

United States Energy Outlook and Policies Affecting the Outlook

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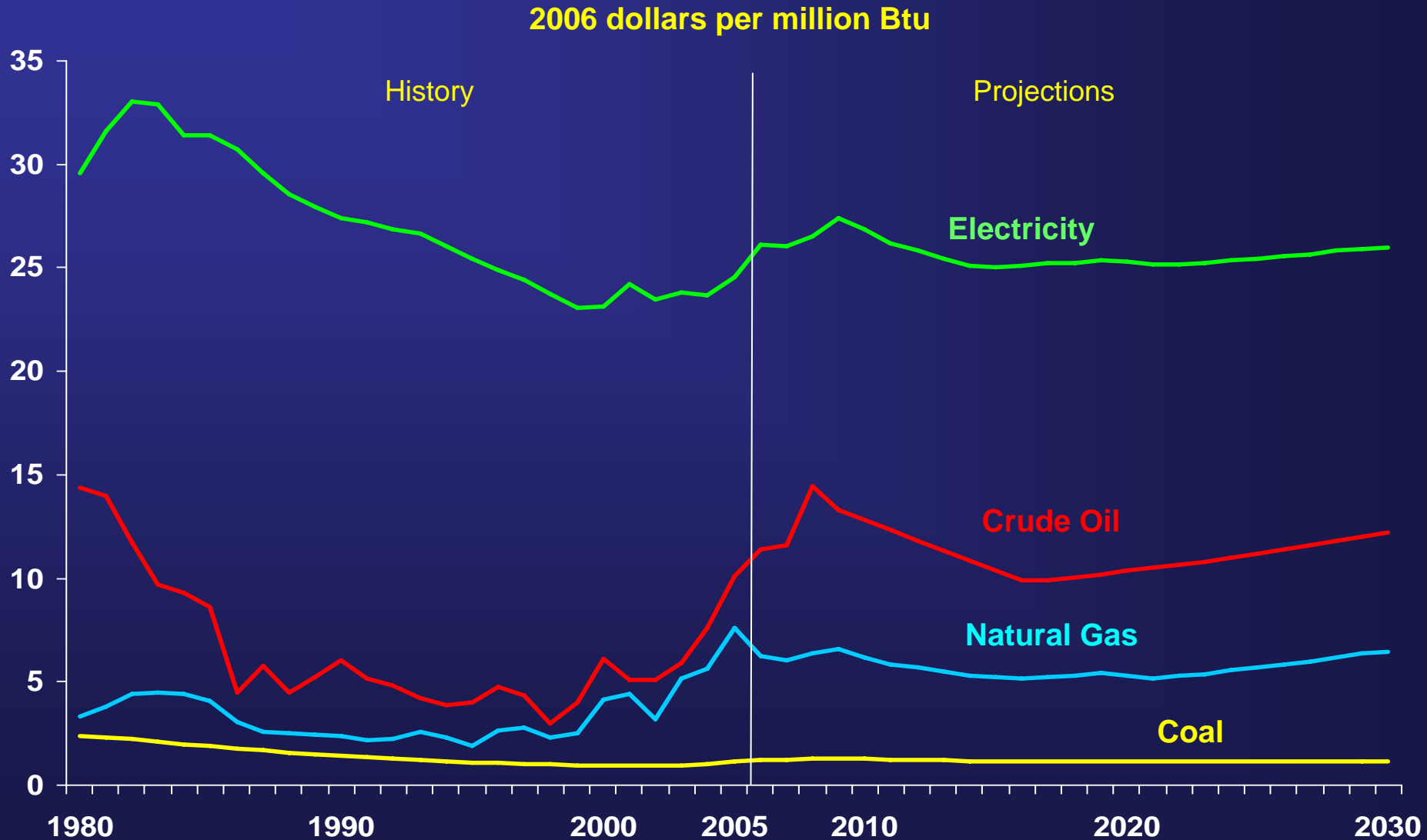
Energy Information Administration

- EIA was established by the Department of Energy Organization Act of 1977
 - Independent since its creation
- EIA does not promote, formulate, or take positions on policy issues
- Outlook is based on EIA's recently issued *Annual Energy Outlook 2008*

Revised AEO2008 reference case indicates that through 2030...

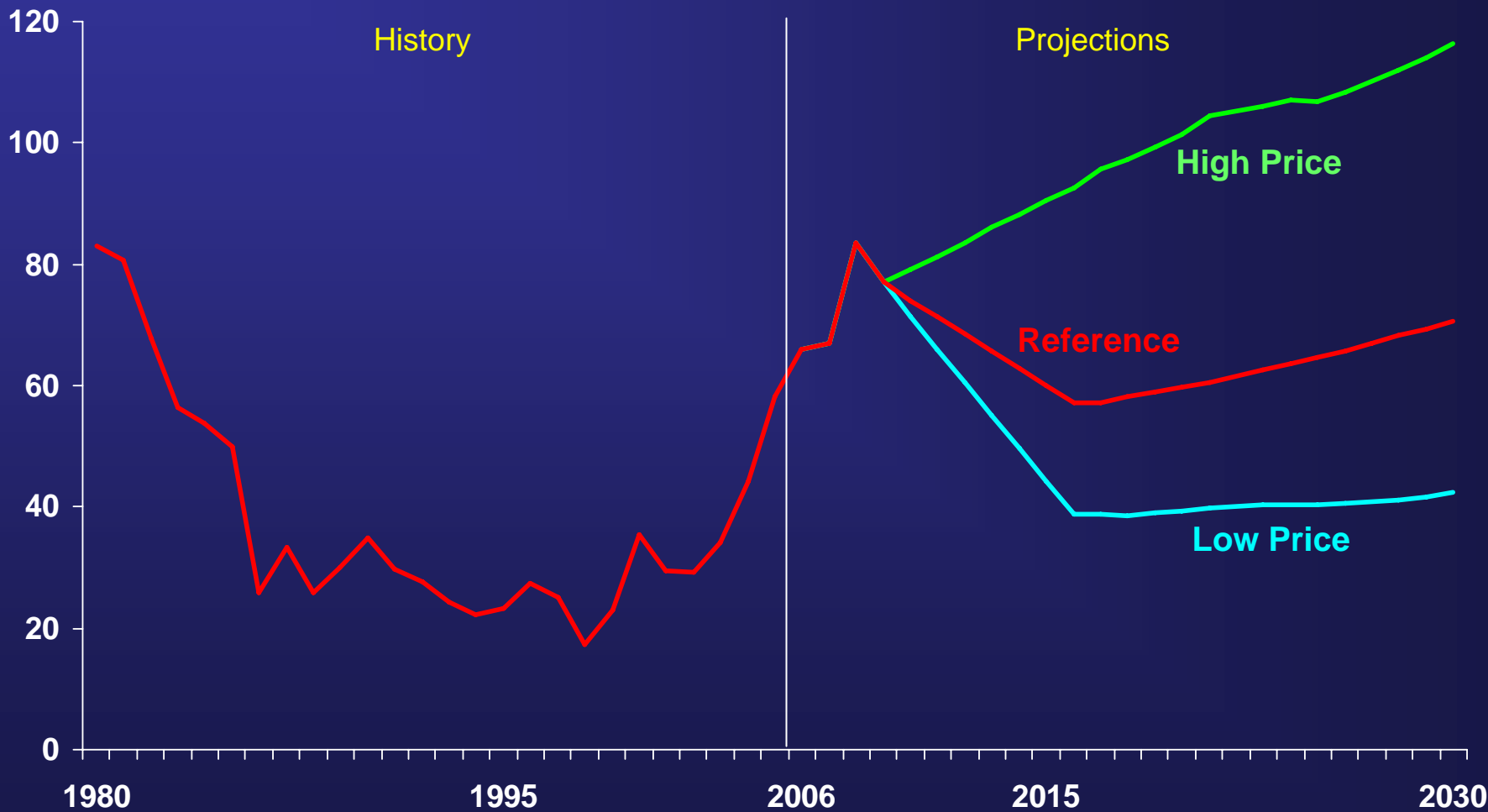
- U.S. energy demand grows at an average annual rate of 0.7 percent
- The energy efficiency of the economy improves at an average annual rate of 1.7 percent
- U.S. oil import dependence, measured as a share of U.S. oil use, decreases over the next 25 years
- U.S. natural gas use declines over the last decade of the projection
- Future growth in U.S. natural gas supplies depends on unconventional domestic production, natural gas from Alaska, and liquefied natural gas imports
- Carbon dioxide emissions from energy grow at an average annual rate of 0.6 percent

Energy prices are expected to decline in the near term, then rise

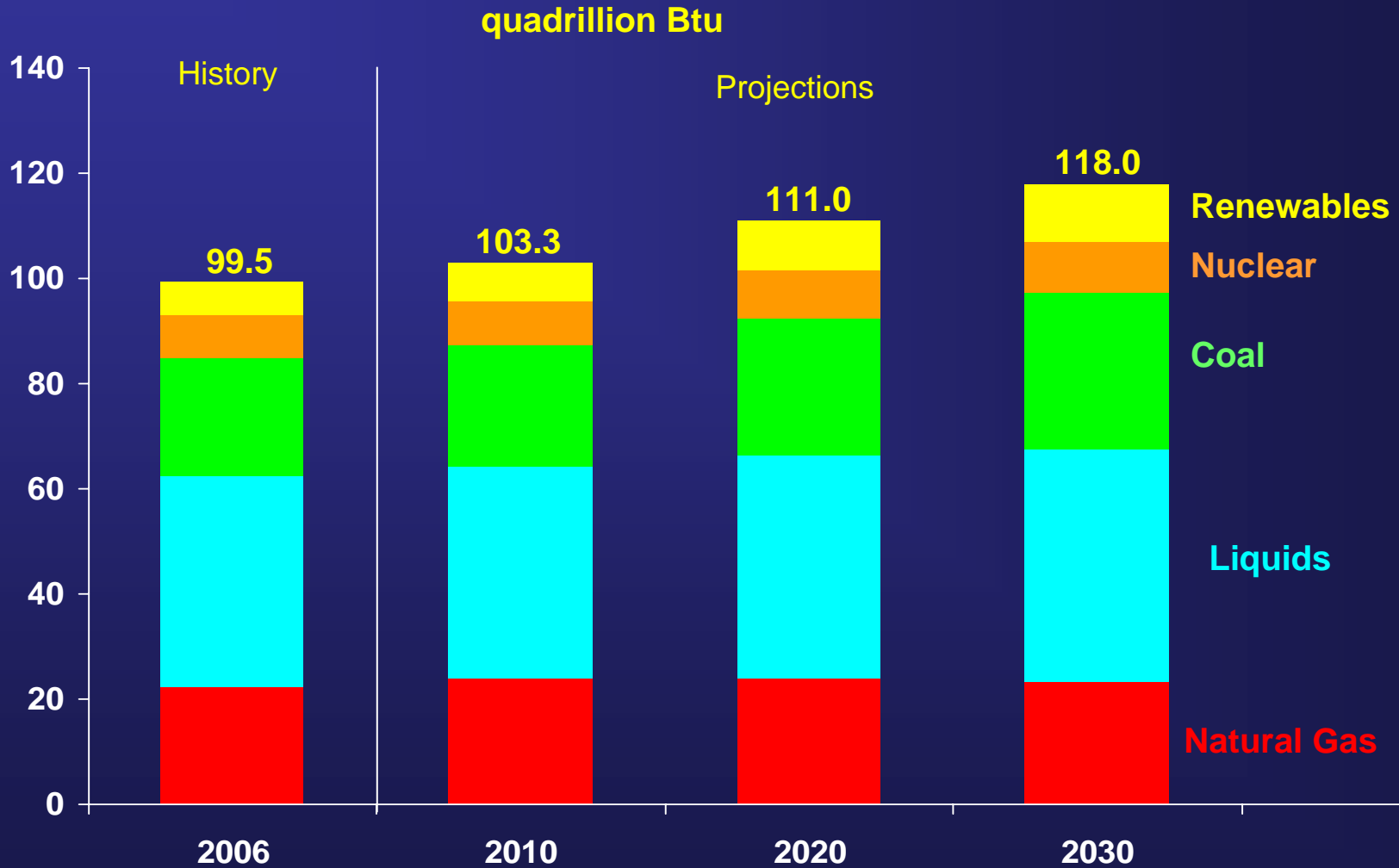


World oil prices are higher than in previous projections

2006 dollars per barrel

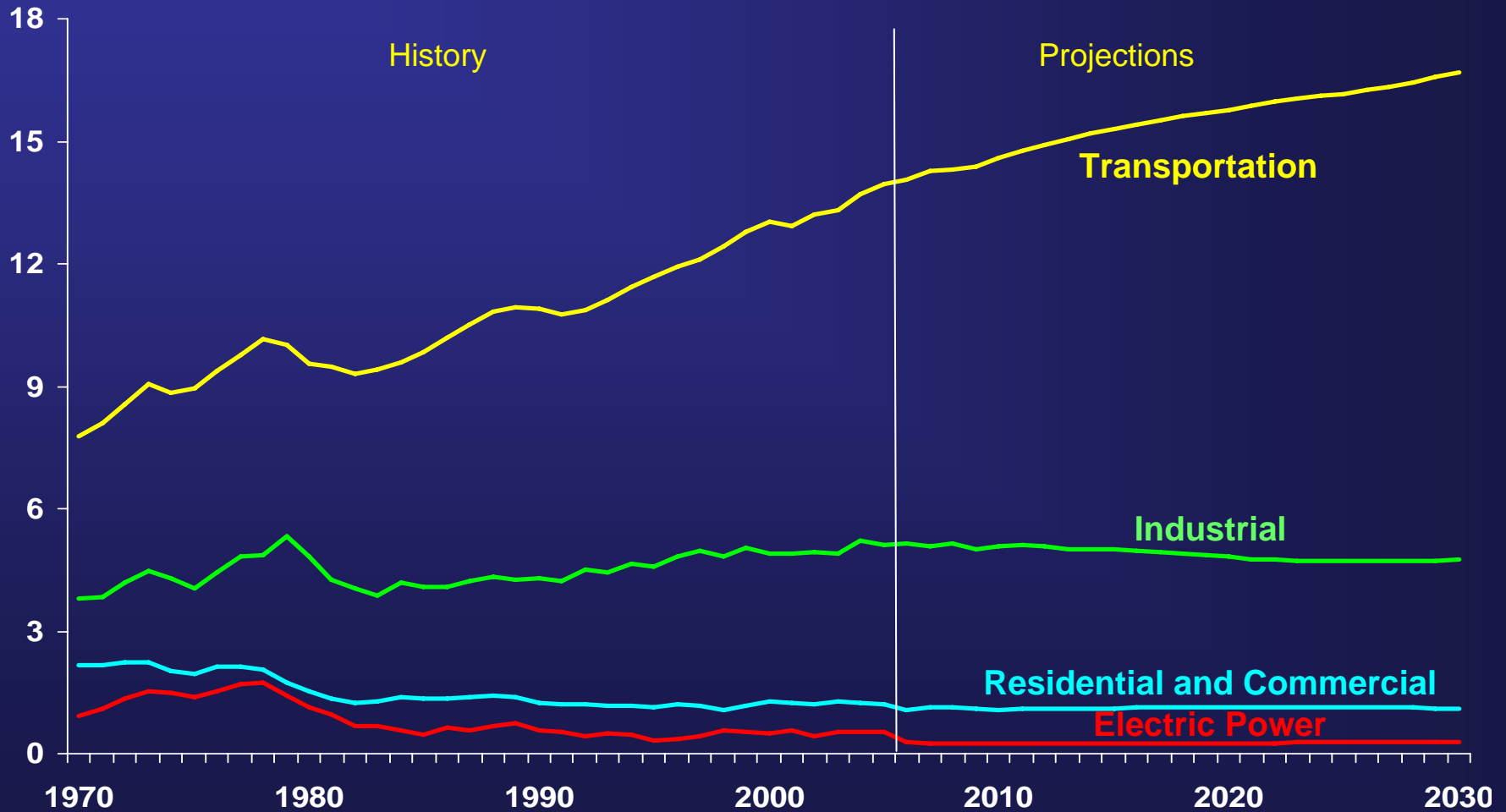


U.S. energy consumption grows slowly



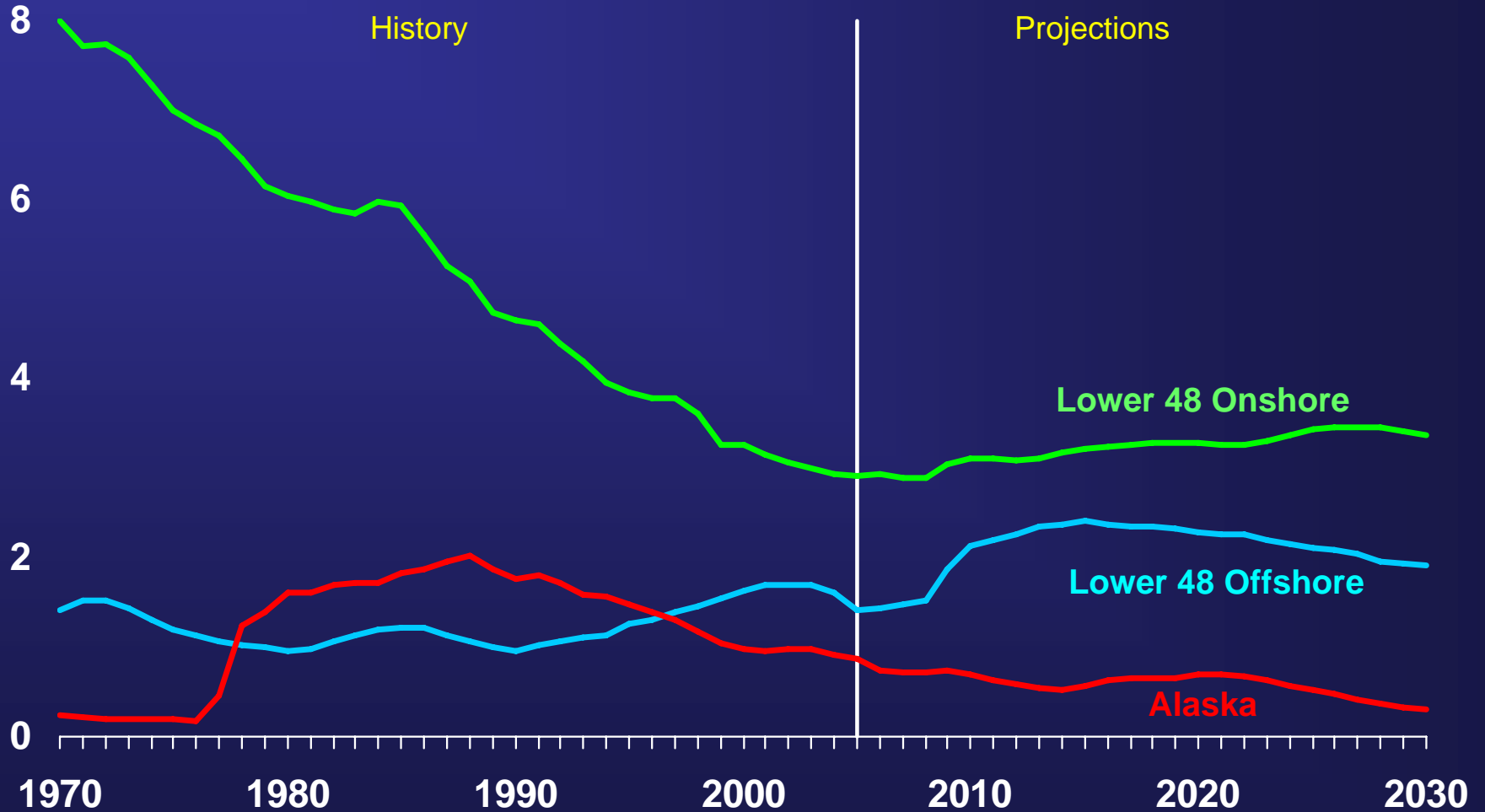
The transportation sector dominates liquid fuel consumption

million barrels per day



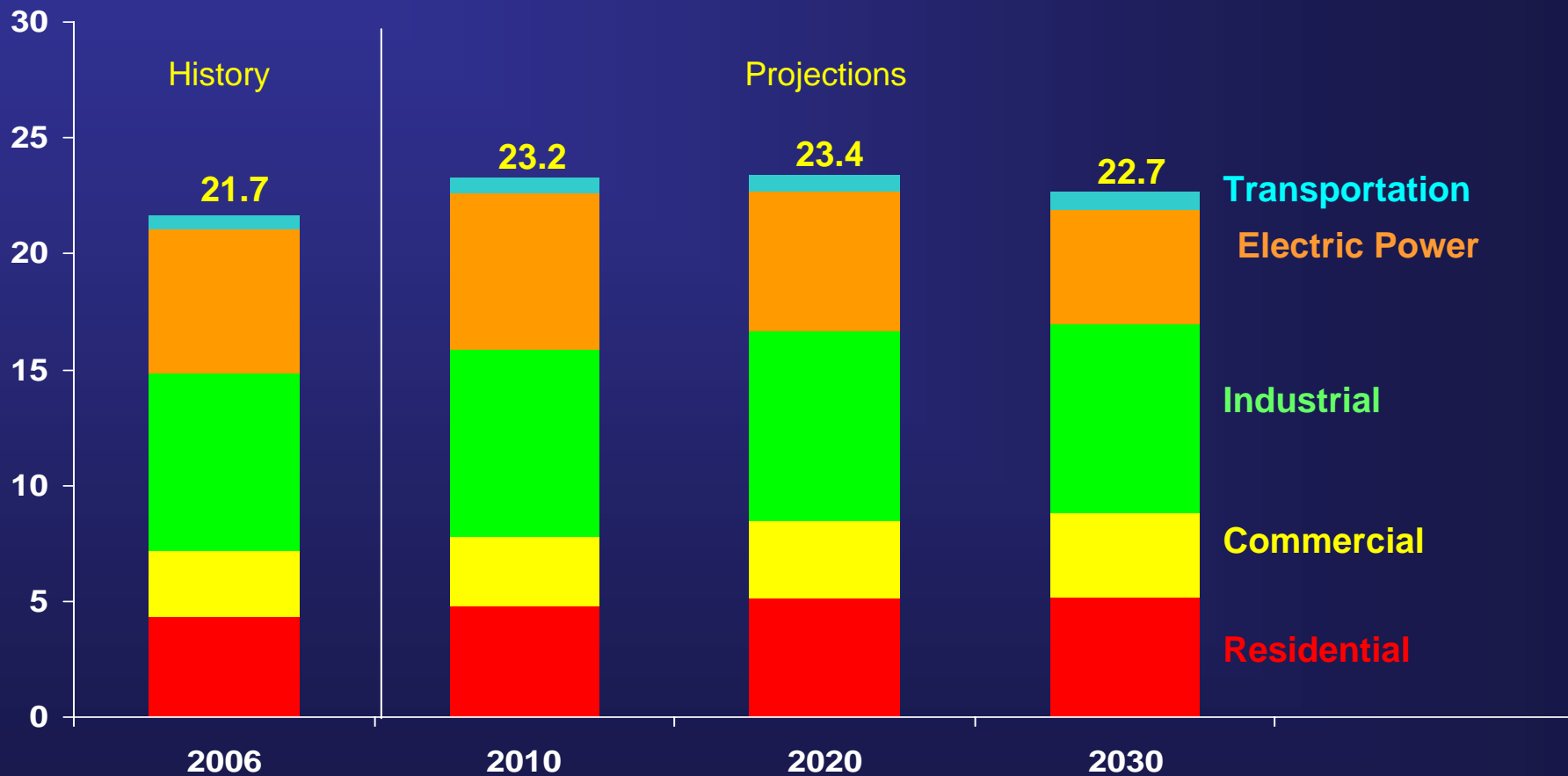
Domestic crude oil production grows in the near term

million barrels per day



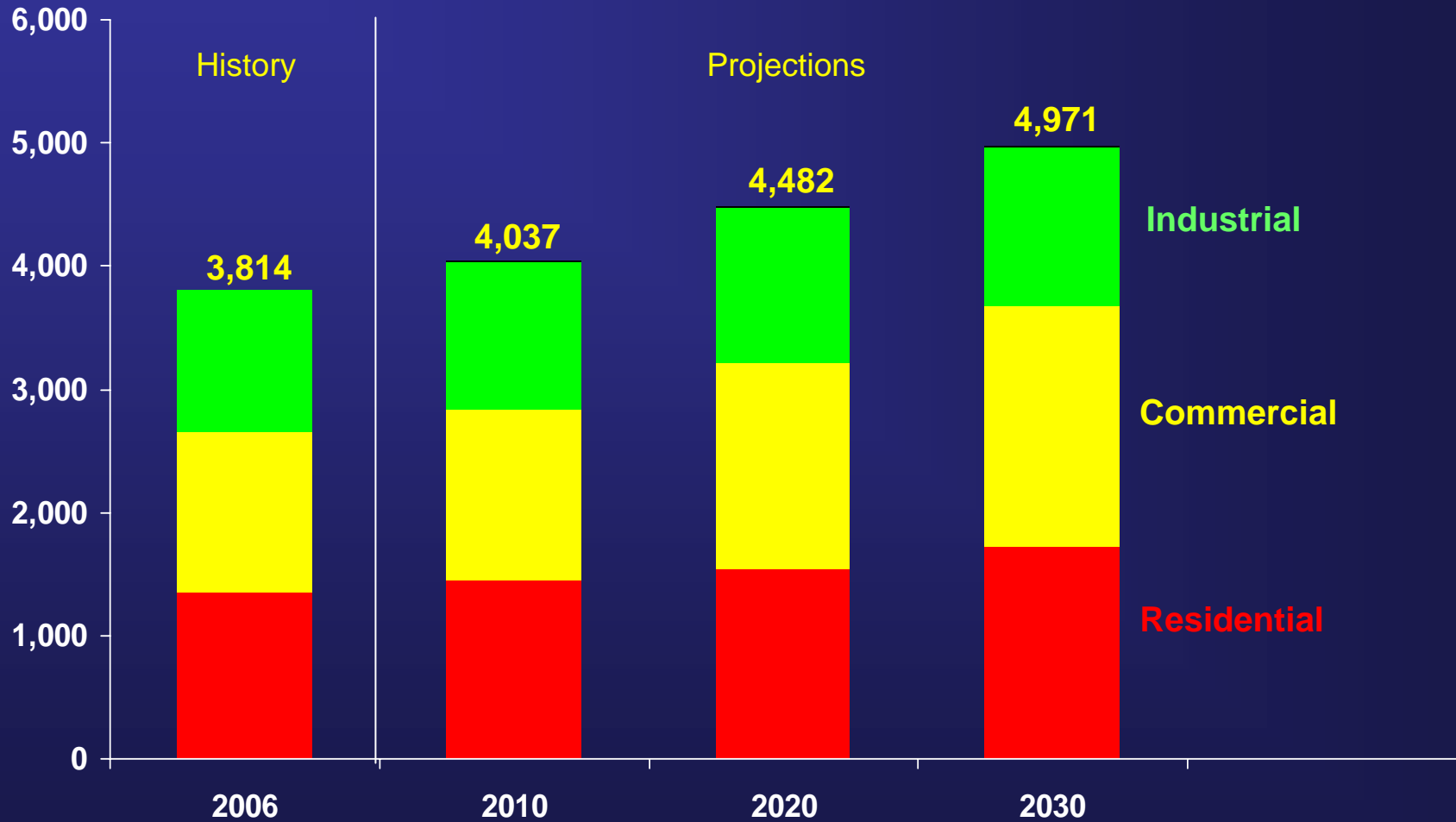
Natural gas consumption grows over the next decade, then declines slowly

trillion cubic feet



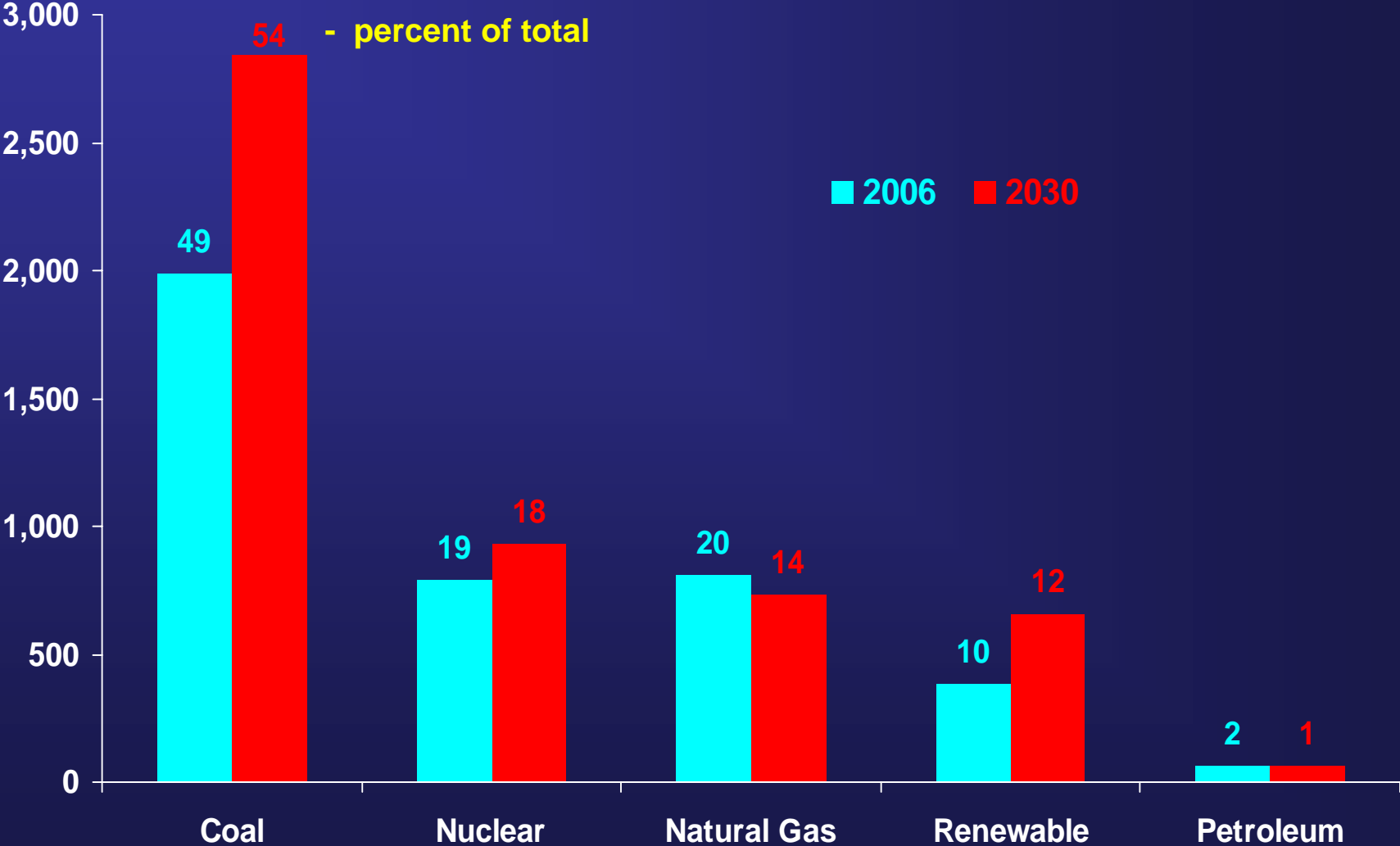
U.S. electricity consumption grows slowly in all sectors

billion kilowatthours



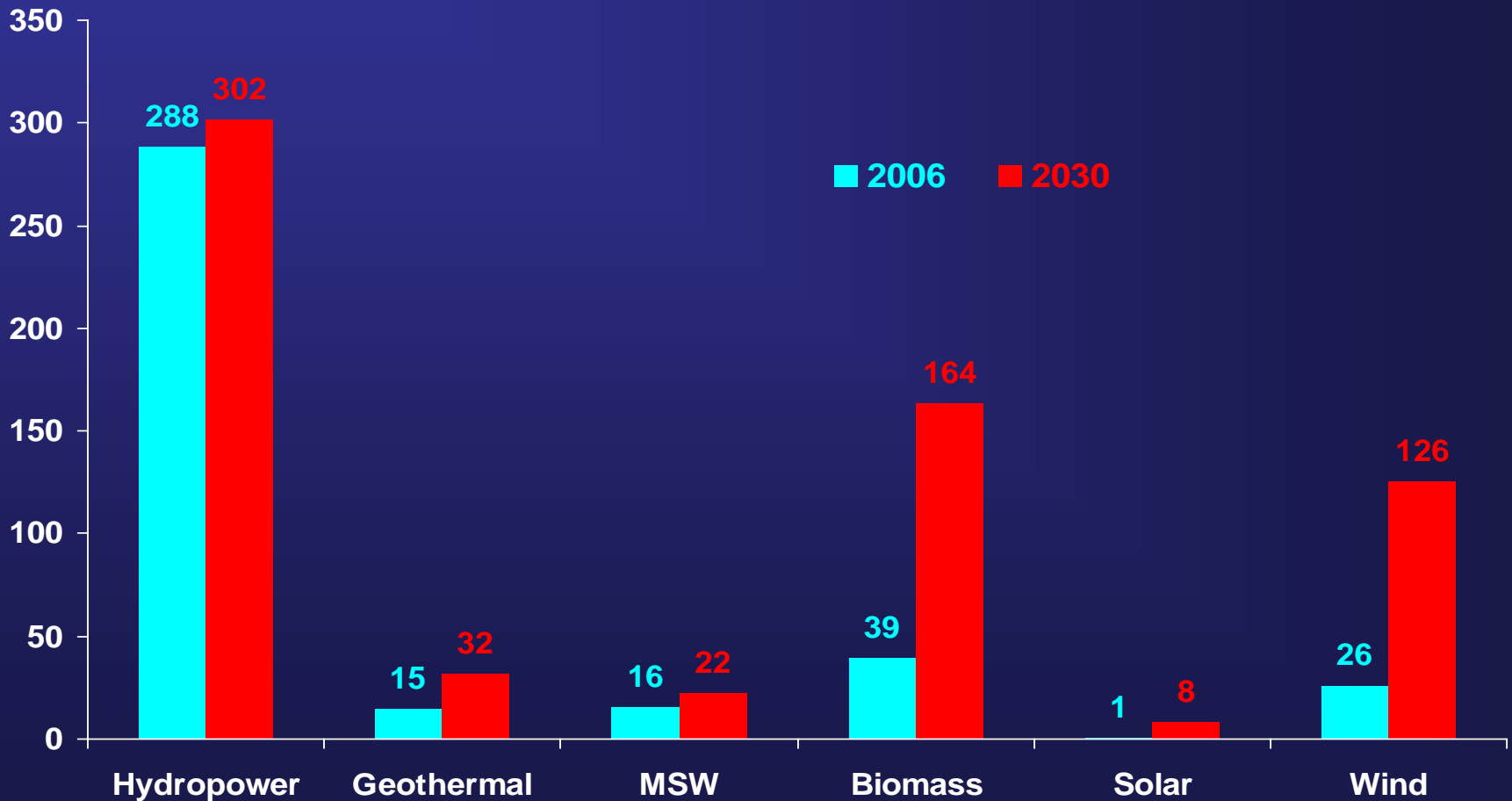
Natural gas generation offset by growth in coal, nuclear, and renewables

billion kilowatthours

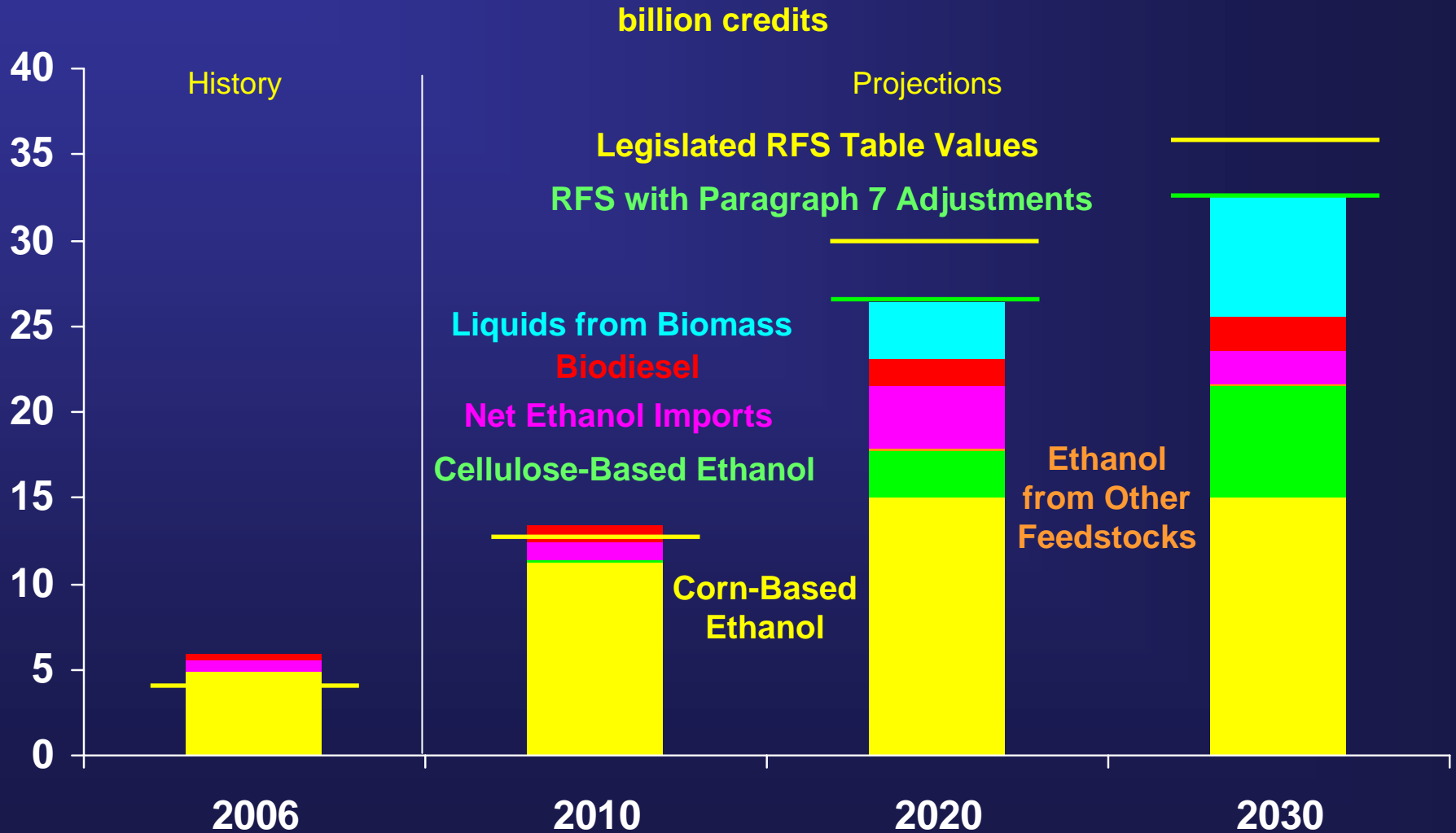


The strongest growth in renewable generation is in biomass and wind

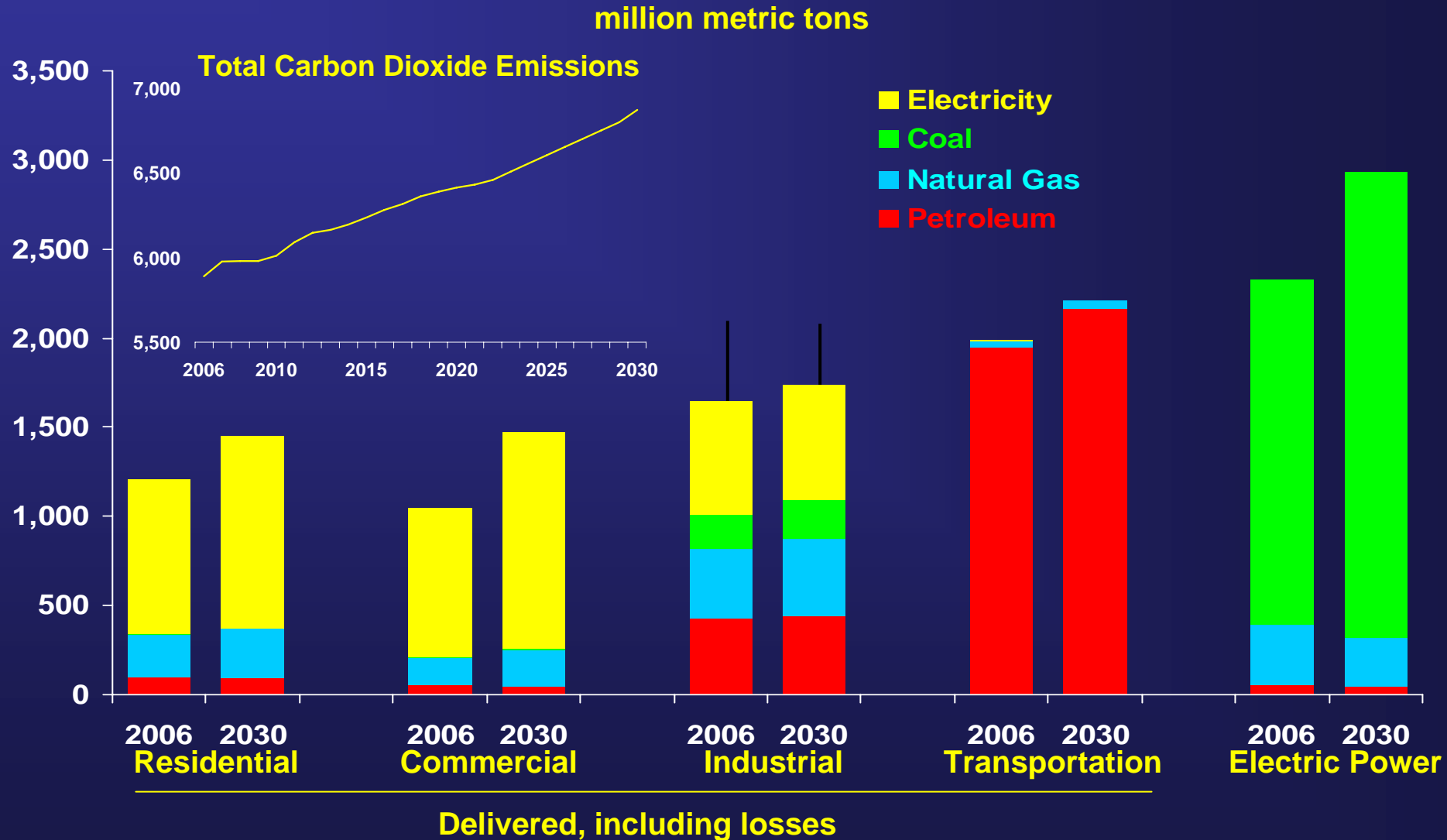
billion kilowatthours



A variety of fuel sources support the new renewable fuel standard



Carbon dioxide emissions grow at a slower rate



Key Uncertainties in the Projections

- Macroeconomic growth
- Energy prices
- Technological changes
- Government policy initiatives

U.S. Energy Policy

(based on Department of Energy)

- Increasing Energy Security remains a top priority of the Bush Administration
- In 2001 the Administration issued the National Energy Policy with over 100 recommendations.
- The Energy Policy Act of 2005 (EPAct) was the first comprehensive energy legislation passed by Congress in over a decade.
- To complement the goals in EPAct, President Bush proposed the Advanced Energy Initiative (AEI), American Competitiveness Initiative (ACI), and the Global Nuclear Energy Partnership (GNEP).
- In December 2007, the President signed the Energy Independence and Security Act of 2007.

Goal: Energy Security

The President's initiatives further advance the Administration's goal to provide a long-term strategy to confront energy challenges in a balanced, comprehensive, and environmentally-responsible way through diversification of supply and suppliers, increased energy efficiency, and modernization protection of the U.S. energy infrastructure.

The Energy Independence and Security Act of 2007

- Improves Fuel Economy
 - Sets national fuel standard at 35 miles per gallon by 2020, which will increase fuel economy standards by 40 percent and save billions of gallons of fuel
- Expands production of renewable fuels
 - Sets a mandatory Renewable Fuel Standard (RFS) requiring fuel producers to use at least 36 billion gallons of biofuel by 2022 representing a nearly five-fold increase over current levels
- Responds to the President's "Twenty in Ten" Initiative
- Demands Energy Efficiency
 - Federal buildings convert to Energy Star products by 2013 and new standards set for home appliances

Energy Agenda for 2008

The Energy Independence and Security Act of 2007 goes a long way, but the President has remaining energy proposals:

- **Electric Power:** Generate electric power using increased cleaner coal technology, solar and wind energy, and nuclear energy
- **Domestic Supply of Oil:** In a prudent and environmentally-sensitive way, pass legislation opening access to domestic energy sources such as the Outer Continental Shelf and the Arctic National Wildlife Refuge
- **Strategic Petroleum Reserve:** Double the capacity to 1.5 billion barrels to protect against severe supply disruptions

U.S. Climate Change Policy Approach: Department of Energy Overview

- Harnesses the power of markets and technological innovation, maintains economic growth, and encourages global participation
- Reaffirms U.S. commitment to goal of United Nations Framework Convention on Climate Change
- Places climate change in a broader context that includes enhancing energy security, encouraging economic growth, and reducing air pollution

Five Basic Elements

- Advancing climate science to reduce uncertainties
- Policies and measures to slow the growth in greenhouse gas emissions with a Presidential goal to improve U.S. greenhouse gas emissions intensity 18 percent from 2002 to 2012
- Accelerating technology development
- Expanding finance and open trade in clean energy goods and services
- Promoting a new international framework for collaboration

Major New Initiatives

Energy Independence and Security Act of 2007

- Renewable fuels mandate
 - 36 billion gallons of biofuel annually by 2022, about 5 times current levels
- Vehicle fuel economy mandate
 - 35 miles per gallon by 2020, a 40-percent improvement saving more than 8 billion gallons annually
- Lighting mandate
 - Phase out incandescent bulbs by 2014
- Appliance mandate
- Federal facility requirements
 - Reduce energy consumption 30 percent by 2015 and make new Federal buildings carbon-neutral by 2030

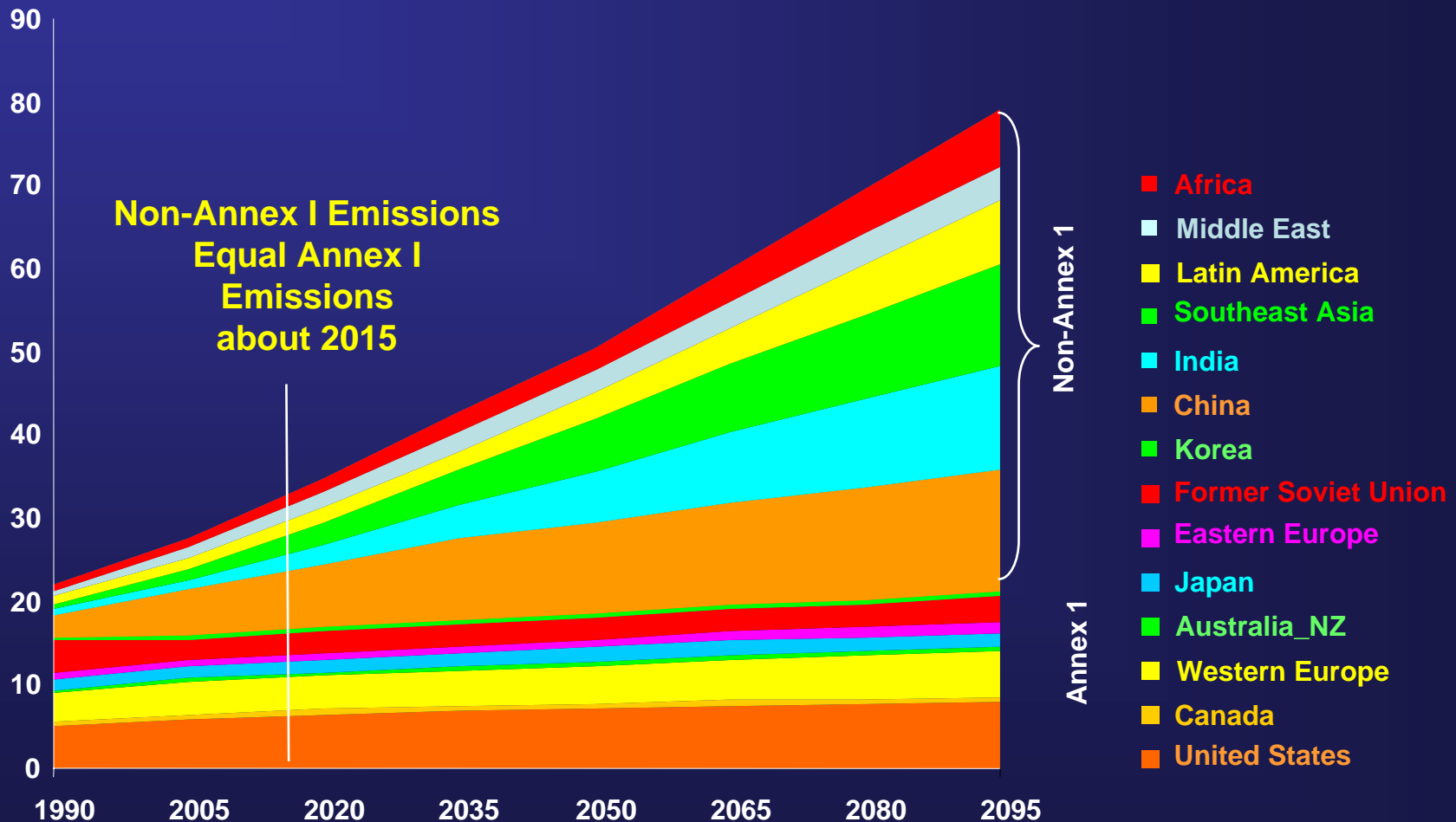
Executive Order

- Strengthening Federal government environmental, energy, and transportation Management
- Reduce oil consumption in vehicles by 2 percent per year
- Increase use of renewable fuels by 10 percent per year
- Improve energy efficiency by 30 percent in 10 years
- Use more renewable power

Combined, these measures could reduce CO₂ emissions by more than 7 billion metric tons through 2030.

Scale of the Global Challenge: Why Developing Countries are Key

Business-As-Usual CO₂ Emission Projections by Region, gigatons per year



Data derived from *Global Energy Technology Strategy, Addressing Climate Change: Phase 2 Findings from an International Public-Private Sponsored Research Program*, Battelle Memorial Institute, 2007.

Periodic Reports

Petroleum Status and Natural Gas Storage Reports, weekly

Short-Term Energy Outlook, monthly

Annual Energy Outlook 2008, March 2008

International Energy Outlook 2007, May 2007, next issue May 2008

Examples of Special Analyses

“Economic Effects of High Oil Prices,” Annual Energy Outlook 2007

Analysis of Oil and Gas Production in the Arctic National Wildlife Refuge,

March 2004

The Global Liquefied Natural Gas Market: Status and Outlook, Dec 2003

“Restricted Natural Gas Supply Case,” Annual Energy Outlook 2005

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