

***Annual Energy Outlook 2008:
EISA2007 and Other Major Impacts***

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Overview

1. *AEO2008* Scenarios
2. Modeled Provisions of the Energy Independence and Security Act of 2007 (EISA2007)
3. “Other Changes” to EIA’s Early Release Reference Case
4. Impacts of Changes to EIA’s Early Release Reference Case
5. Major Results from *AEO2008* Reference Case

AEO2008 Scenarios

- Reference
- Early Release Reference
- Low Economic Growth
- High Economic Growth
- Low Price
- **High Price**
- Residential: 2008 Technology
- Residential: High Technology
- Residential: Best Available Technology
- Commercial: 2008 Technology
- Commercial: High Technology
- Commercial: Best Available Technology
- Industrial: 2008 Technology
- Industrial: High Technology
- Transportation: High Technology
- Electricity: Low Nuclear Cost
- Electricity: High Nuclear Cost
- Electricity: Low Fossil Cost
- Electricity: High Fossil Cost
- Renewable Fuels: High Renewable Cost
- Renewable Fuels: Low Renewable Cost
- Oil and Gas: Rapid Technology
- Oil and Gas: Slow Technology
- Oil and Gas: High LNG Supply
- Oil and Gas: Low LNG Supply
- Oil and Gas: ANWR
- Coal: Low Coal Cost
- Coal: High Coal Cost
- Integrated 2008 Technology
- Integrated High Technology
- **Integrated Alternative Weather Case**
- **High Commodity Cost**
- **Low Commodity Cost**
- **Restricted Non-Natural Gas Electricity Generation**
- **Restricted Natural Gas Supply**
- **Combined High Demand/Low Natural Gas Supply Case**

Energy Independence and Security Act of 2007

- **Corporate Average Fuel Efficiency**

- ✓ based on vehicle footprint
- ✓ 35 miles per gallon in 2020
- ✓ manufacturer credit and transfer program
- ✓ Alternative Motor Fuels Act credit extension

- **Renewable Fuels Standard**

- ✓ 36 billion gallons of biofuels per year by 2022
- ✓ corn ethanol limited to 15 billion gallons
- ✓ 13.5 billion gallons of cellulosic ethanol by 2022
- ✓ 1 billion gallon of biodiesel by 2012

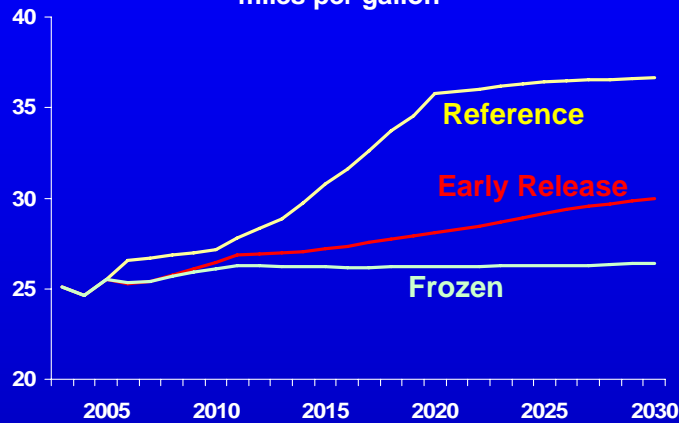
- **Other Efficiency Standards**

- ✓ lighting efficiency standards
- ✓ appliance standards: boilers, dehumidifiers, dishwashers, clothes washers
- ✓ commercial standards for walk-in coolers and freezers
- ✓ increases weatherization assistance program through 2012
- ✓ 30% reduction in Federal buildings by 2015
- ✓ industrial motor efficiency standards

Energy Independence and Security Act of 2007

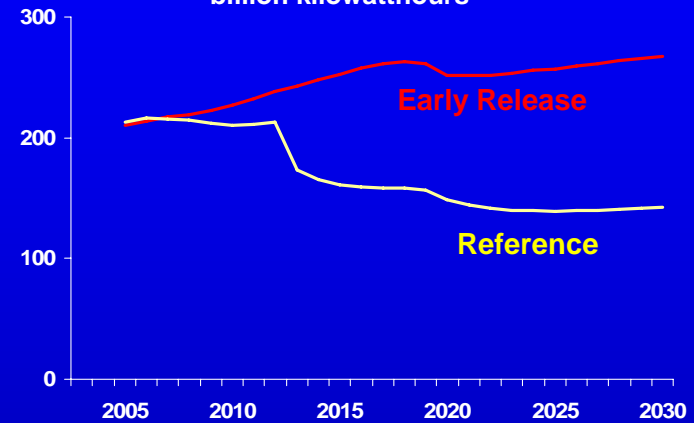
Average New Light Duty Vehicle Efficiency

miles per gallon



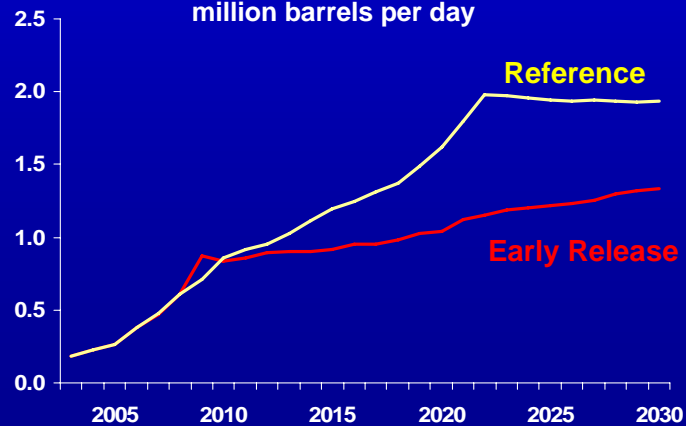
Residential Lighting Energy Consumption

billion kilowatthours



Supply of Biofuels

million barrels per day



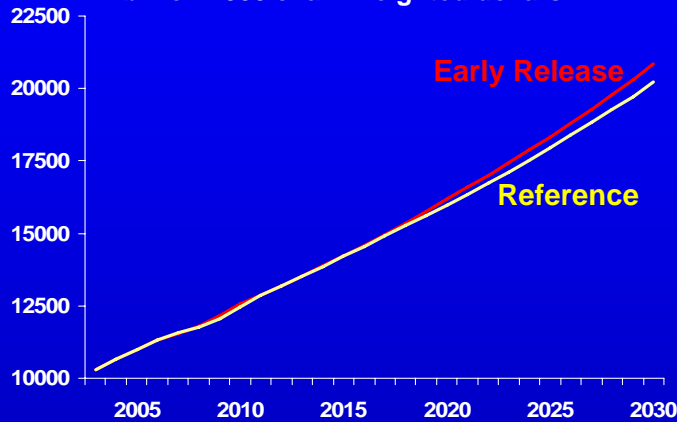
Includes ethanol, biodiesel, and liquids from biomass

Additional NEMS Updates—“Other Changes”

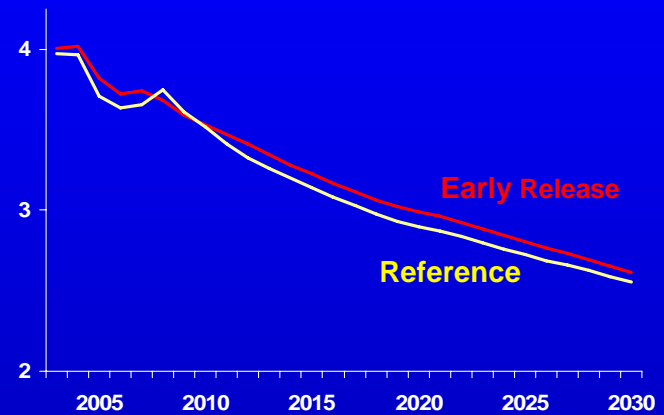
- **Macroeconomic forecast**
 - ✓ gross domestic product growth rate reduced from 2.6% to 2.4%
- **Industrial output**
 - ✓ historical revision for most industry categories
- **Other data updates**
 - ✓ revised short term based on January Short-Term Energy Outlook
 - ✓ added recent weather data
 - ✓ revised National Highway Transportation Safety Administration new light duty vehicle (LDV) sales data

Additional NEMS Updates —“Other Changes”

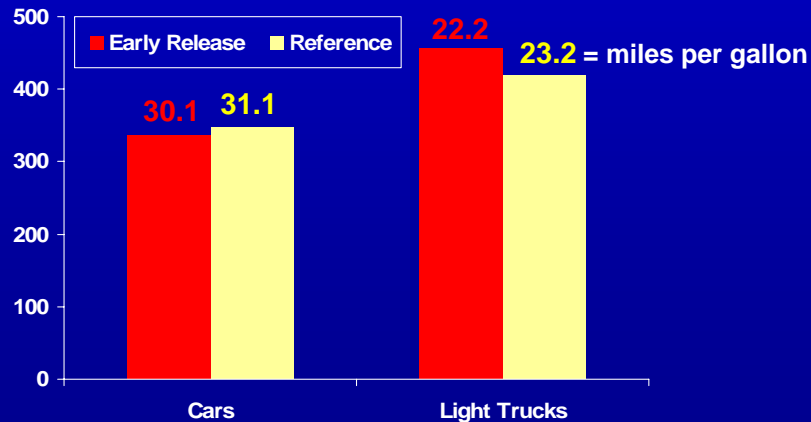
Gross Domestic Product
billion 2000 chain-weighted dollars



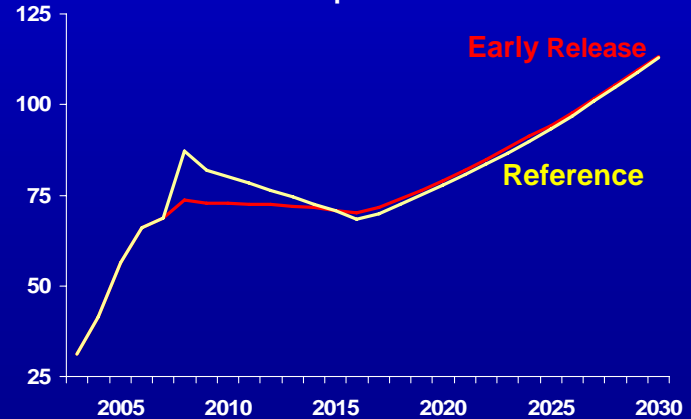
Industrial Energy Intensity
thousand Btu per 2000 dollar of shipments



Conventional Light Duty Vehicle Sales, 2006
thousand vehicles

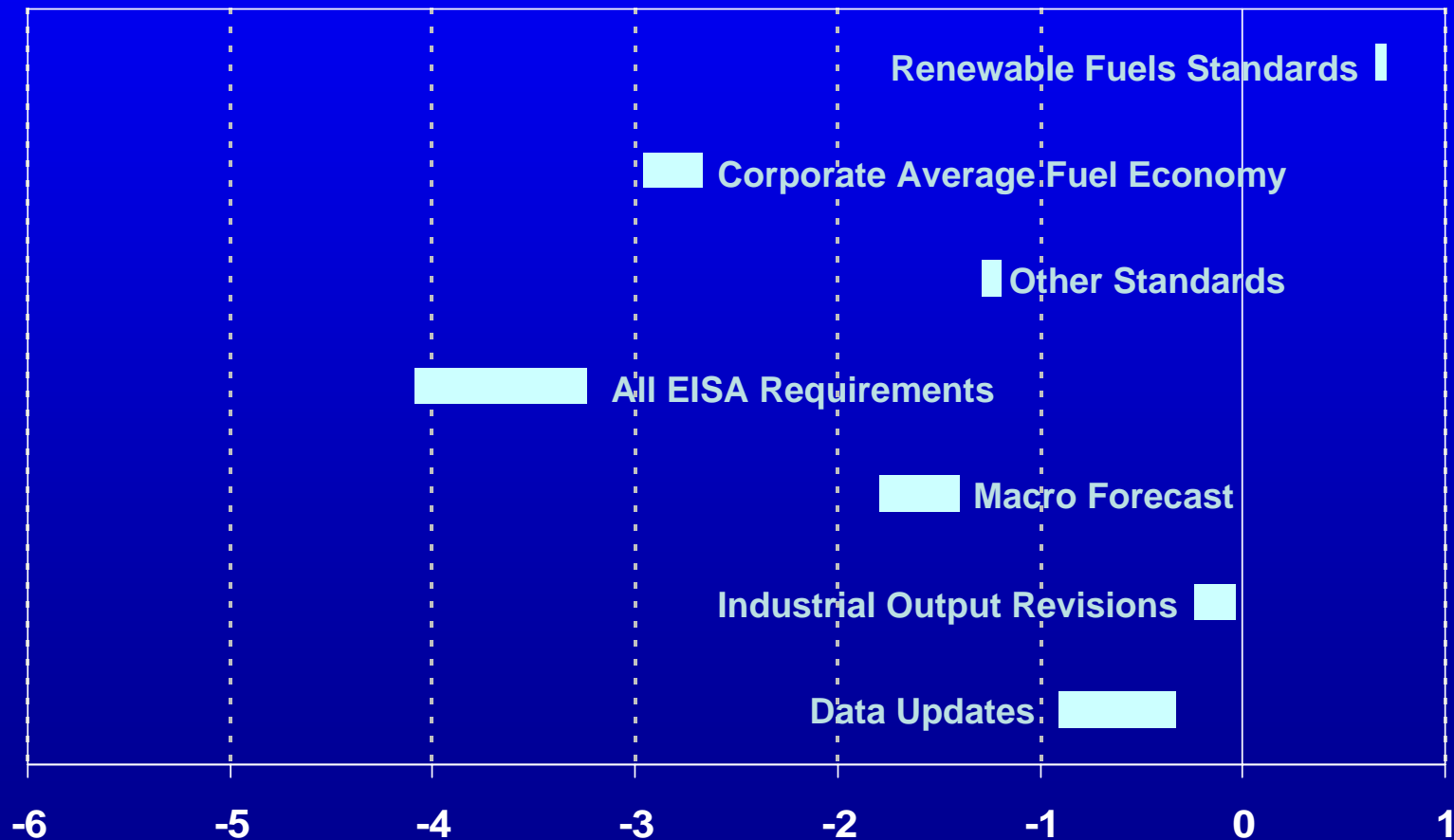


World Oil Price
2006 dollars per barrel

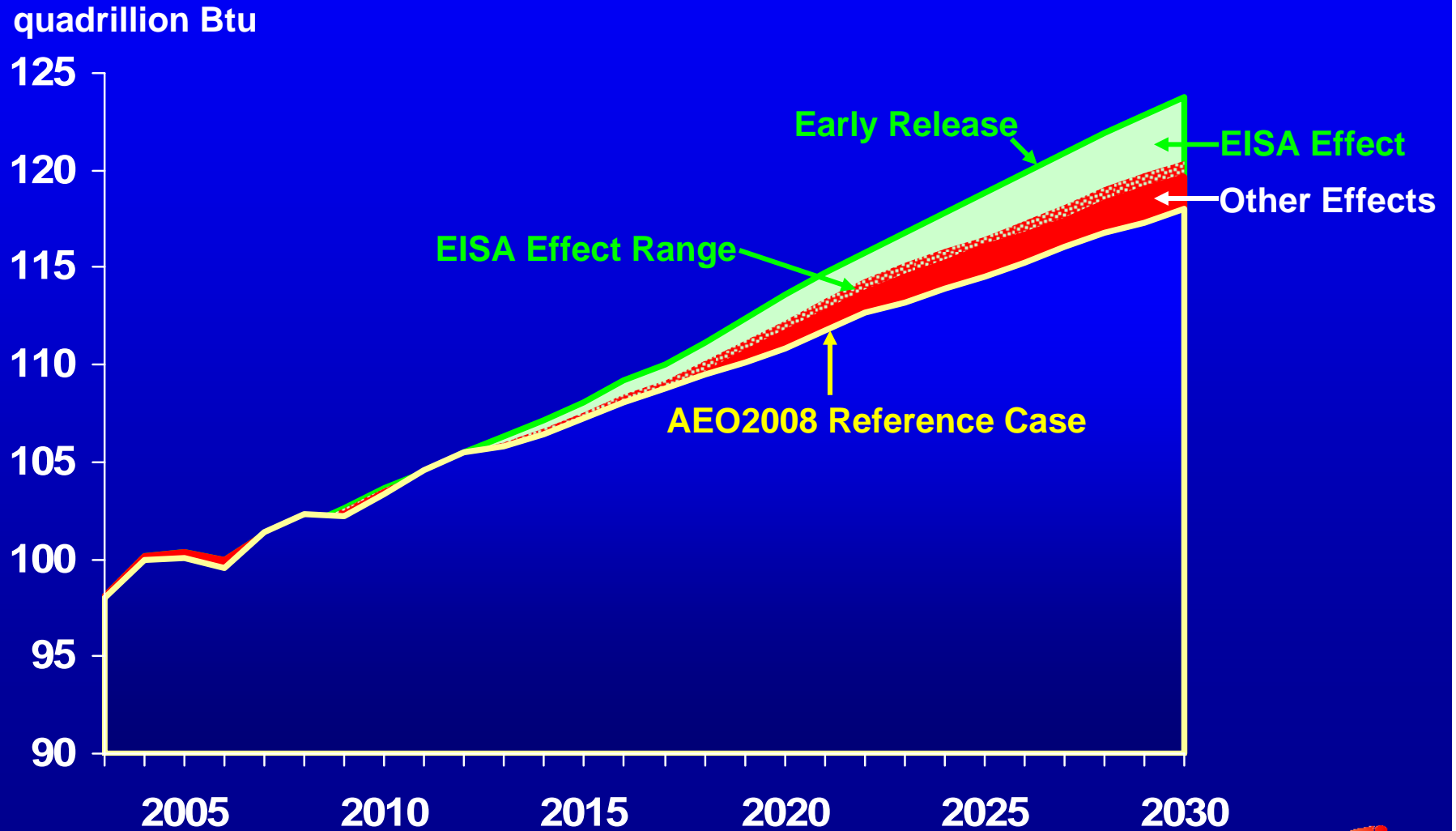


Range of Effects of the Energy Bill on Total Energy Consumption, 2030

Change in Total Energy Consumption in Quadrillion Btu

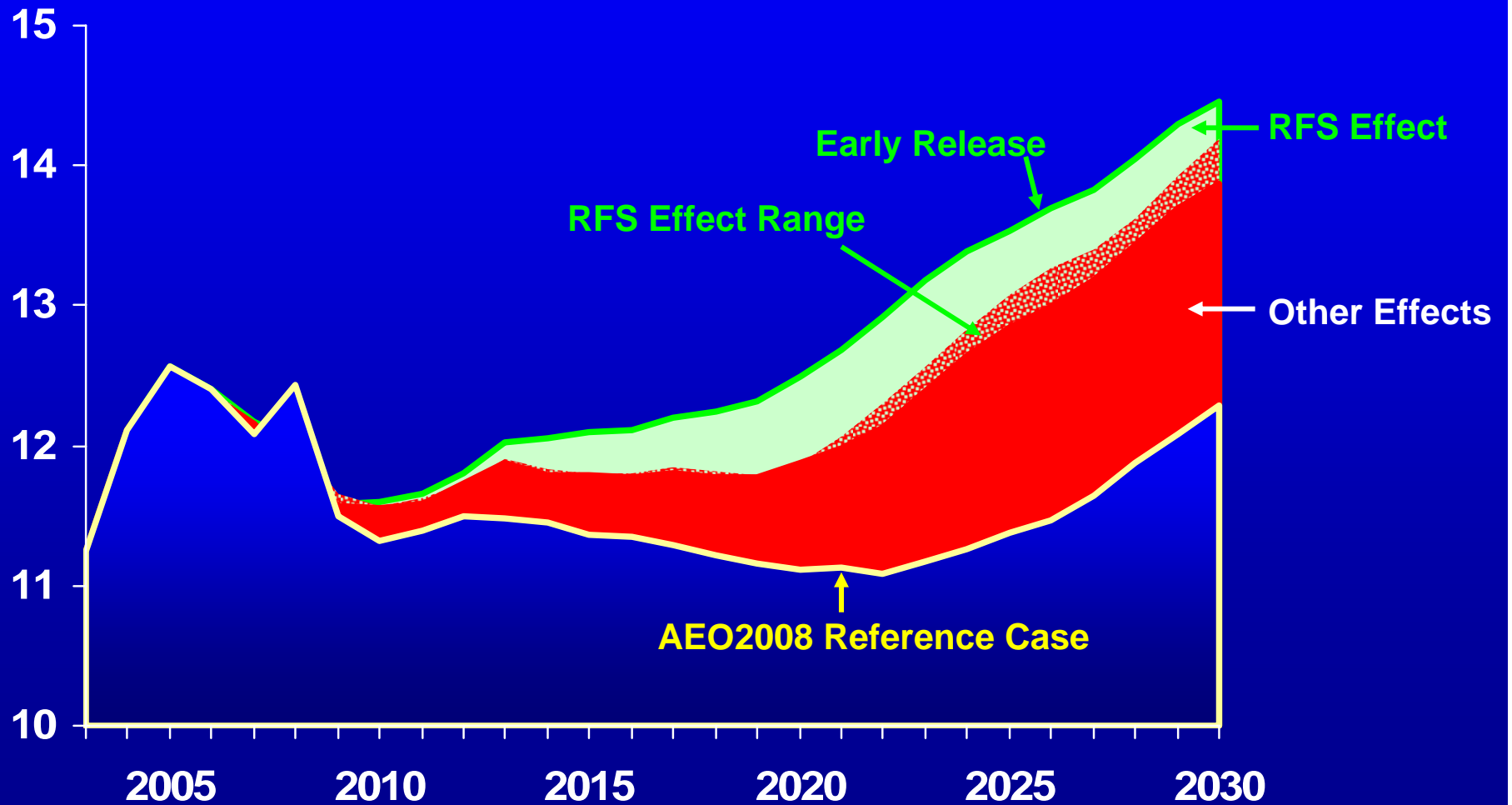


Total Primary Consumption

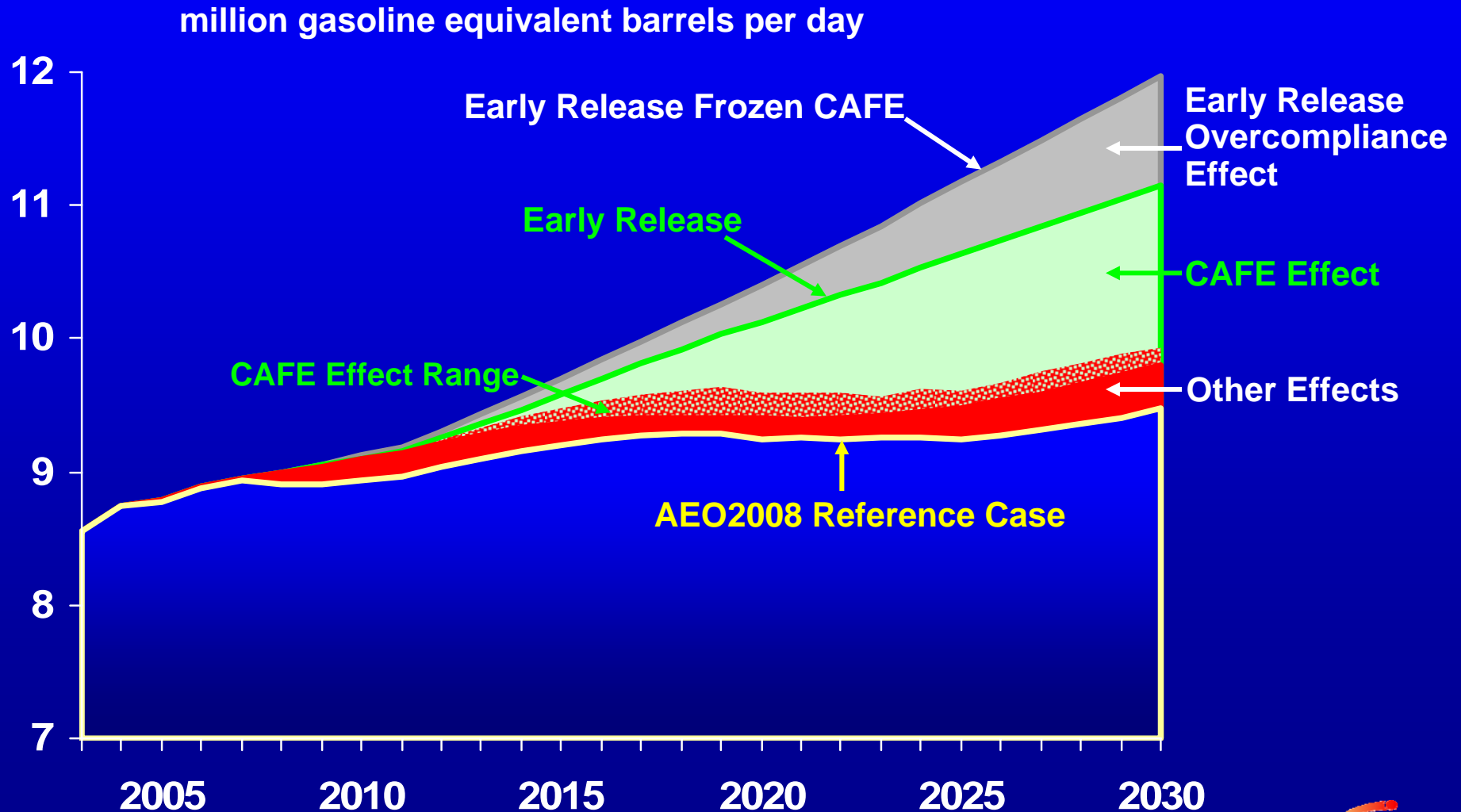


Net Petroleum Imports

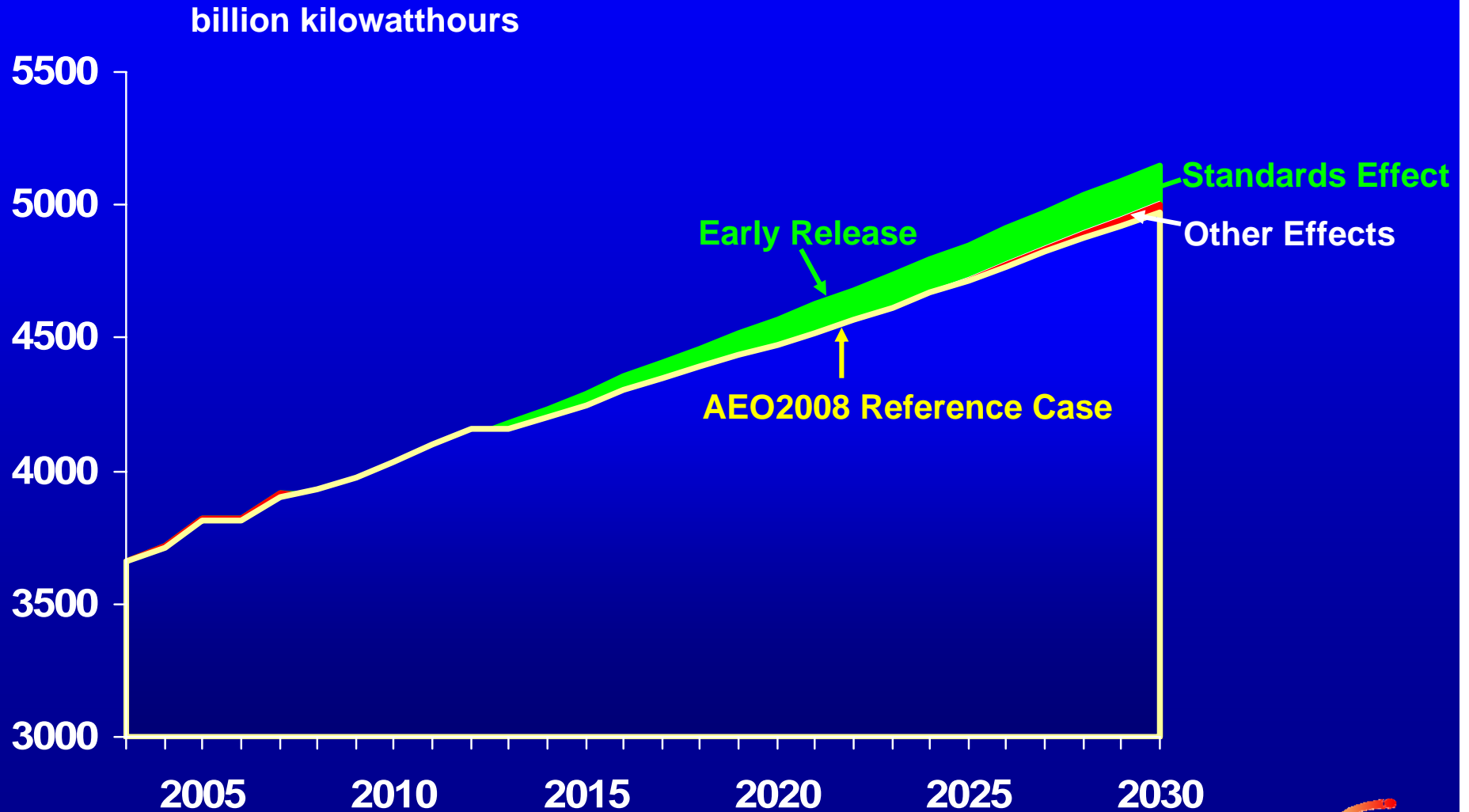
million barrels per day



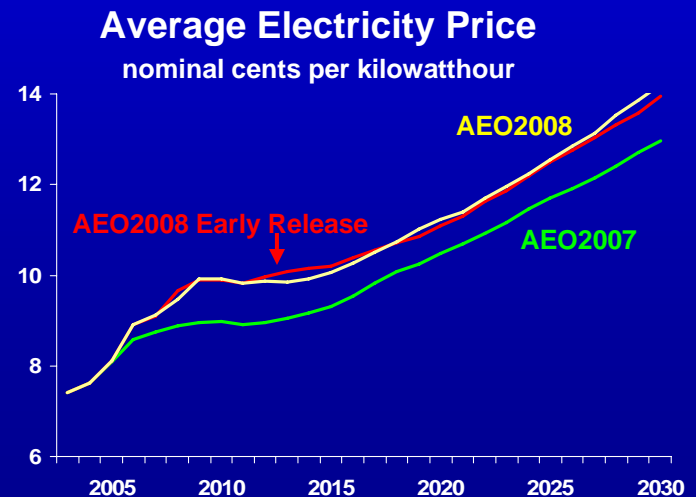
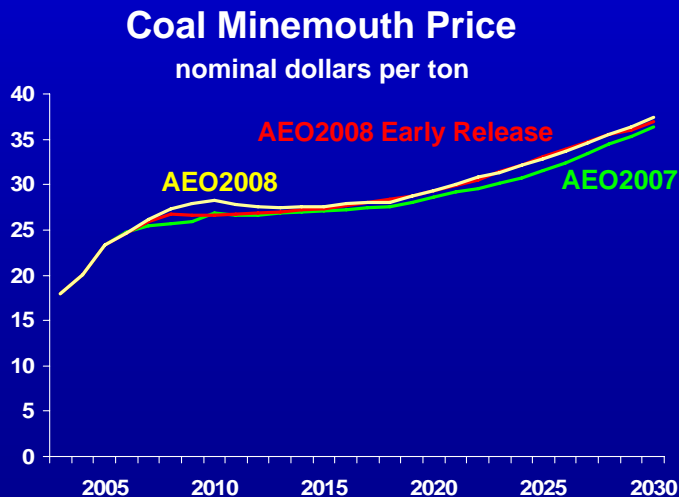
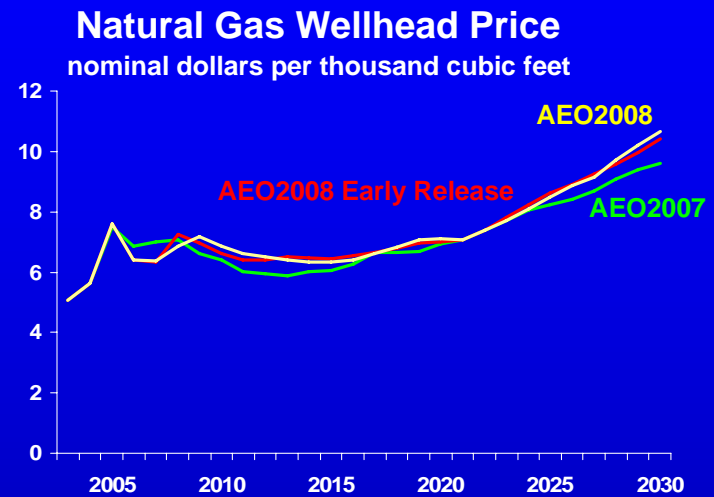
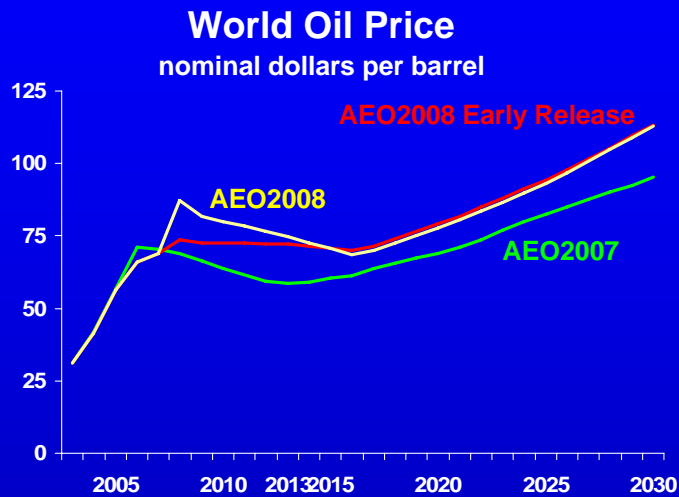
Light Duty Vehicle Consumption



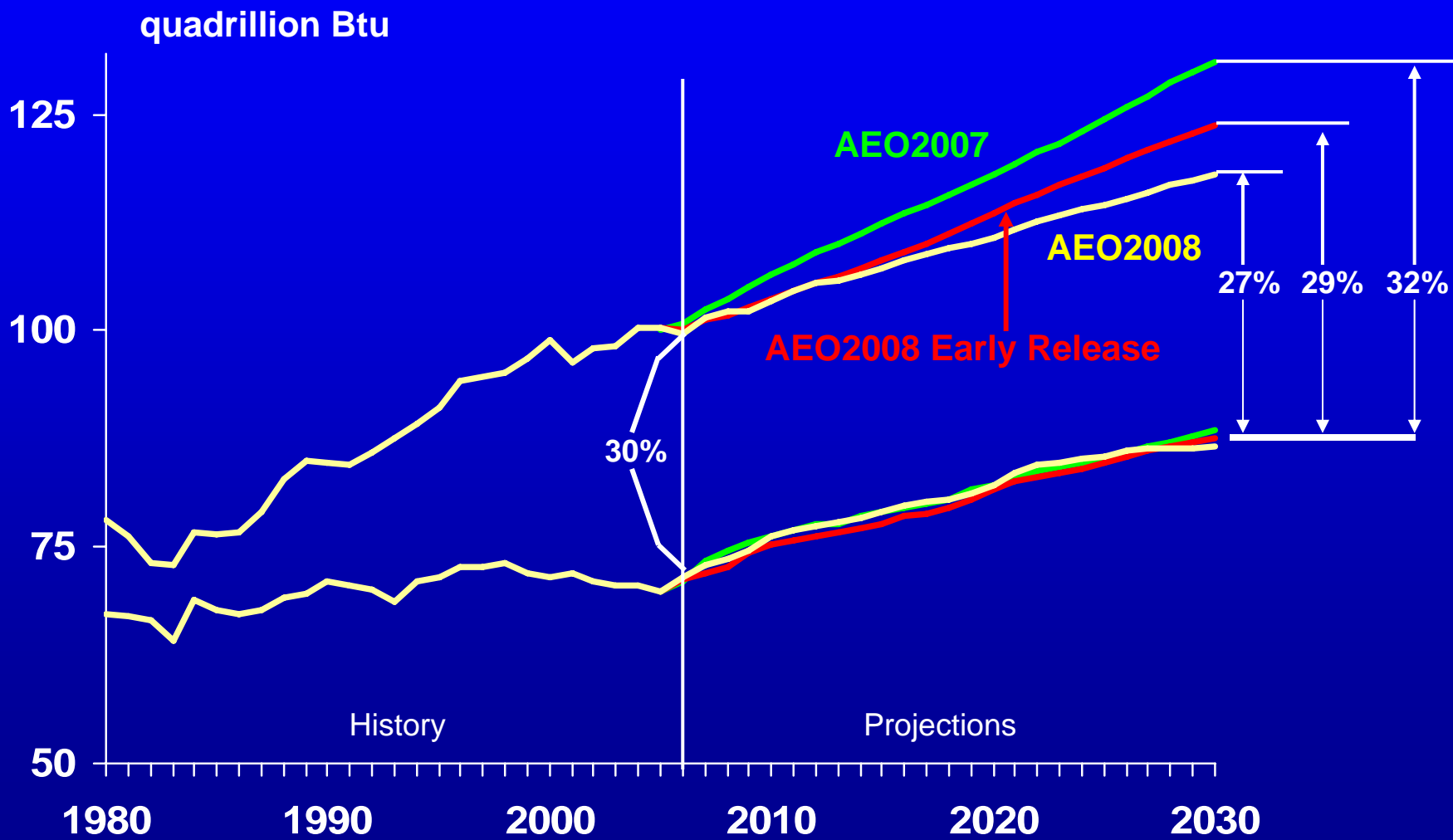
Total Electricity Consumption



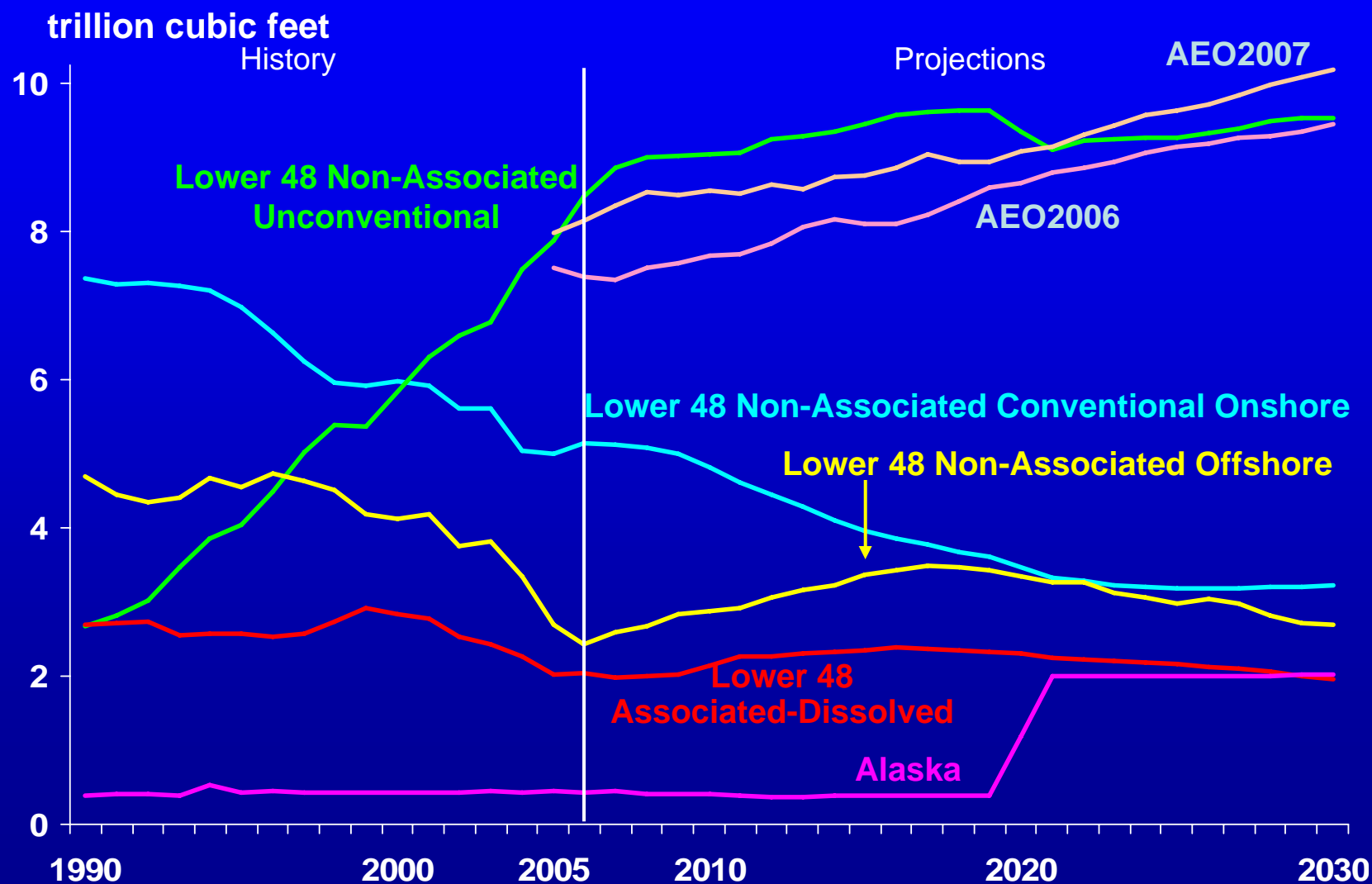
Annual Energy Outlook 2008 Price Forecasts



Energy Production, Consumption, and Net Imports

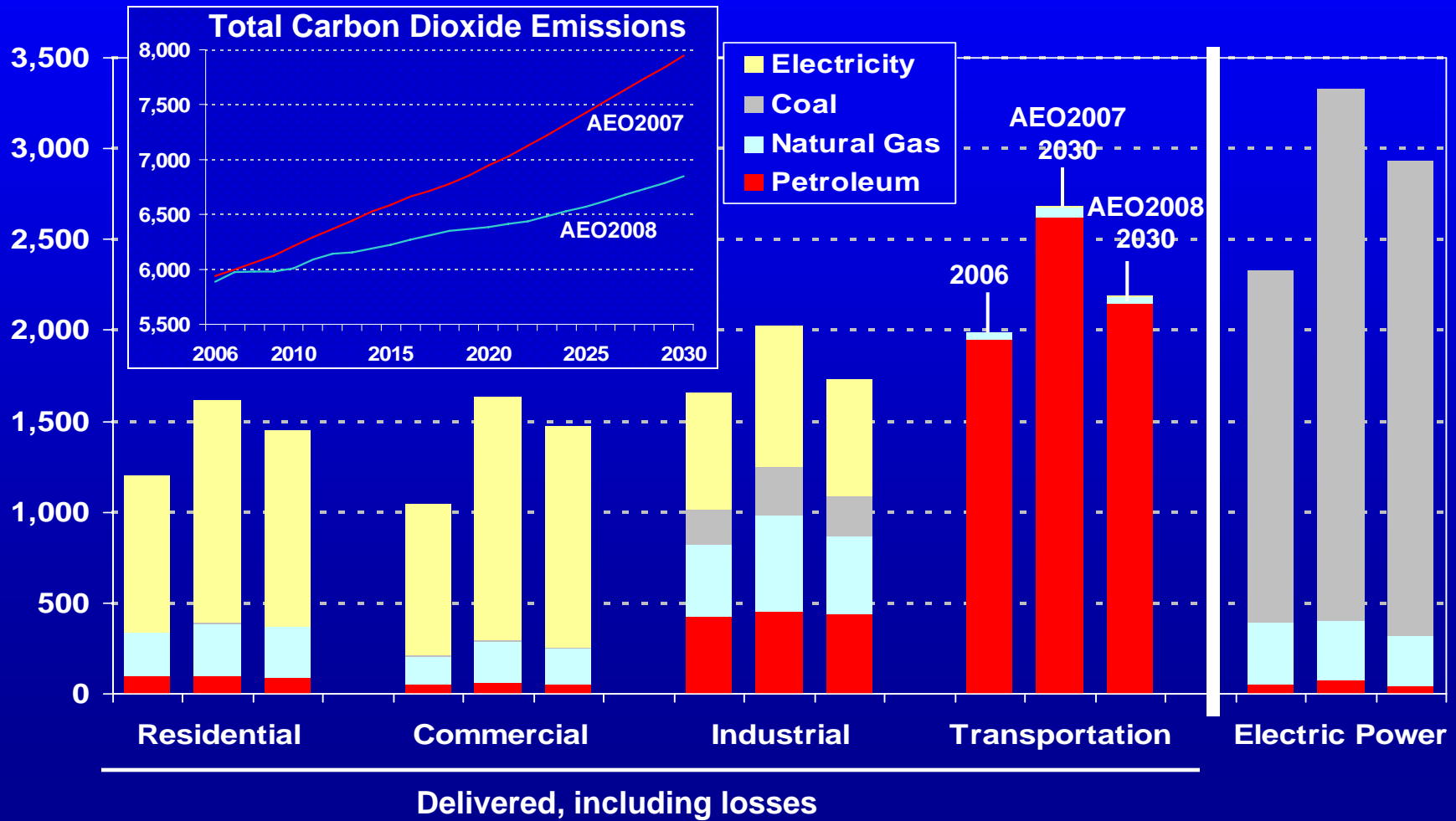


Natural Gas Unconventional Production



Carbon Dioxide Emissions

million metric tons



Summary

- The AEO2008 Reference Case is one of many scenarios contained in the AEO.
- Depending on the basis from which it is measured, the impact of Energy Independence and Security Act of 2007 (EISA2007) varies.
 - EISA reduced total primary energy consumption by about 4 quadrillion Btu (~3 percent)
 - EISA reduced net petroleum imports by more than 1.5 million barrels per day (~12 percent).
- The “other changes” made to the Early Release reference case also reduced U.S. energy consumption.
- In the AEO2008 Reference Case, energy Prices (in nominal dollars) are expected to moderate before beginning to increase again more rapidly towards the end of the projection period.
- In the AEO2008, Energy import dependency is projected to decrease from about 30 percent today to about 25 percent in 2022 before rising again, reaching 27 percent by 2030. Energy import dependence is less than in previous recent AEOs.
- Enhancing and maintaining U.S. natural gas supplies depends on unconventional domestic production, natural gas from Alaska, and LNG imports.
- Without the imposition of policies to restrict the use of coal in electric power generation, U.S. natural gas use is projected to decline over the last decade of the projection
- Carbon dioxide emissions from energy grow at an average annual rate of 0.6 percent, which is about half the rate projected in the AEO2007.

Periodic Reports

Early Release Reference Case, December 2007

Annual Energy Outlook 2008 Reference Case March 2008, full report, April 2008

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