

Energy for the U.S. Industrial Sector: Opportunities and Challenges

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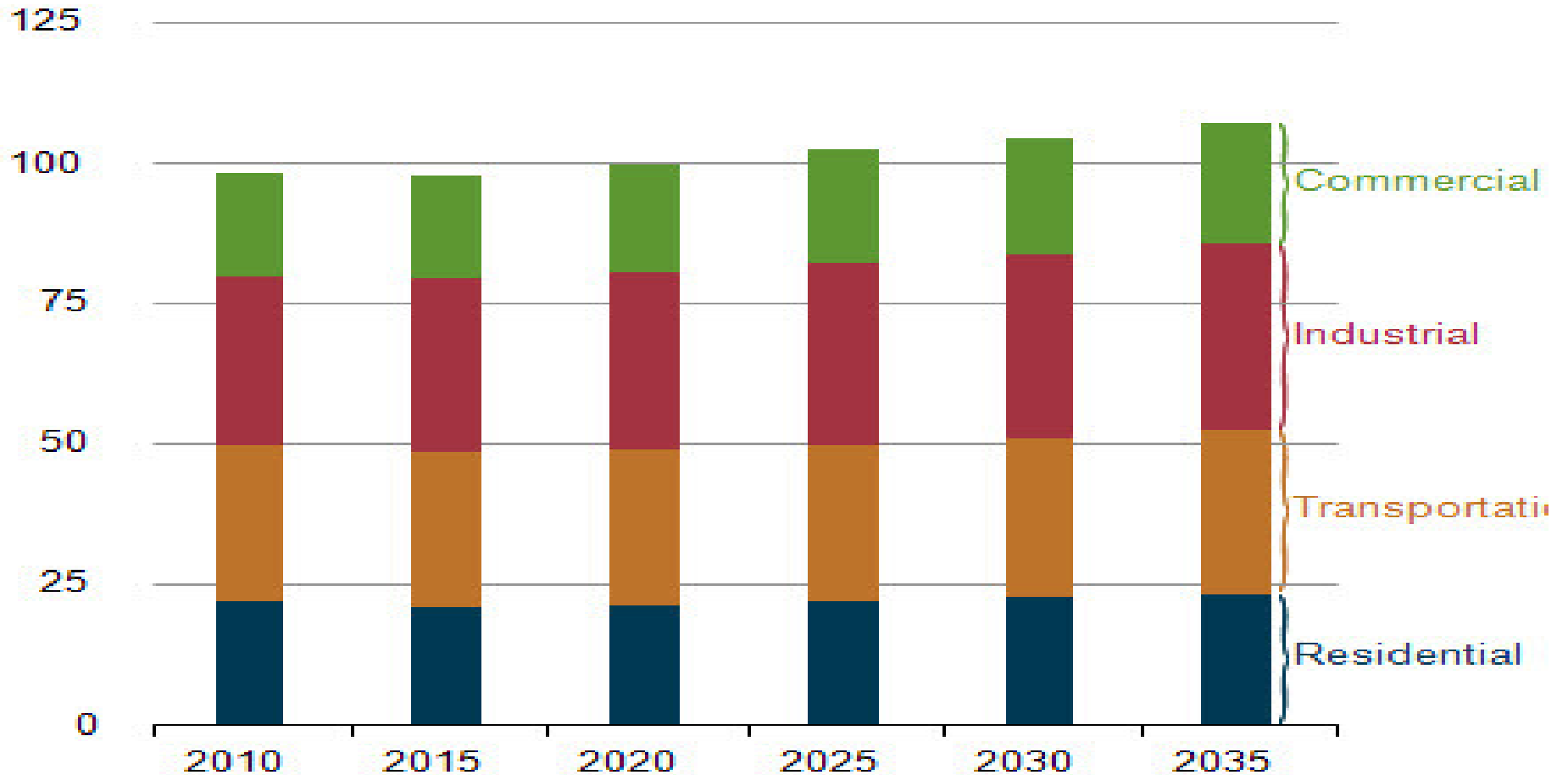
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AMERICAN COUNCIL FOR CAPITAL FORMATION

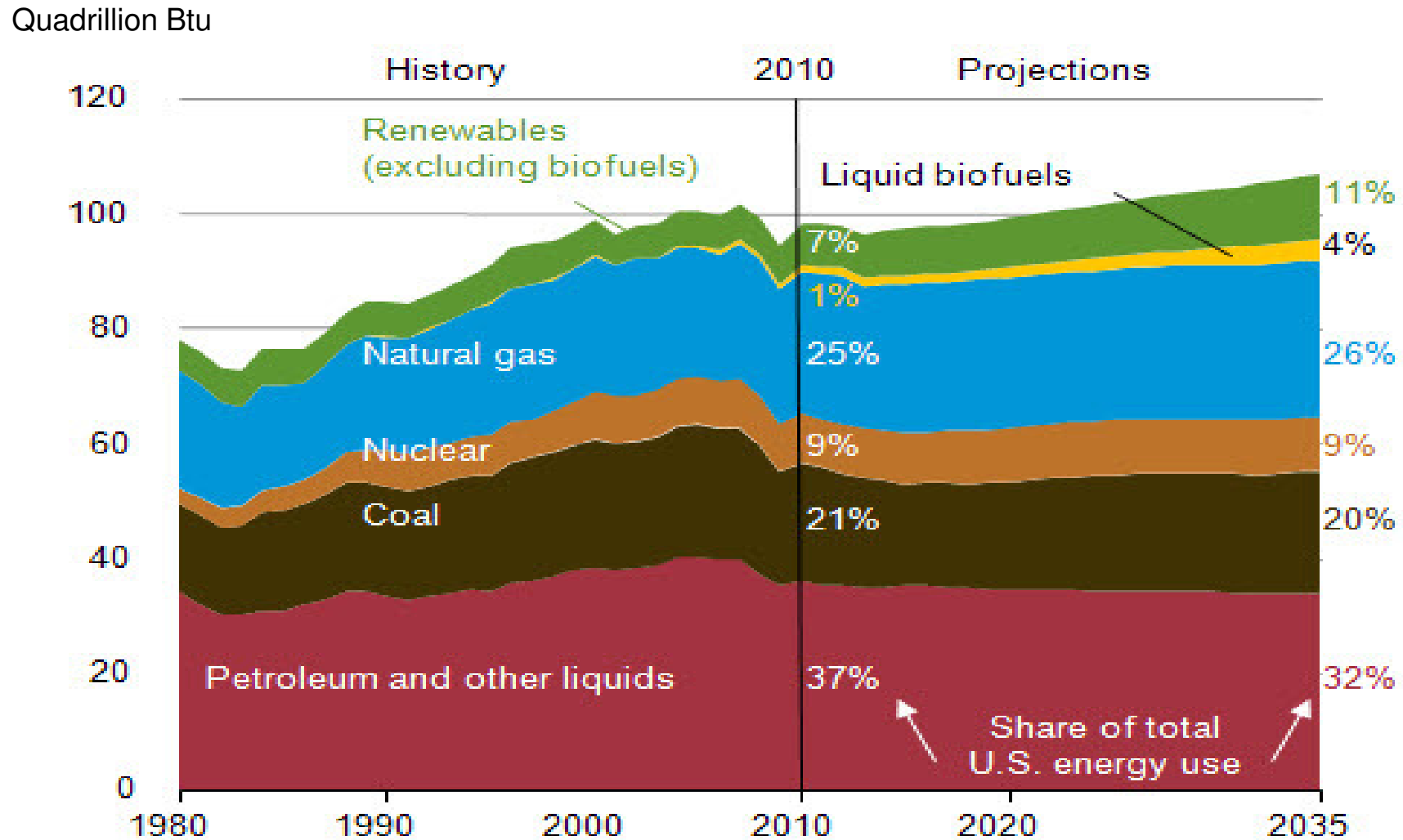
Primary Energy Use by end-use Sector, 2010-2035 (quadrillion Btu)

Quadrillion Btu



Source: EIA, Annual Energy Outlook 2012, Figure 72.

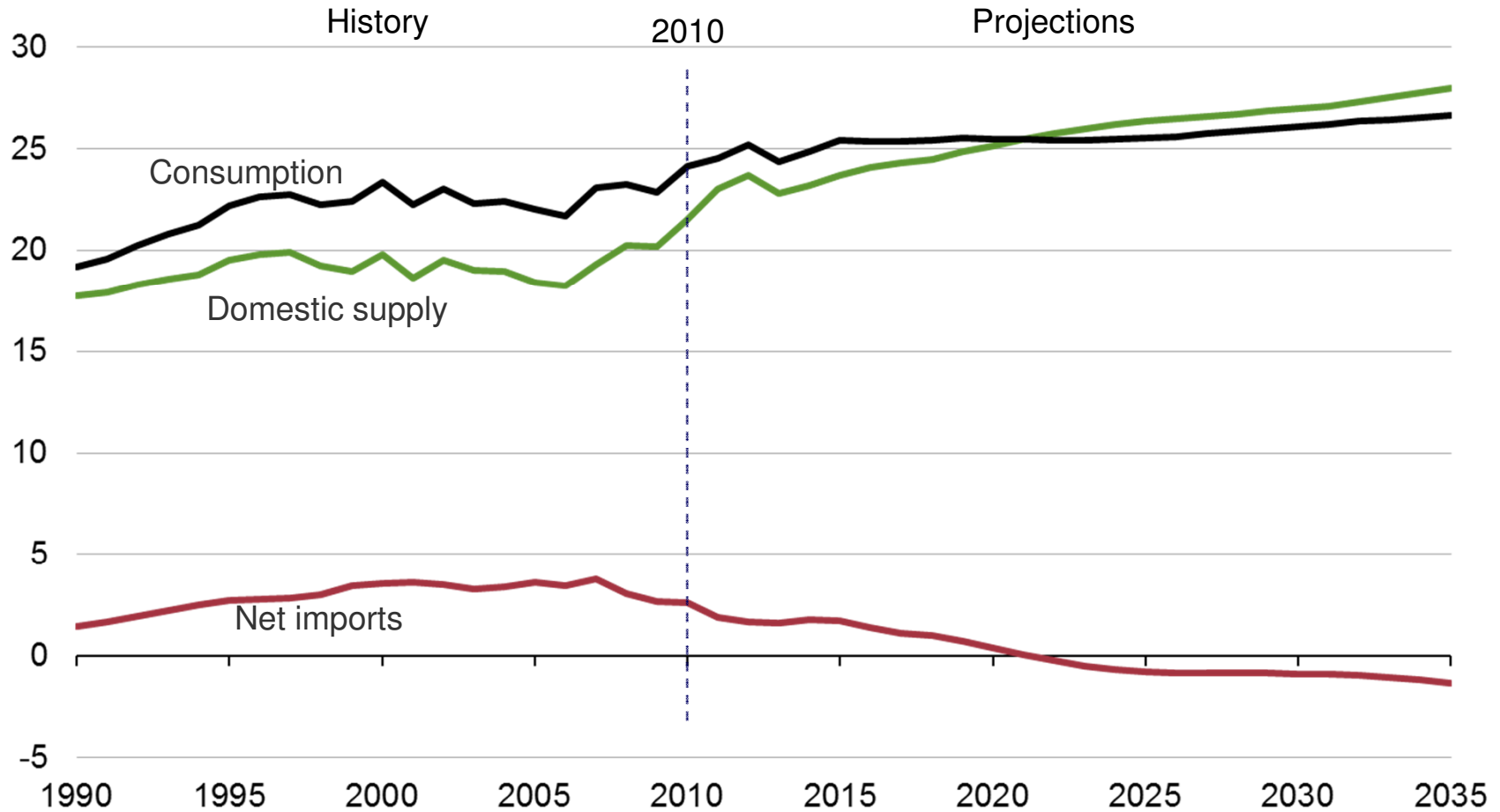
Primary Energy Use by Fuel, 1980-2035 (quadrillion Btu)



Source: EIA, Annual Energy Outlook 2012, Figure 73.

Domestic Natural Gas Production Grows Faster Than Consumption

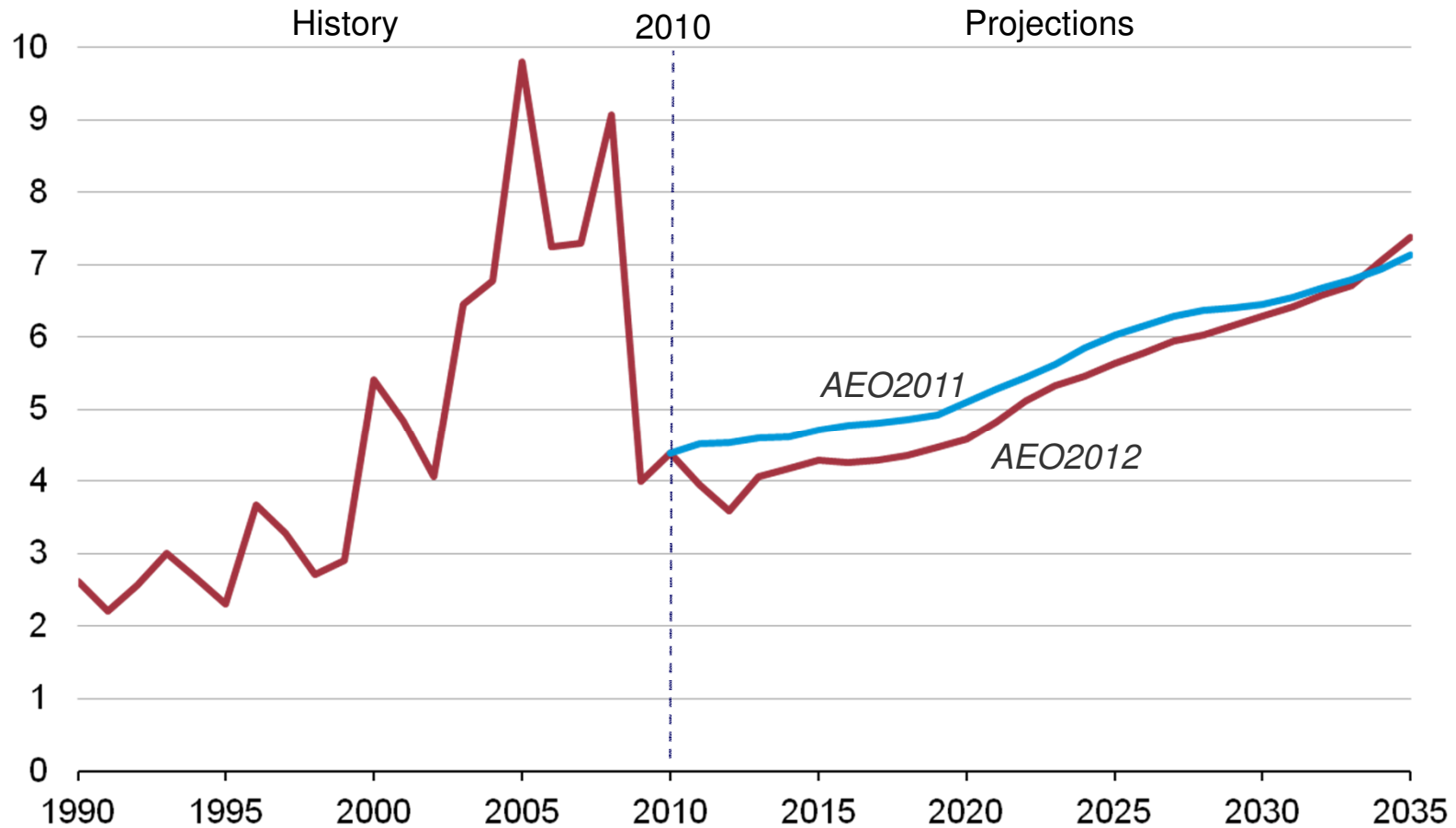
U.S. dry gas trillion cubic feet per year



Source: EIA, Annual Energy Outlook 2012.

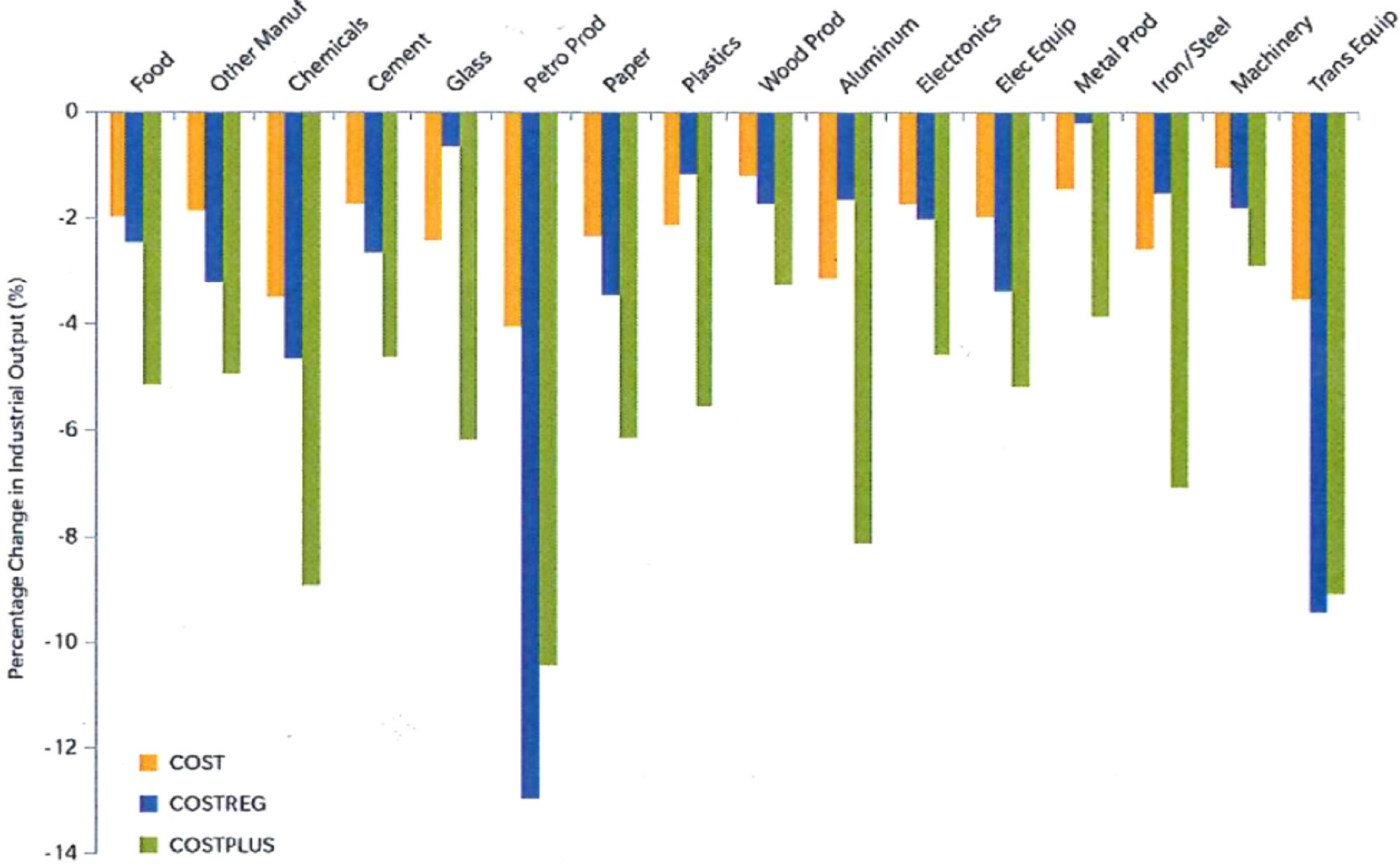
Natural Gas Price Projections Are Lower Than in AEO 2011, Consistent with Recent Market Developments

Natural gas spot price (Henry Hub)
2010 dollars per million Btu



Source: EIA, Annual Energy Outlook 2012 and EIA, Annual Energy Outlook 2011.

Impact of Major Regulations on Physical Output in Manufacturing (Annual Average Percent Change Averaged over 2012-2021)



Source: "Macroeconomic Impacts of Federal Regulation of the Manufacturing Sector," MAPI-NERA.

The Economic Impact of EPA's GHG Regulations on GDP and Employment in 2014

Decrease in Investment in Directly Impacted Industries	Reduction in Capital Investment by \$25 Billion	Reduction in Capital Investment by \$75 Billion
Value Added (\$Billions)	-\$47	-\$141
Employment (Total)	-476,200	-1,428,700
Manufacturing	-70,100	-210,400

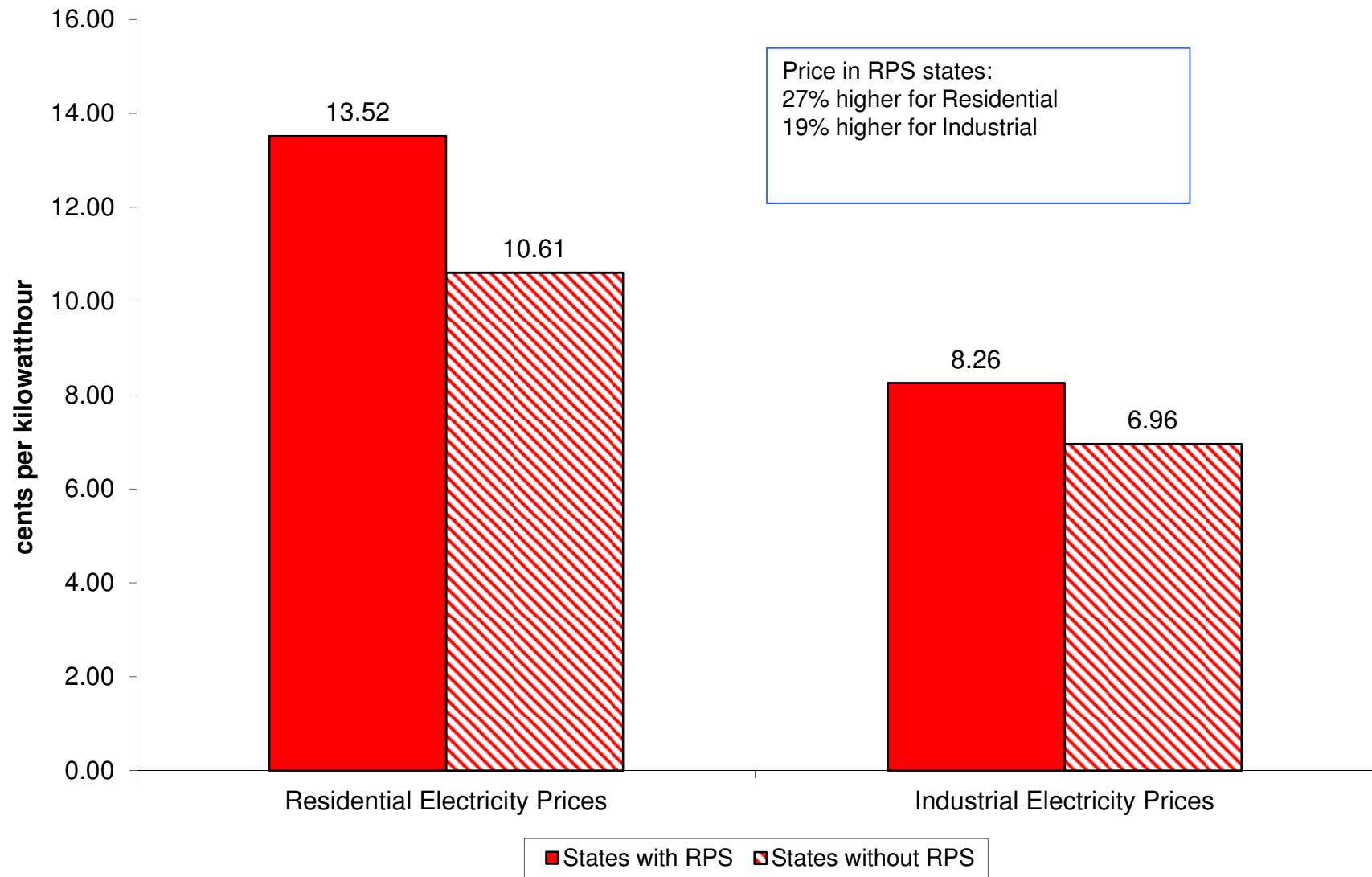
Source: "The Impact of EPA Regulation of GHGs under the Clean Air Act on U.S. Investment and Job Growth," Margo Thorning, Testimony Before the Subcommittee on Energy and Commerce, U.S. House of Representatives, February 9, 2011.

Cost of Electric Generating Capacity: Estimated Levelized Cost of New Generation Resources, 2016 (2009\$/megawatthour)

	Levelized Capital Cost	Total System Levelized Cost
Conventional Coal	\$65.5	\$95.1
Natural Gas: Conventional Combined Cycle	\$17.5	\$65.1
Advanced Nuclear	\$90.2	\$114
Wind	\$83.3	\$96.1
Wind-Offshore	\$209.7	\$243.7
Solar PV	\$194.9	\$211
Biomass	\$55.4	\$112.6

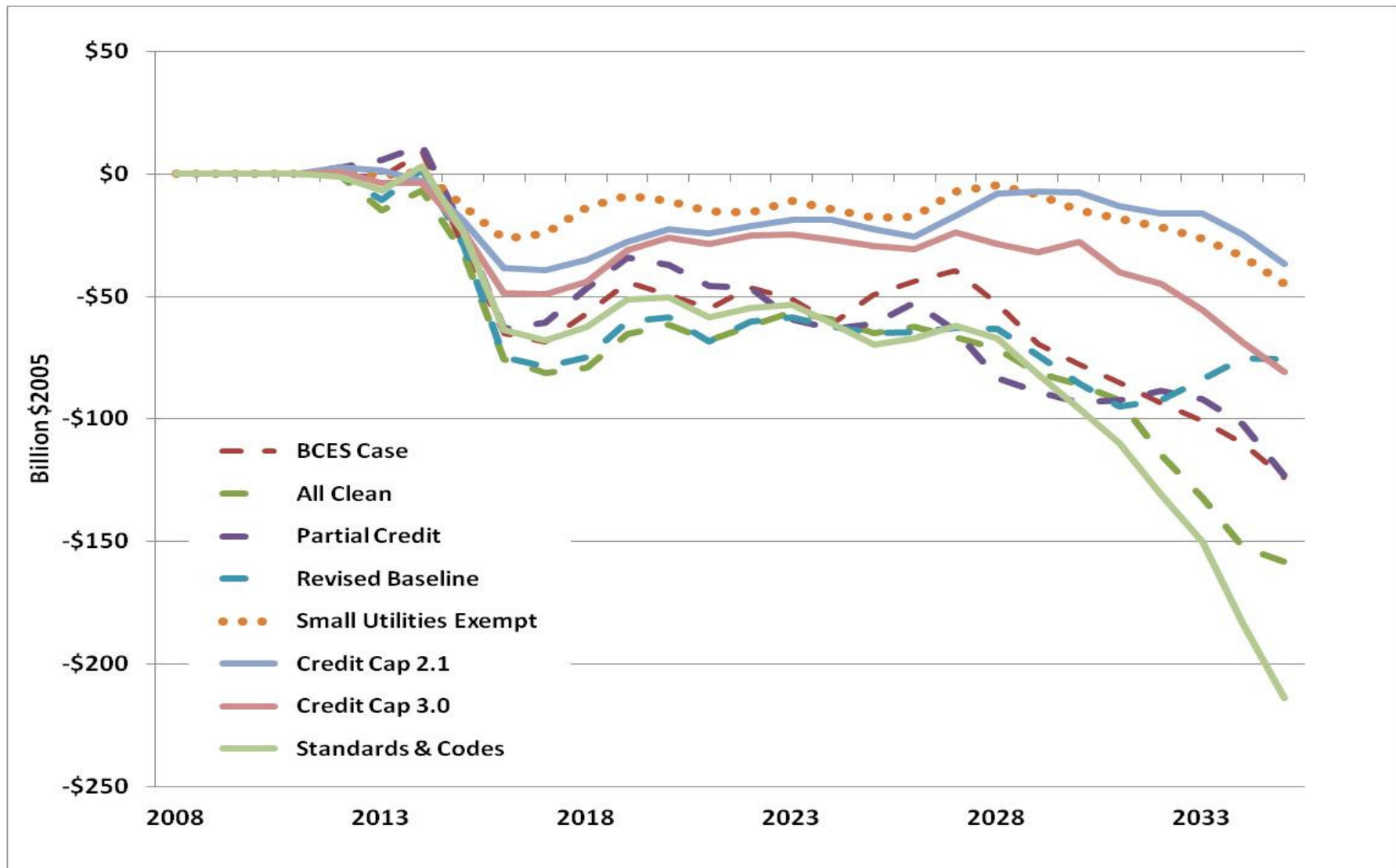
Source: Energy Information Administration, Annual Energy Outlook 2011, April 2011.

Electricity Prices: States with Renewable Portfolio Standards versus States without RPS



Source: Data for year to date, July 2012. Energy Information Administration, Table 5.6.B.

Clean Energy Standard: Impact on U.S. Gross Domestic Product (Change in Real GDP from Reference Case (Billion \$2005))



Source: "Analysis of Impacts of a Clean Energy Standard," Energy Information Administration, November 2011.

U.S. Tax Reform: Potential Impacts on Manufacturing

- Some plans such as Bowles/Simpson eliminate all deductions and lowers business tax rate to 26- 28%**
- Loss of provisions such as accelerated depreciation and Section 199 disadvantages manufacturing**
- Capital intensive firms may face higher capital costs for new investment due to cash flow impact**
- Costs of complying with new energy and environmental regulations may rise due to changes in capital cost recovery**
- Cost of energy may rise as energy producers and utilities face higher tax burdens**

Conclusions

- **Prospects for future U.S. fossil energy supplies are good if access to offshore and onshore areas is enhanced**
- **Policymakers should allow markets to determine which forms of energy are used by business and households**
- **Cost/benefit analysis should be used as existing and new regulations are evaluated**
- **Tax reform proposals should be evaluated with an eye toward how they impact manufacturing and other capital intensive industries**