
Current Topics at EIA

U.S. Association for Energy Economics
November 20, 2009, Washington, DC

Richard Newell, Administrator
U.S. Energy Information Administration



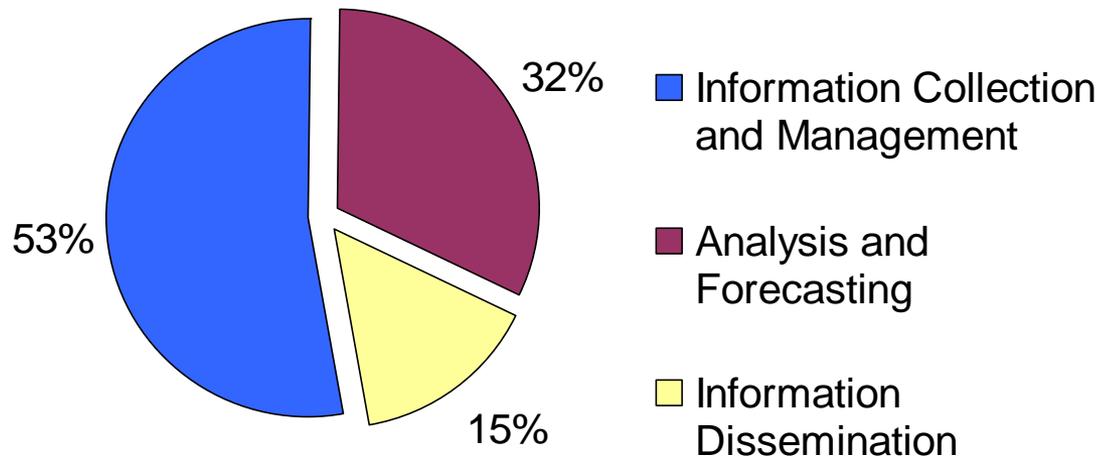
Overview

- EIA mission
- U.S. natural gas developments
- Energy and Financial Markets Initiative
- Climate policy analysis

EIA mission, resources, and core functions

- **Mission: Independent Statistics and Analysis**
 - EIA collects, analyzes, and disseminates independent and impartial energy information to promote sound policymaking, efficient markets, and public understanding of energy and its interaction with the economy and the environment.
- **Current resources: \$111 million; 375 FTEs**

EIA Budget by Function

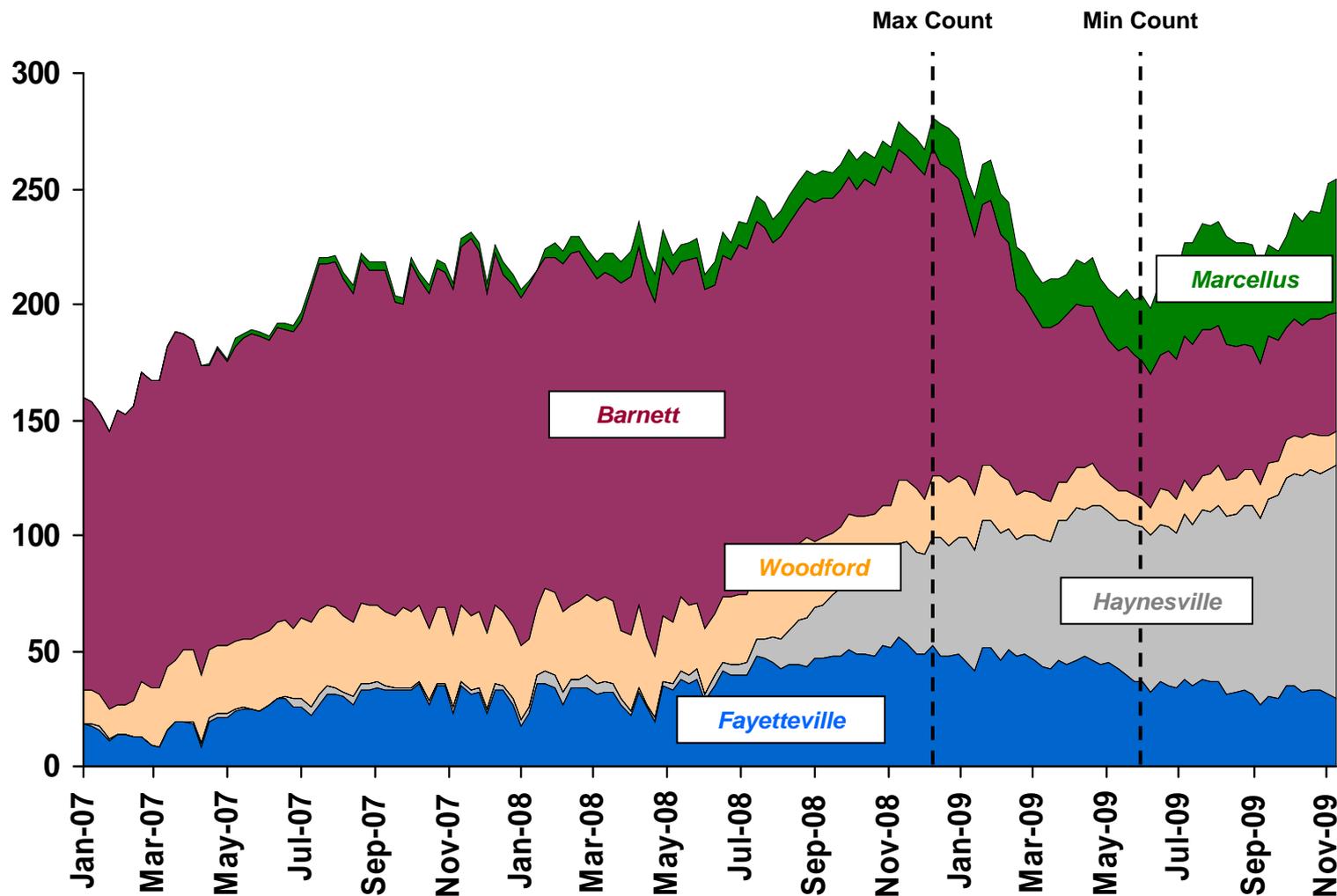


U.S. natural gas shale plays

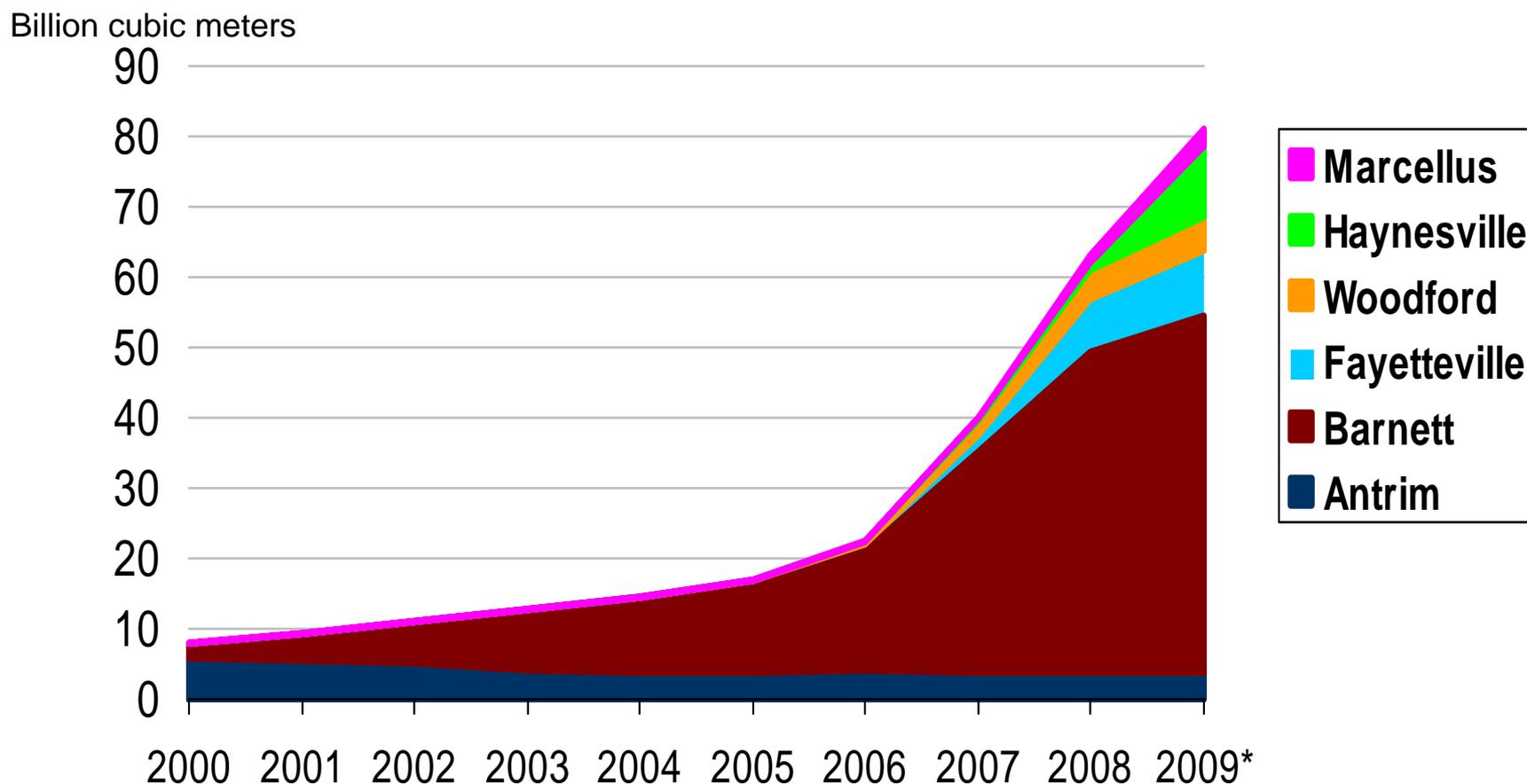


Source: Energy Information Administration based on data from various published studies
 Updated: May 28, 2009

Horizontal shale gas rig counts slowed, but have rebounded



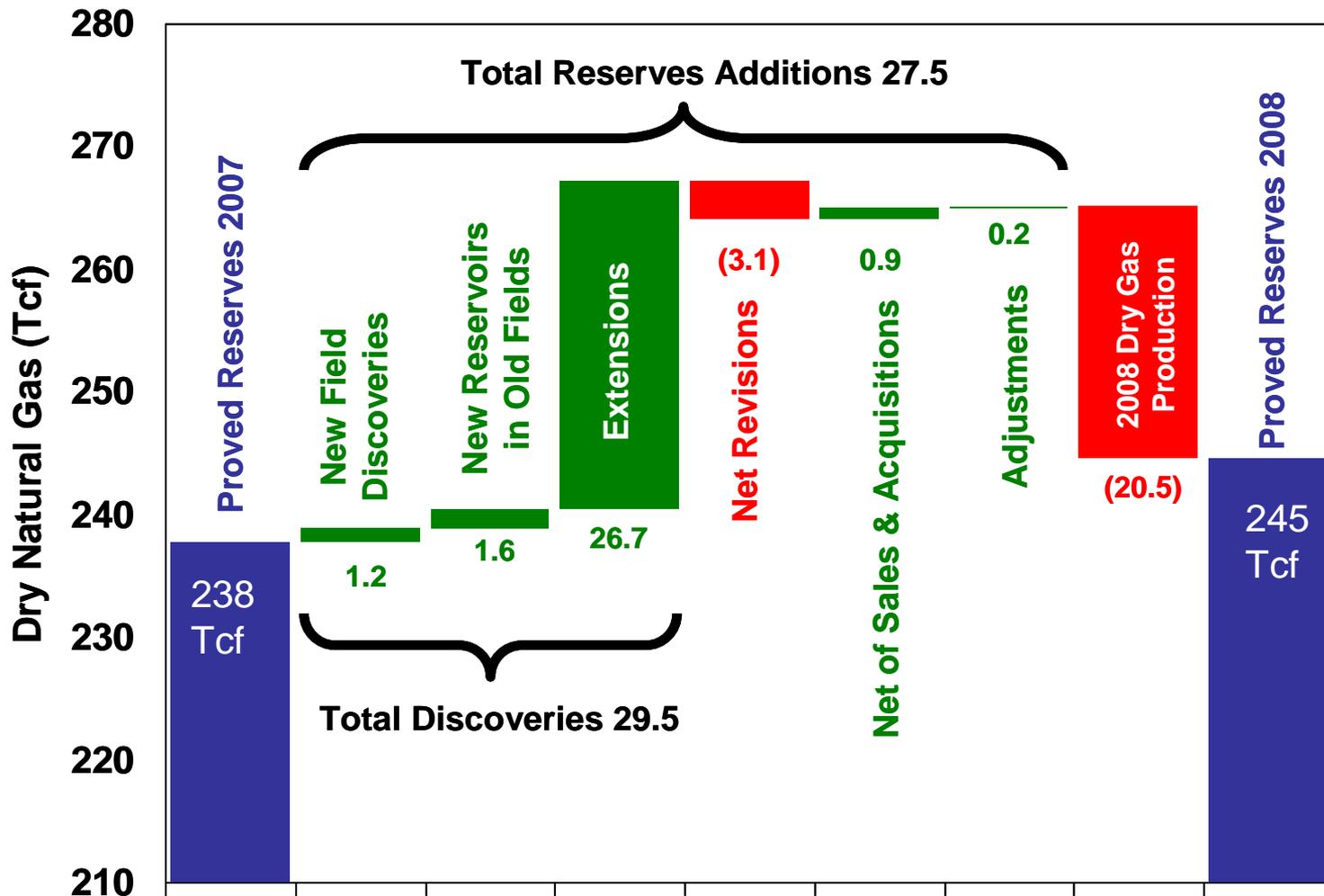
Production in key gas shale plays is growing rapidly



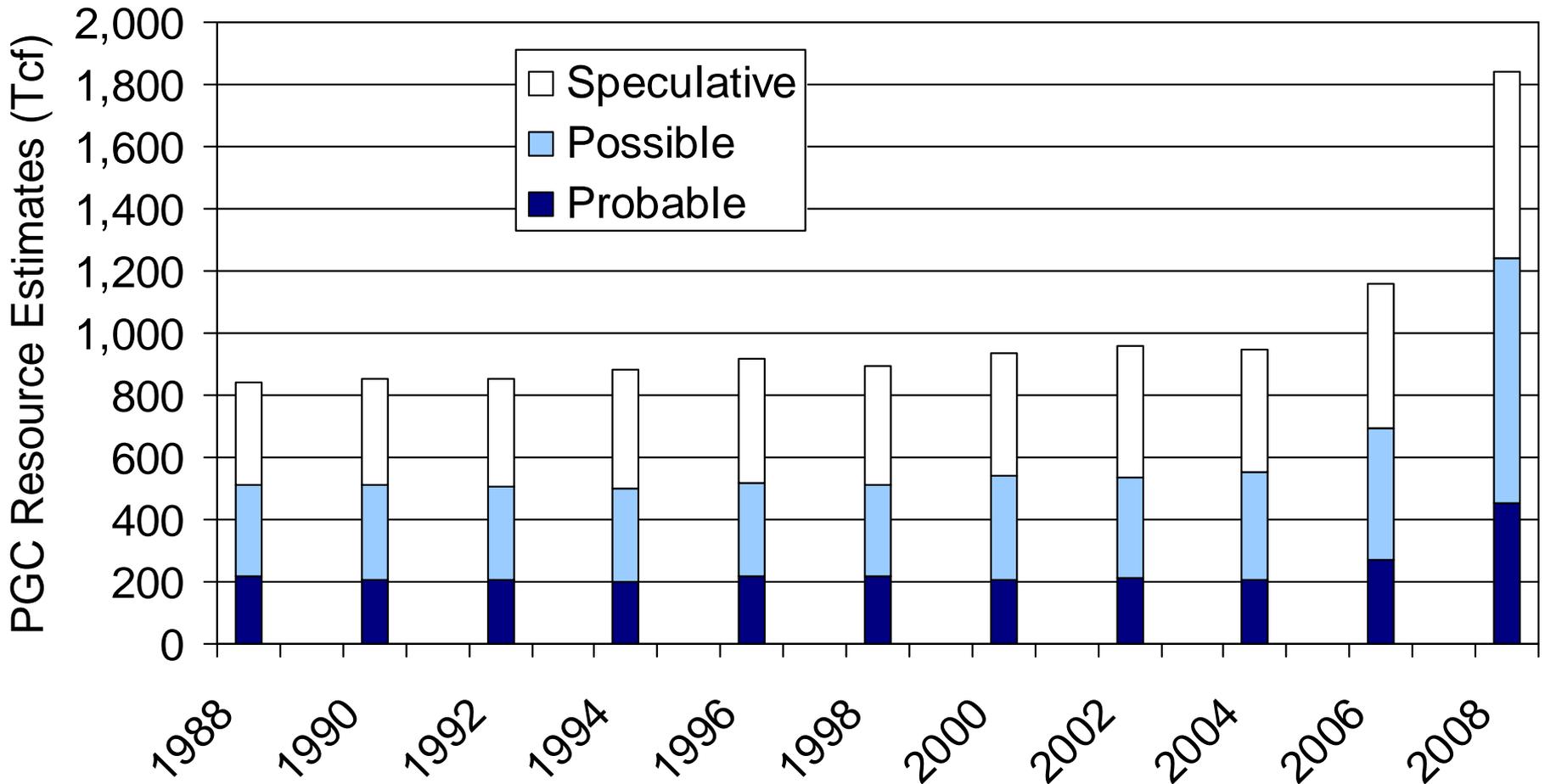
**Estimated*



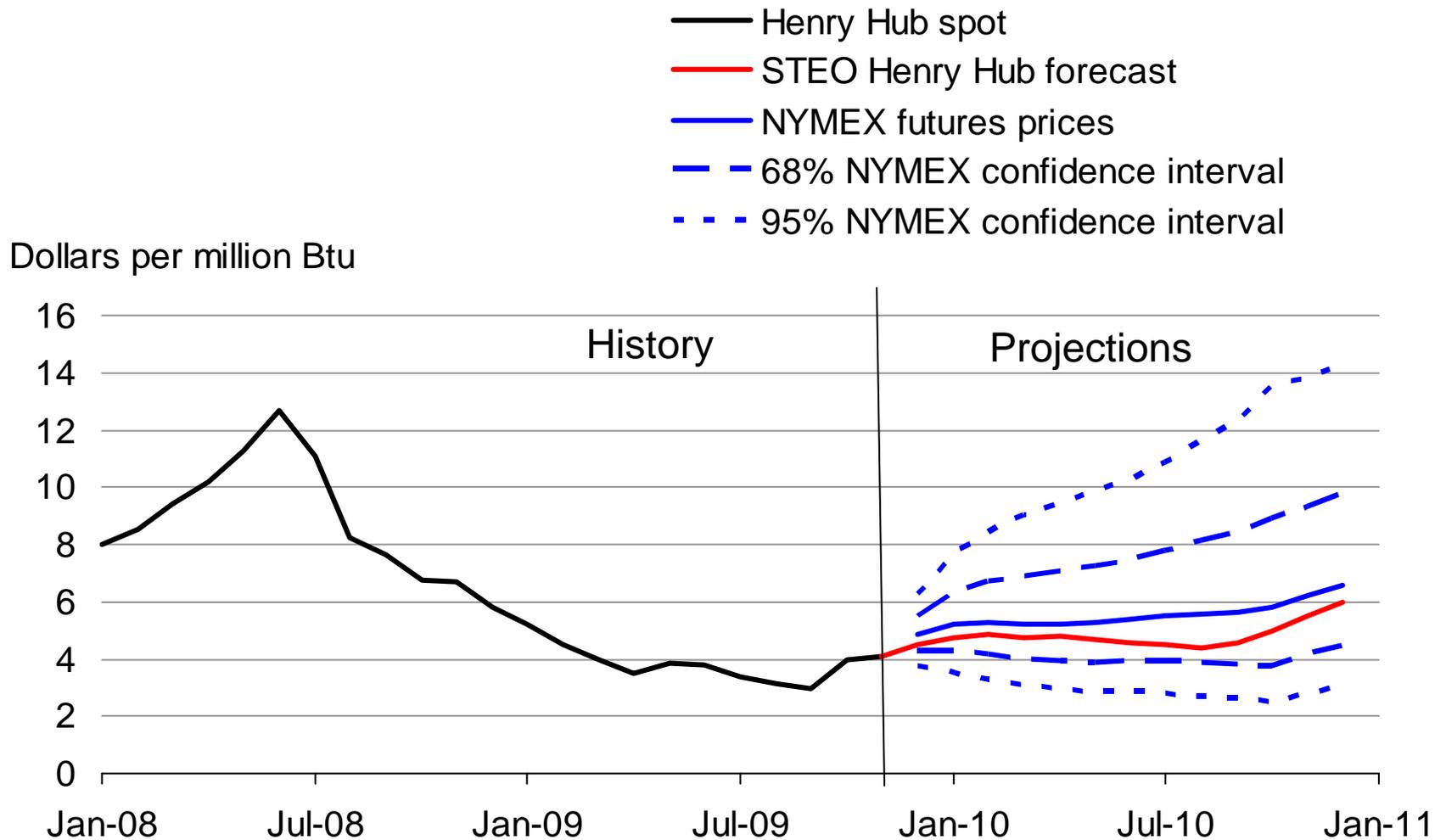
Year-end domestic gas reserves increased 3% in 2008, despite higher production and lower prices



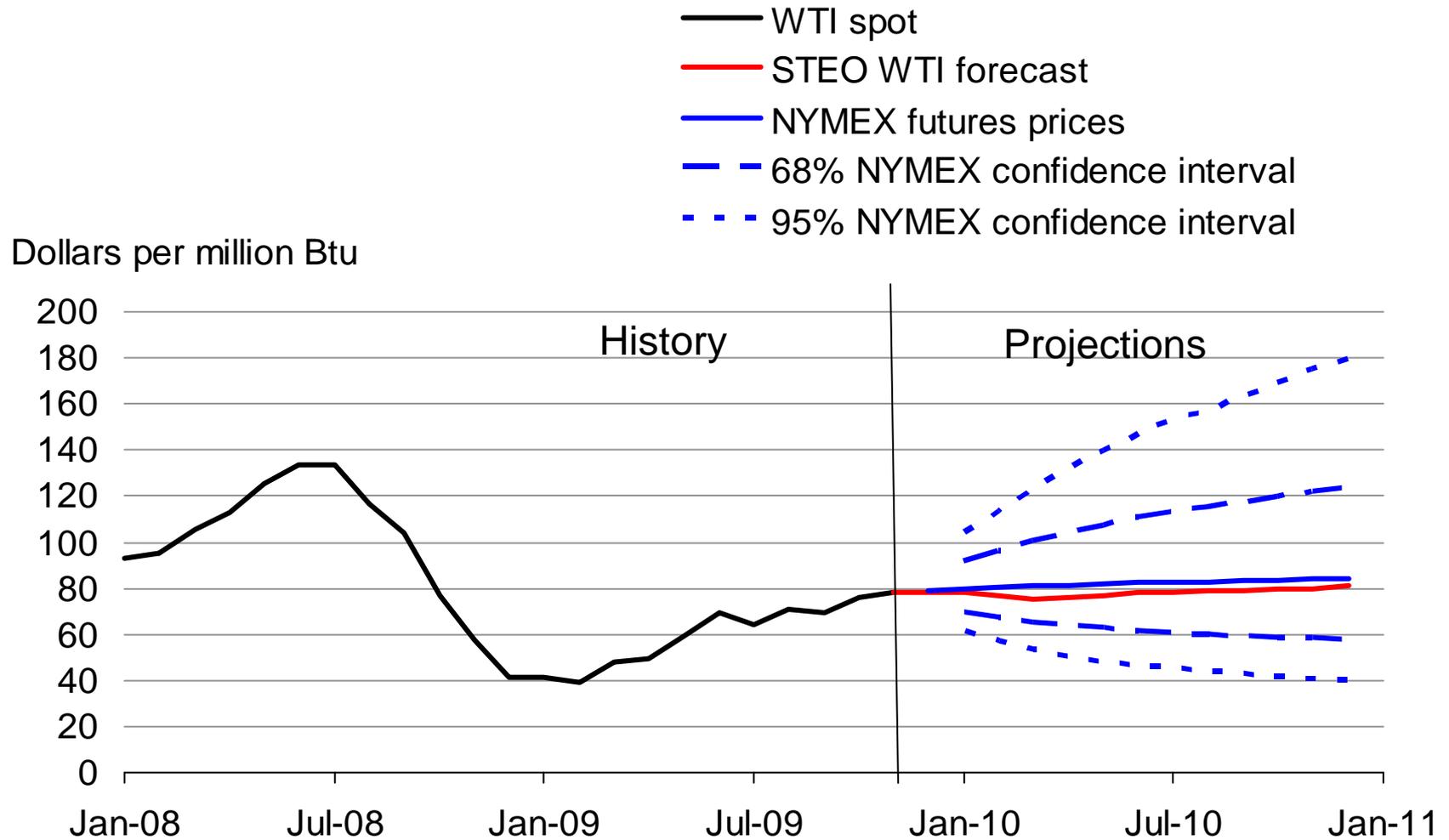
New technologies also force a reassessment of gas resources



Henry Hub spot prices remain highly uncertain



Expected near term WTI oil price is flat, but highly uncertain



Oil prices relate to many uncertain factors



EIA recently launched the *Energy and Financial Markets Initiative* to track all the factors affecting energy prices

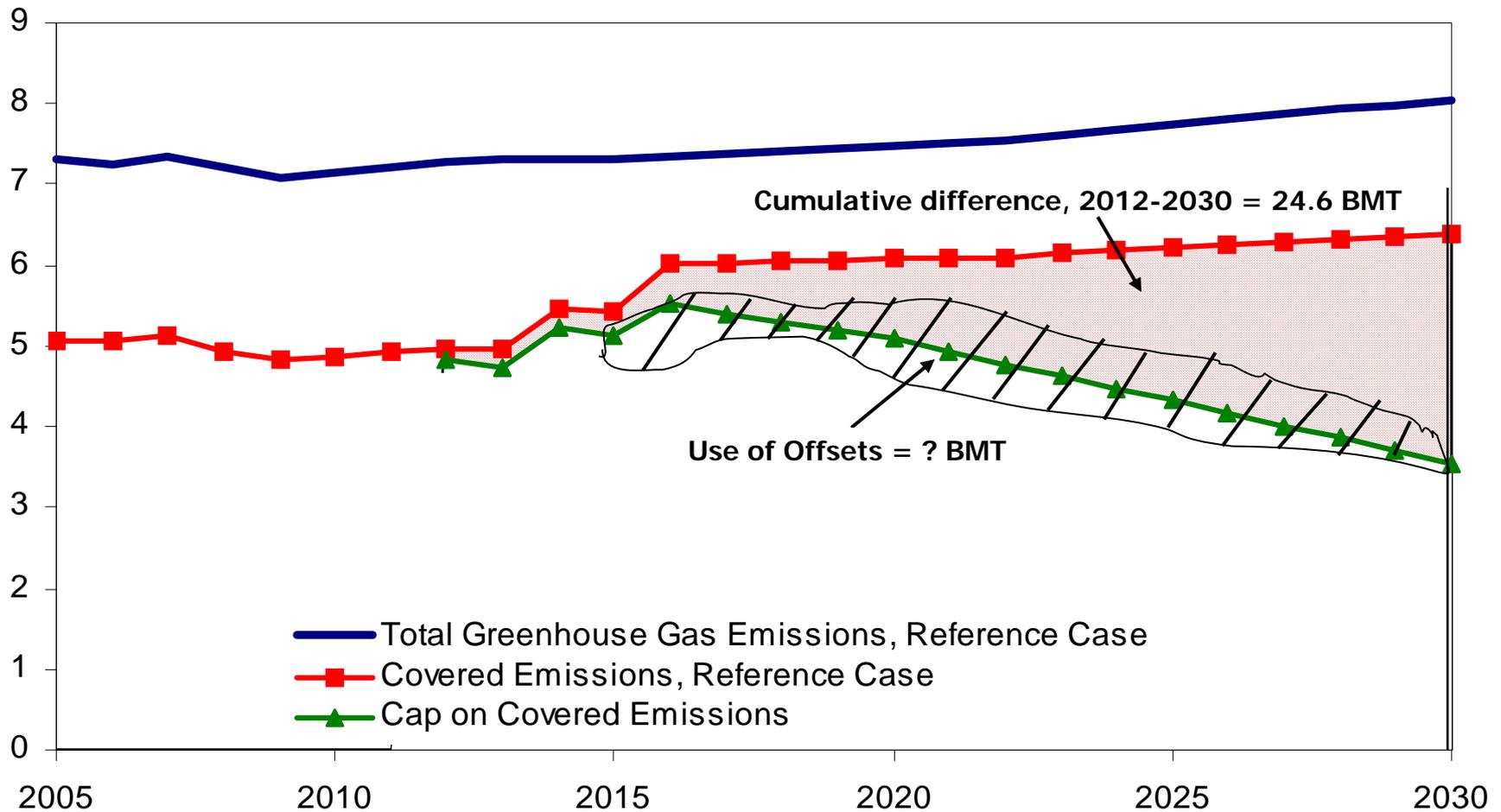
1. Collection of critical energy information to improve market transparency
 - Nov 2 Federal Register notice initiating additional petroleum storage capacity collection
 - Forthcoming FR notice requesting views on additional data needs, particularly for clarifying relationship among inventories-prices-financials
2. Analysis of energy and financial market dynamics
 - Oct rollout of implied volatility work
 - Improving existing products; special reports on factors affecting prices
3. Outreach to experts and the public
 - Nov 18 workshop; FR notices; Annual conference
4. Coordination with other Federal agencies

EIA Analysis of H.R.2454

The American Clean Energy and Security Act of 2009

ACESA requires 24.6- billion-metric-ton reduction in covered GHG emissions over 2012-2030; actual reductions could be smaller or larger depending on the use of offsets and banking behavior

CO₂-equivalent emissions, billion metric tons

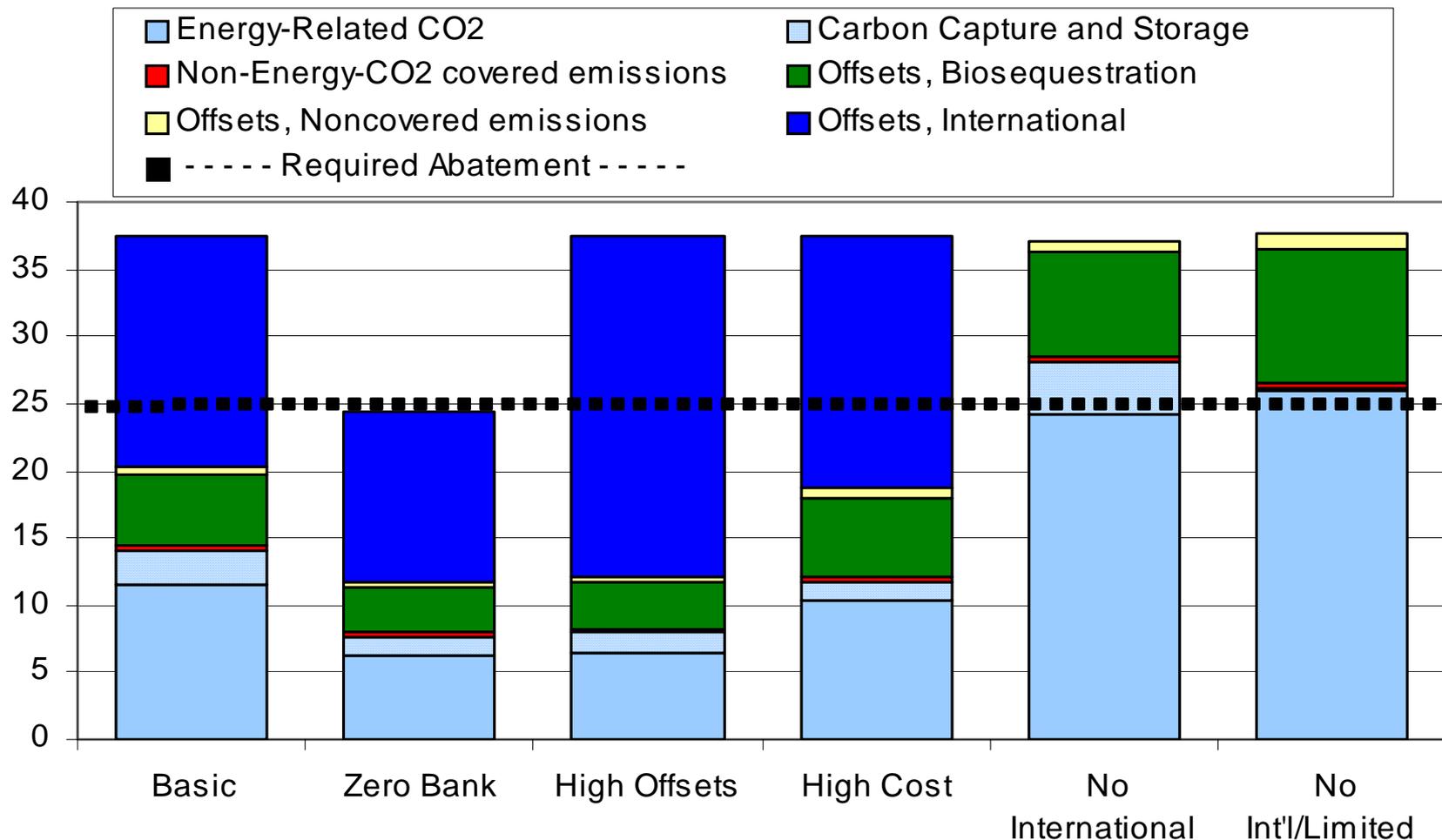


Main cases in EIA's analysis

Case Name	Assumptions
Basic	Integrated analysis of all of the modeled provisions of ACESA.
Zero Bank	Same as Basic but no carryover of allowances beyond 2030. Proxy for major low- no-carbon energy technology breakthroughs with significant market impacts after 2030
High Offsets	Same as Basic but assumes increased use of international offsets.
High Cost	Same as Basic but assumes that nuclear, fossil with CCS and biomass gasification costs are 50 % higher
No International	Same as Basic but assumes international offsets are too expensive or unable to meet the requirements for use
No International / Limited	Same as Basic but limits additions of nuclear, fossil with CCS and biomass to reference case levels. Also no international offsets.

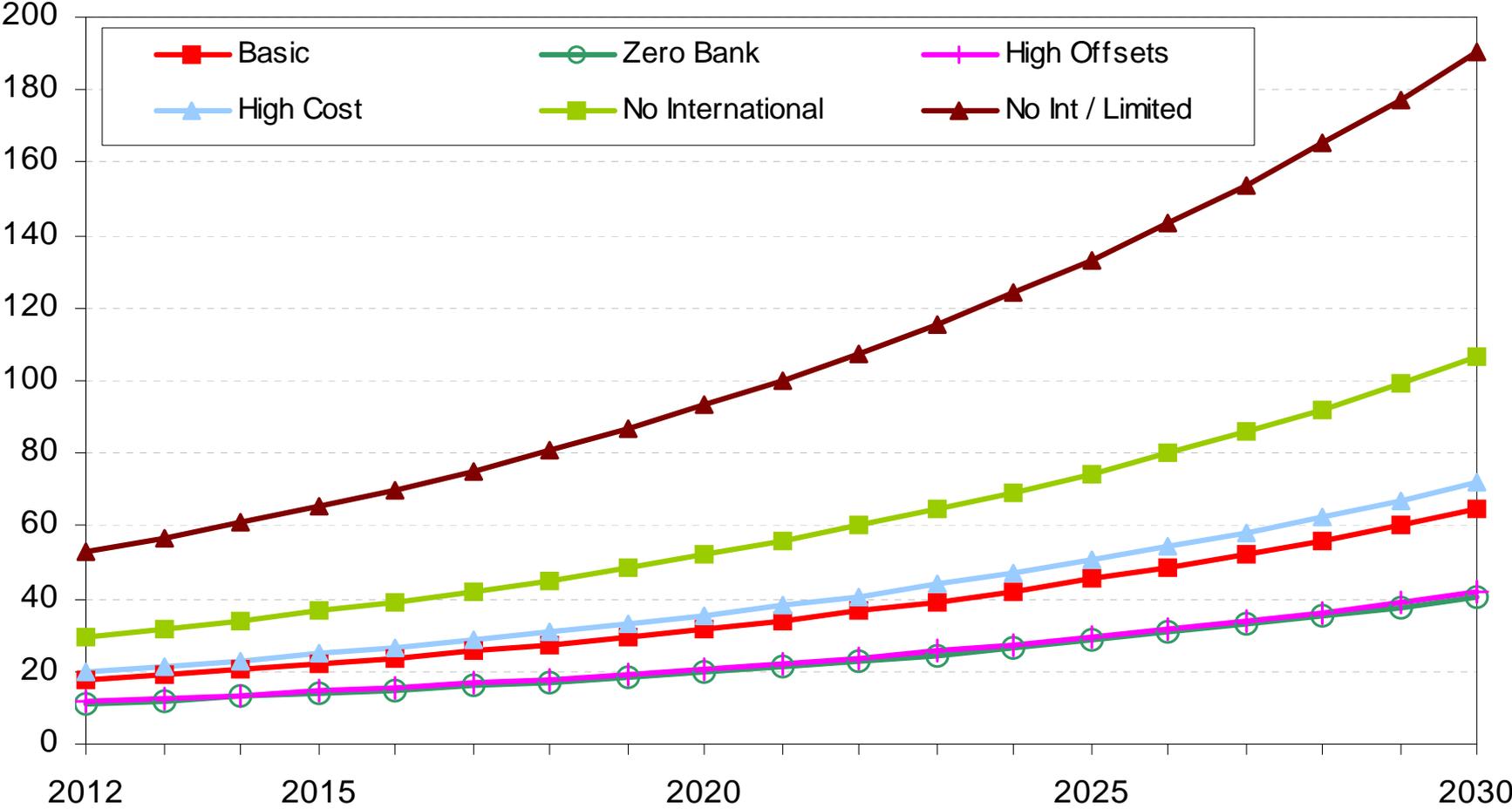
Energy sector reductions (2 bottom sections) vary with availability of offsets and low-emitting generation options

Cumulative compliance, 2012-2030 (billion metric tons)



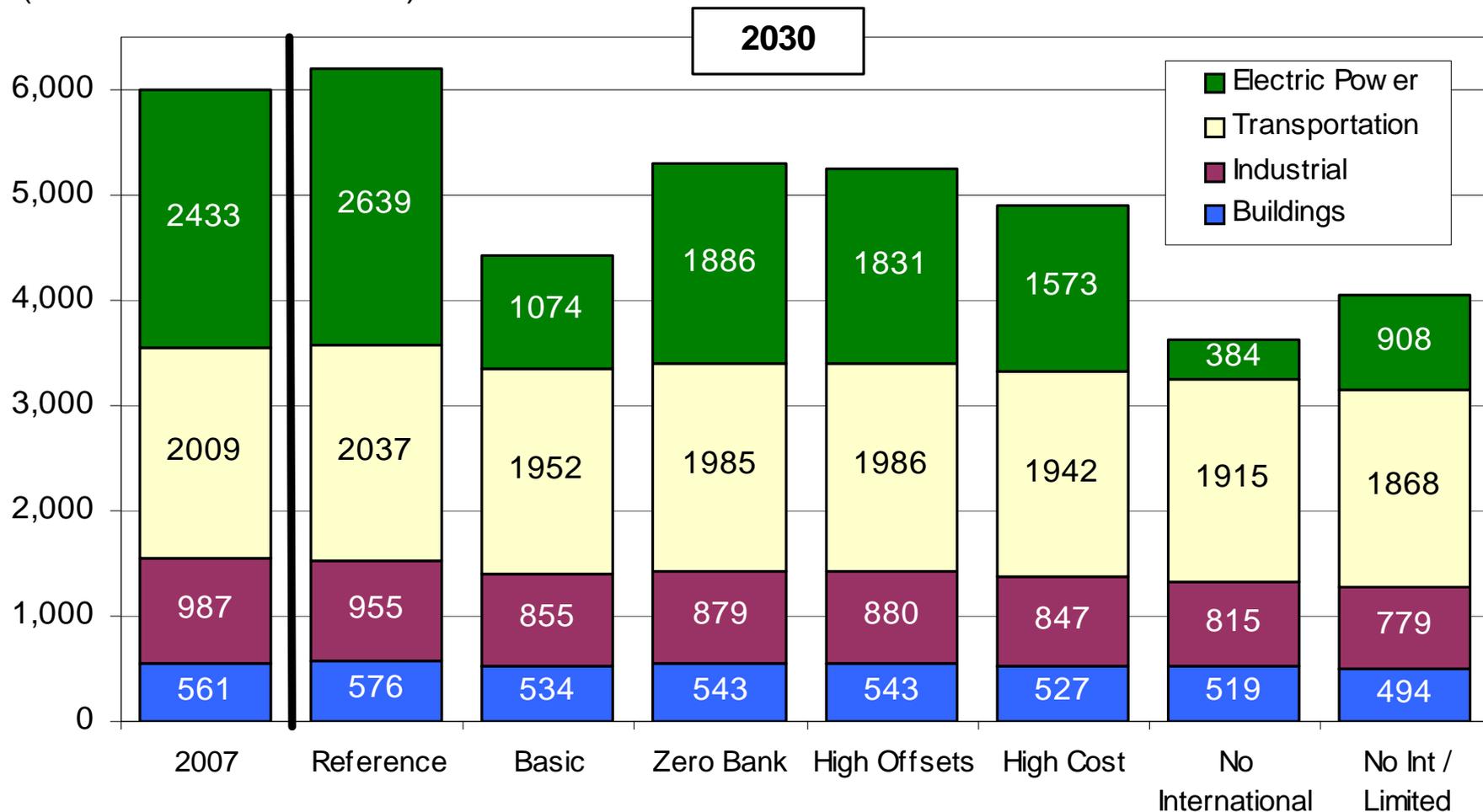
Projected allowance prices depend on the availability of offsets and low/no carbon electricity generation technologies

(2007 dollars per metric ton CO₂-equivalent)



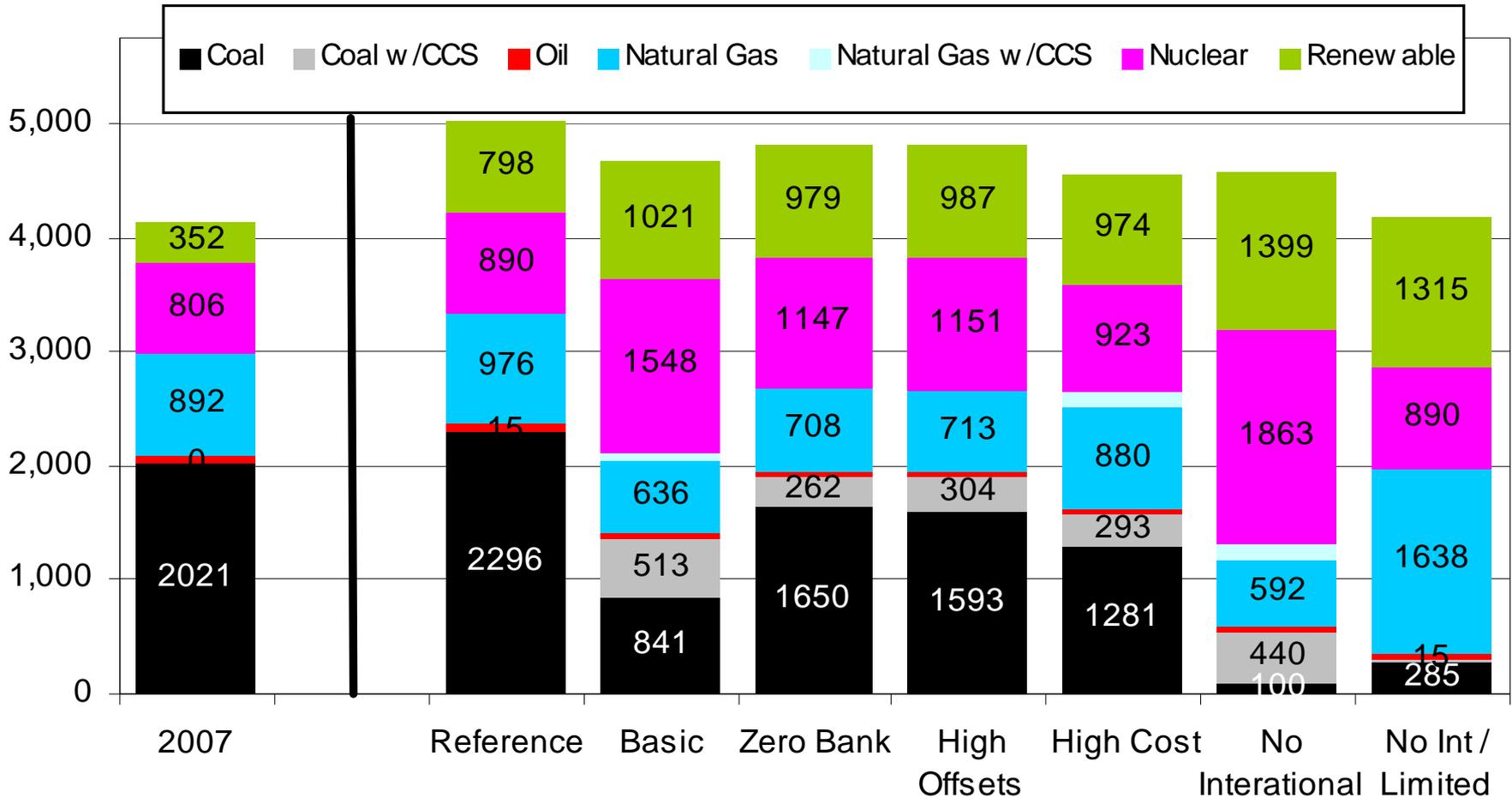
The electricity sector dominates projected reductions in energy-related CO₂ emissions

(million metric tons CO₂)



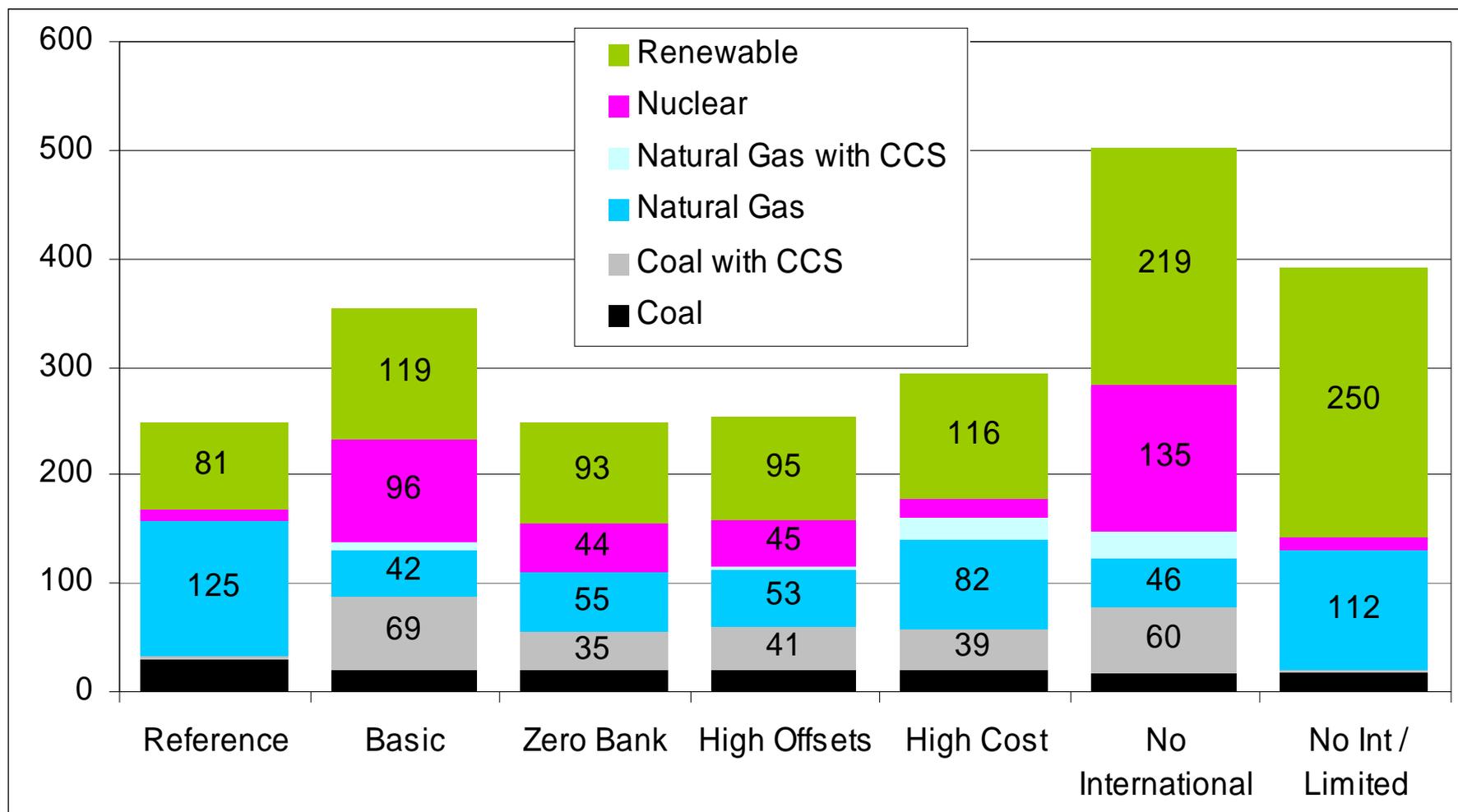
2030 generation shifts from conventional coal to nuclear, renewables, and fossil+CCS; natural gas use grows dramatically if other options are limited

(billion kilowatthours)



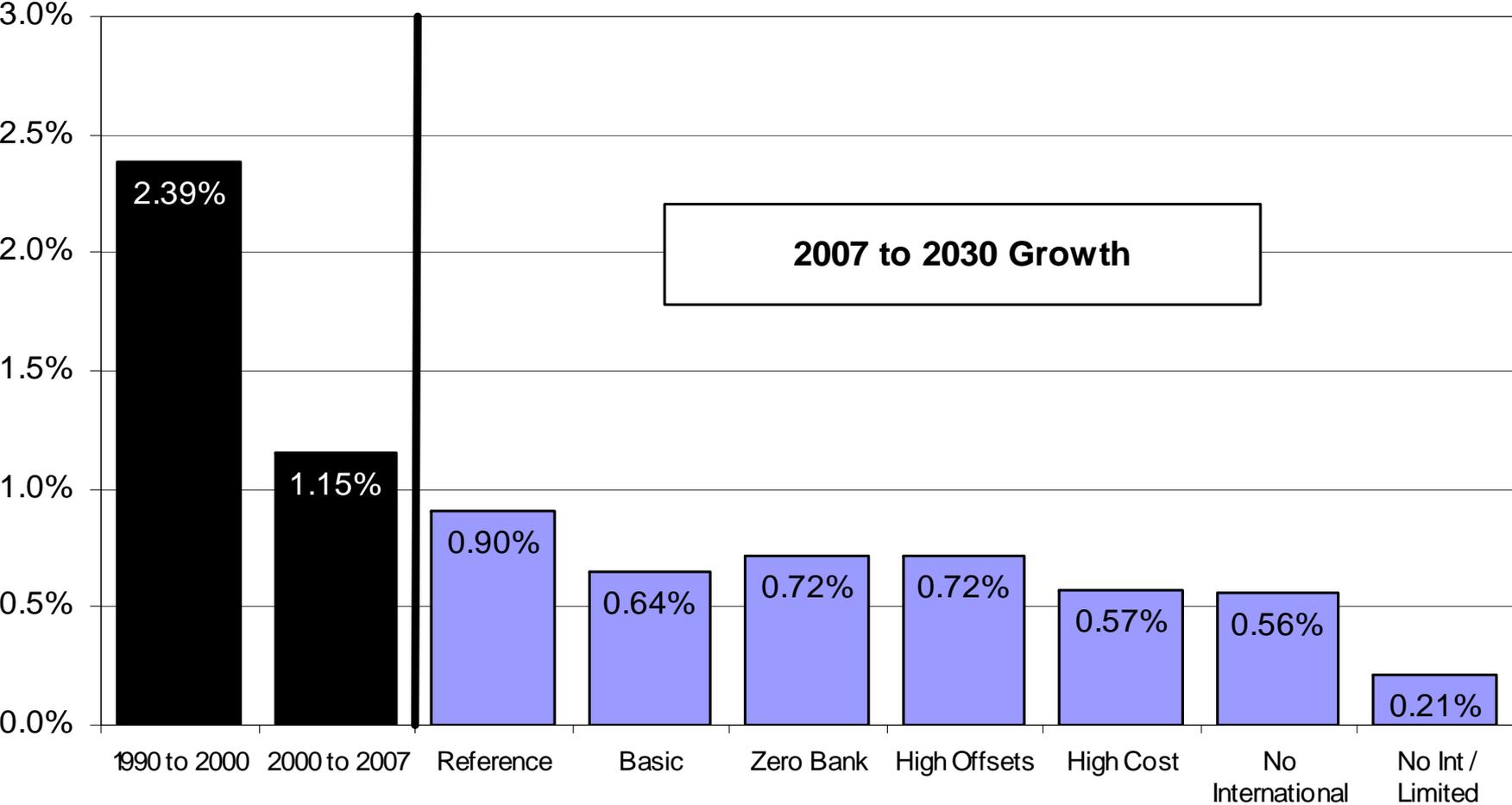
Electricity capacity additions dominated by mix of nuclear, renewables, fossil+CCS, but natural gas is larger if those options are limited

(thousand megawatts)



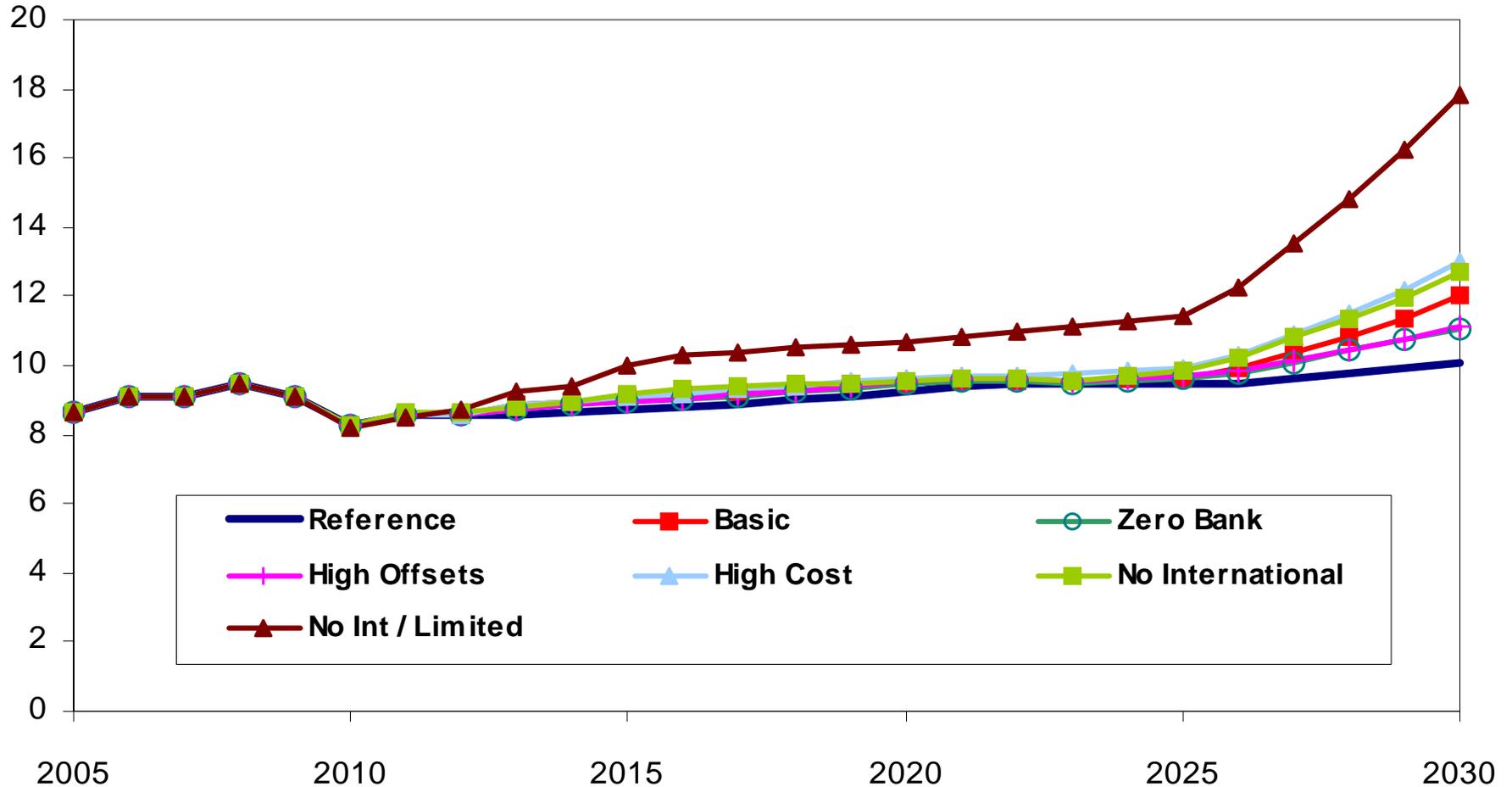
Efficiency programs and higher electricity prices reduce electricity demand growth

Annual percent growth in electricity use



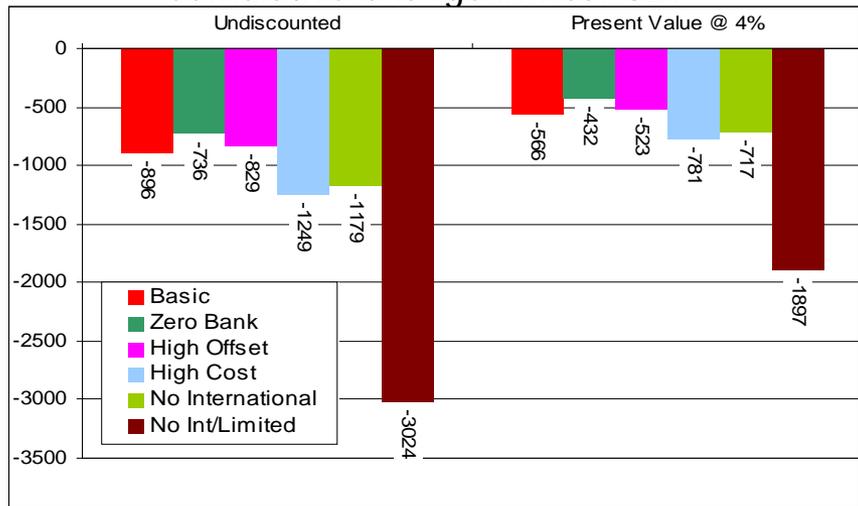
Electricity prices stay near baseline through 2025 in all but one case, then rise to higher levels through 2030

(2007 cents per kilowatthour, all sectors average)

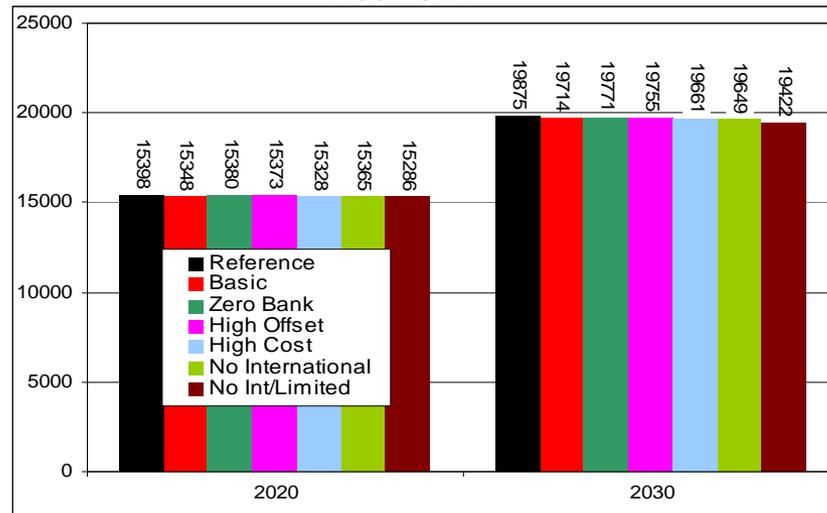


Present-value GDP losses over 2012-2030 range from 0.2% to 0.4%; consumption losses range from 0.1% to 0.3% in 5 analysis cases. Impacts are much higher in the No International/Limited Alternatives case.

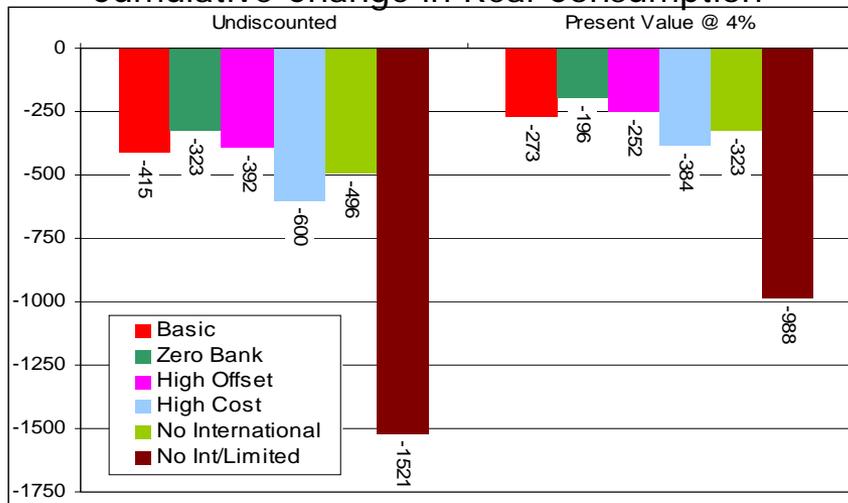
Cumulative Change in Real GDP



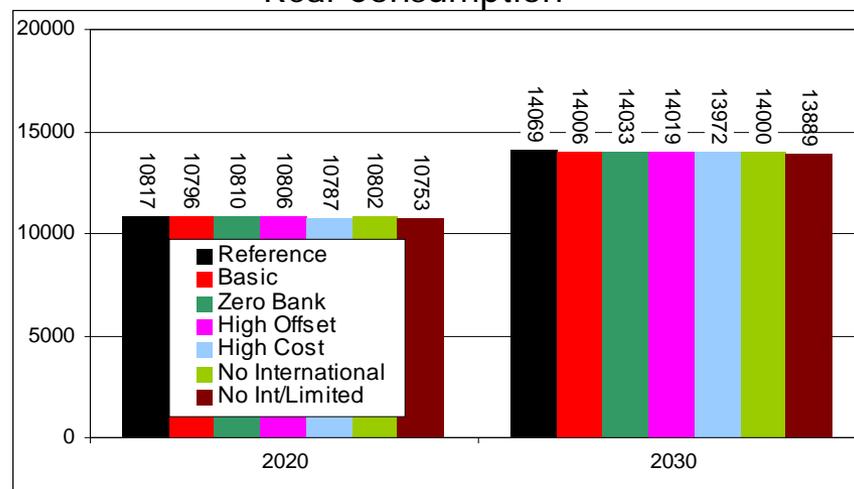
Real GDP



Cumulative Change in Real Consumption



Real Consumption



For more information

Energy Information Administration home page	www.eia.doe.gov
Short-Term Energy Outlook	www.eia.doe.gov/emeu/steo/pub/contents.html
Annual Energy Outlook	www.eia.doe.gov/oiaf/aeo/index.html
International Energy Outlook	www.eia.doe.gov/oiaf/ieo/index.html
Monthly Energy Review	www.eia.doe.gov/emeu/mer/contents.html

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