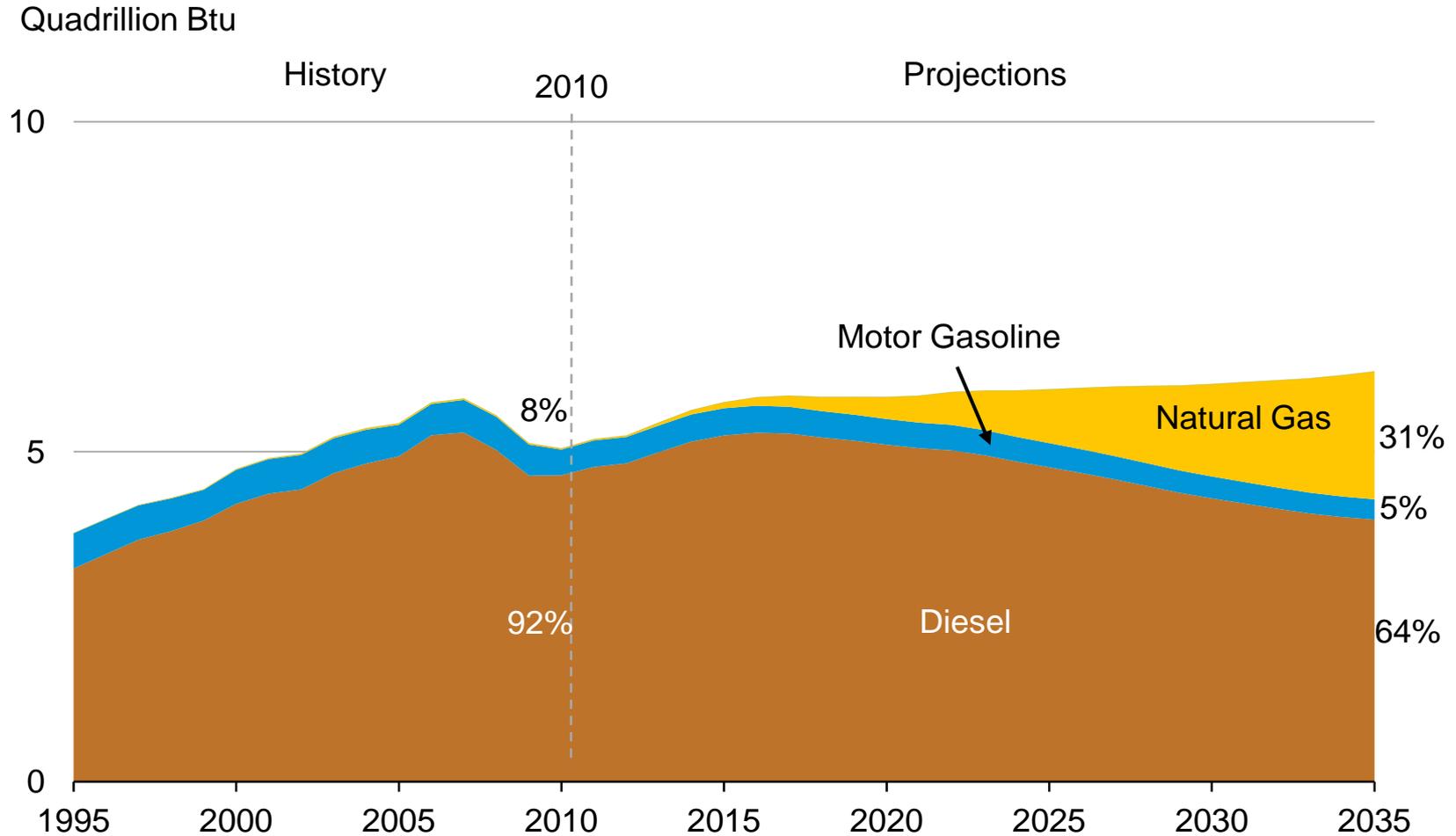
Plug-in and hybrid electric vehicle sales increase substantially by 2035 in High Technology Battery case

U.S. light car and truck sales
millions



Source: EIA, Annual Energy Outlook 2012 Reference case and High Technology Battery case

Heavy-duty vehicle natural gas consumption grows substantially in the HD NGV case



Source: EIA, Annual Energy Outlook 2012 HD NGV case

For more information

U.S. Energy Information Administration home page | www.eia.gov

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International Energy Outlook | www.eia.gov/forecasts/ieo

Monthly Energy Review | www.eia.gov/totalenergy/data/monthly

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