

# China's Emissions Future

## Market and Policy Developments and Global Implications

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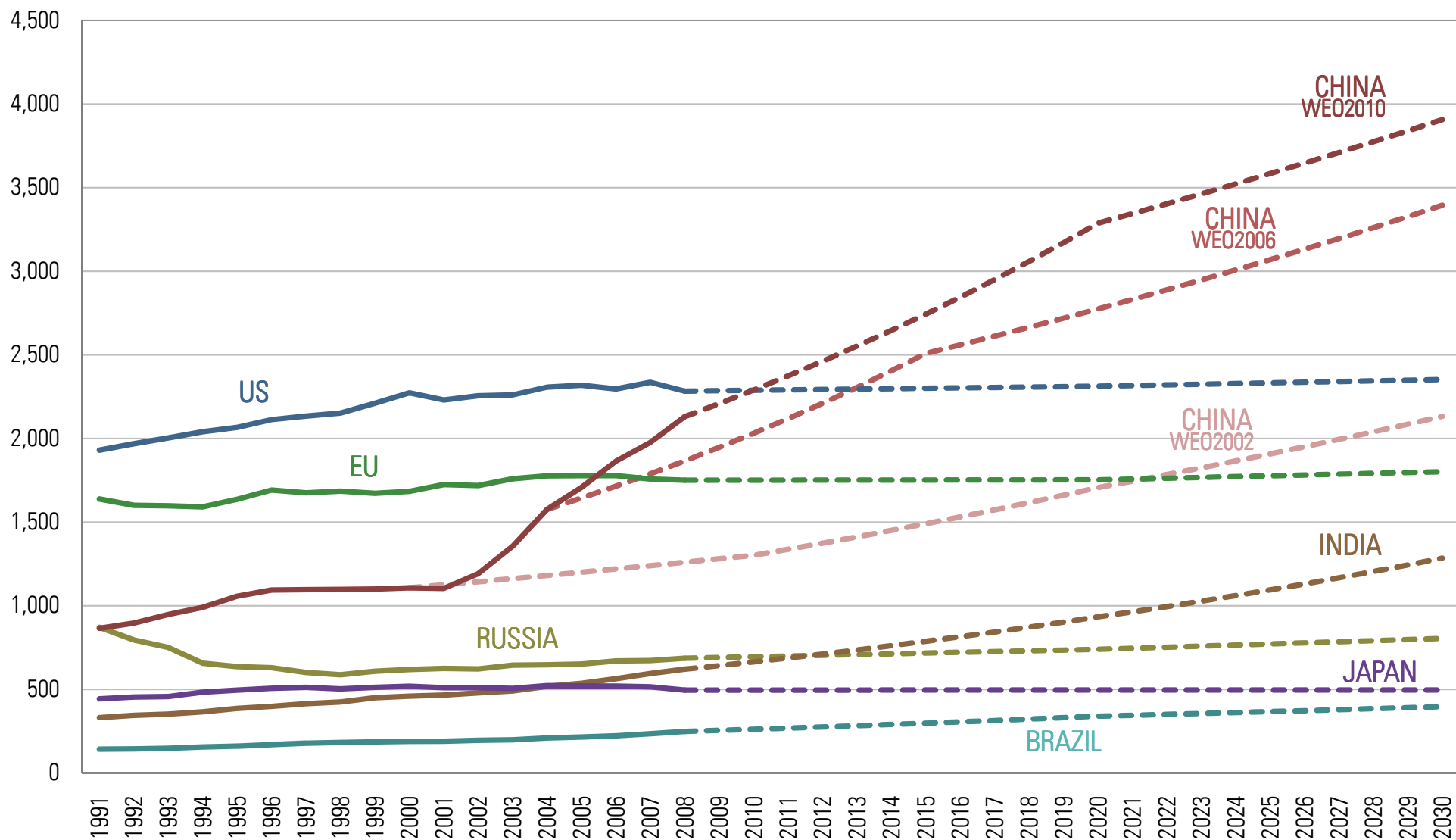
EPRI Seminar

Washington, DC

May 26, 2011

# Grappling with Future Chinese Energy Demand

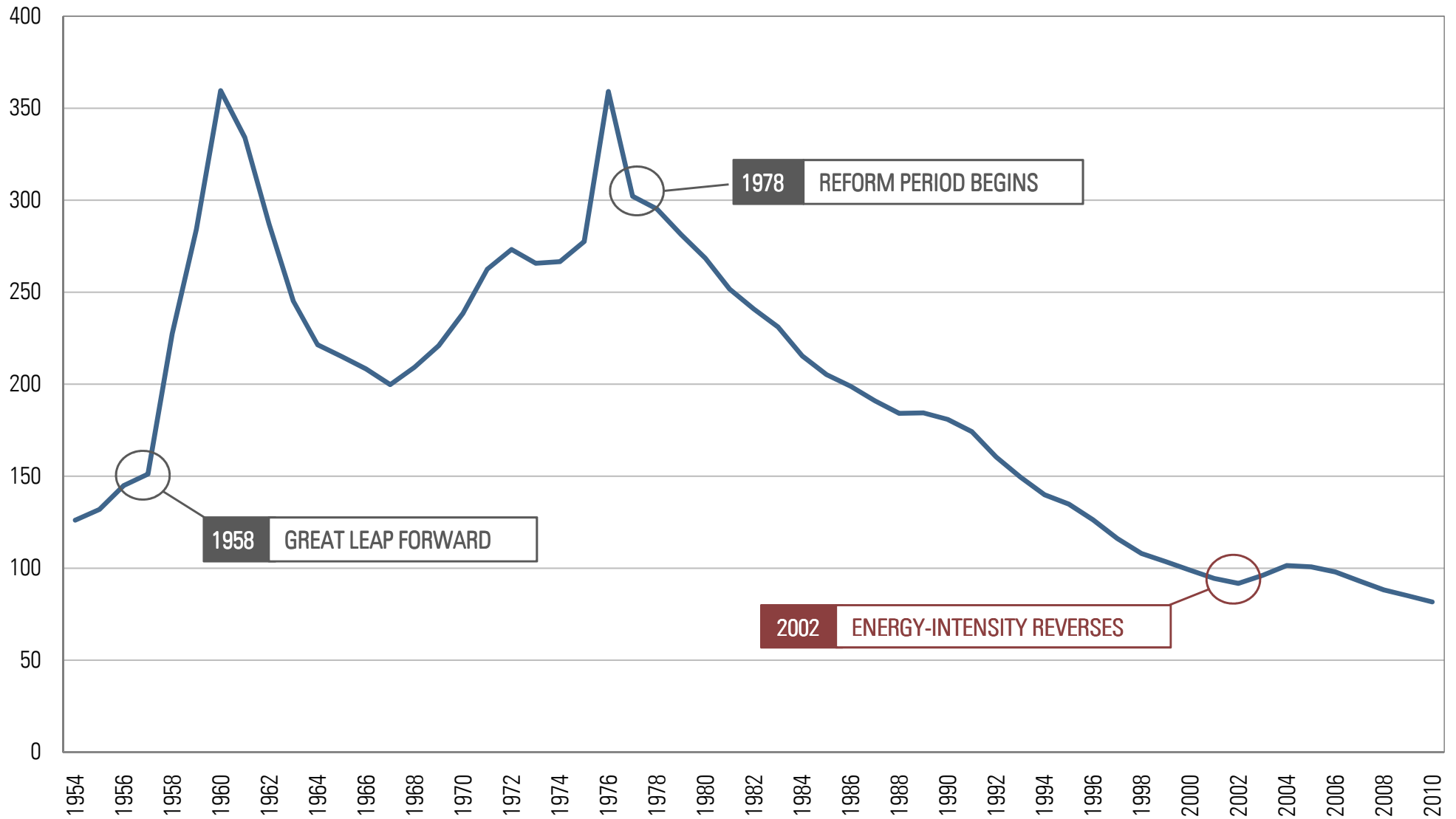
IEA Projections for Total Primary Energy Supply, mtoe



Source: IEA, RHG

# Energy Intensity of China's Growth

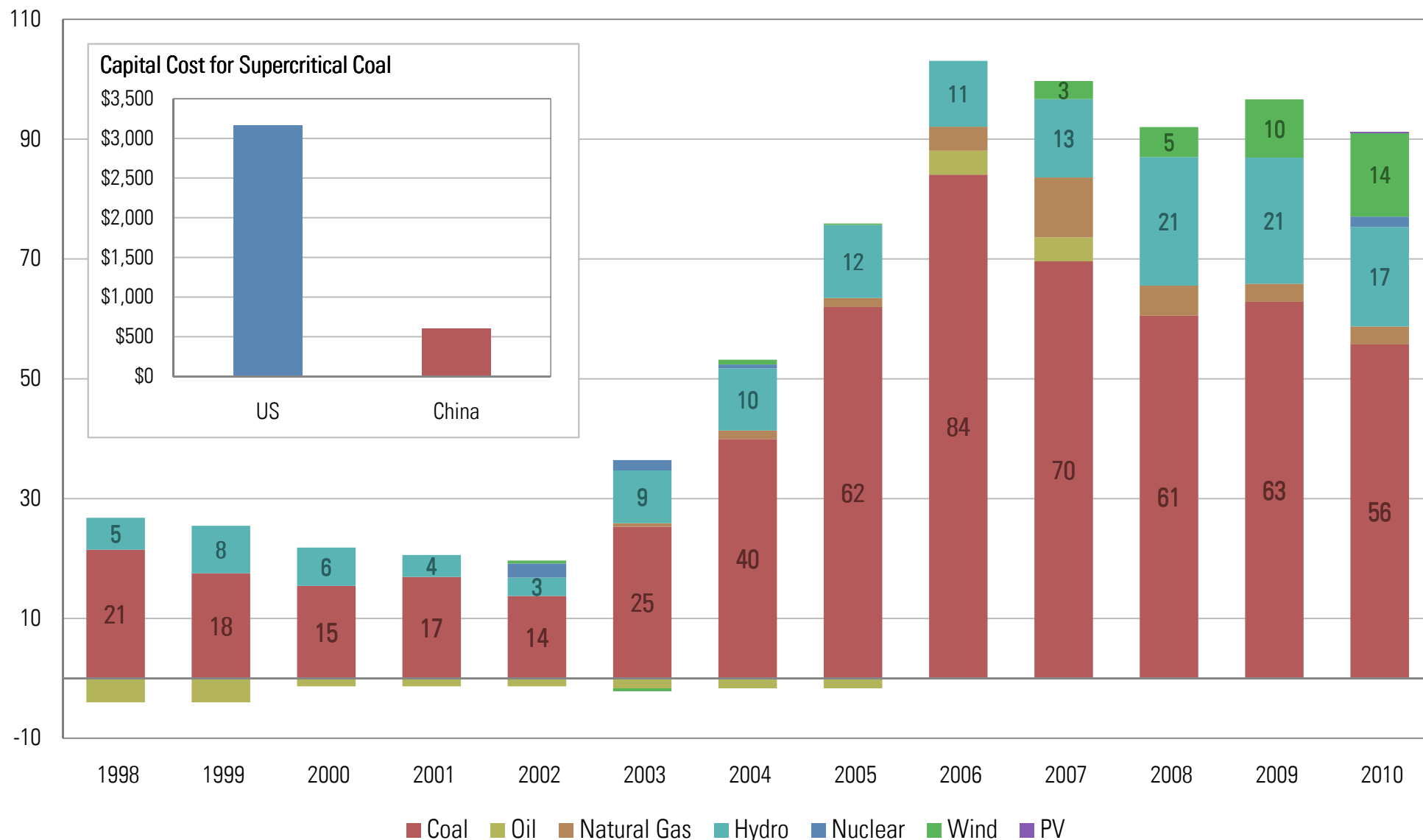
Tons of coal equivalent per million real RMB



Source: NBS, RHG

# The "China-Price" in Coal-Fired Power

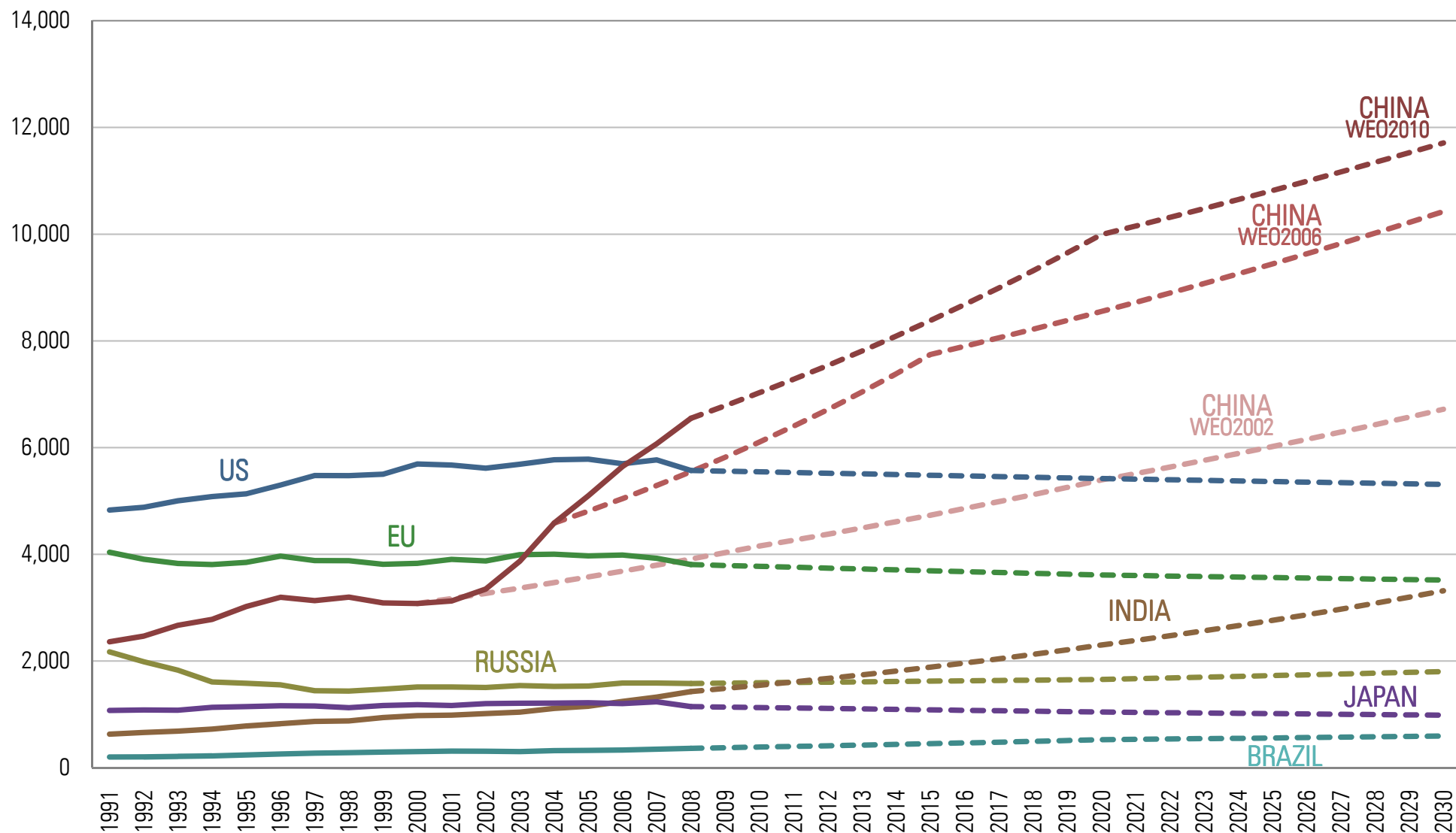
## Annual Chinese Power Capacity Additions



Source: CEIC, EIA, IEA and RHG Estimates

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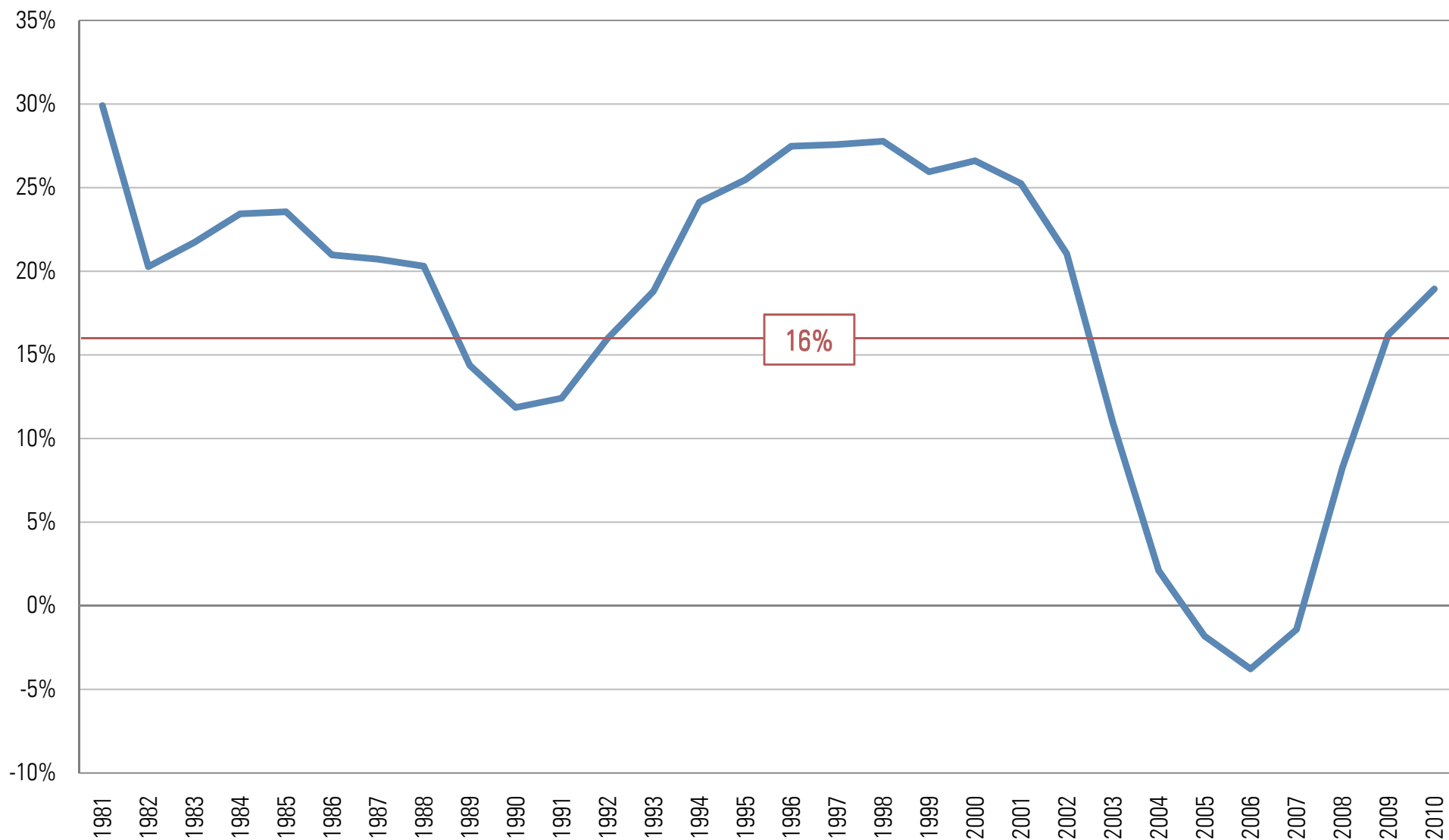
## Energy-related CO2 emission projections



Source: IEA, RHG

# Past Chinese Energy-Intensity Improvements vs Target

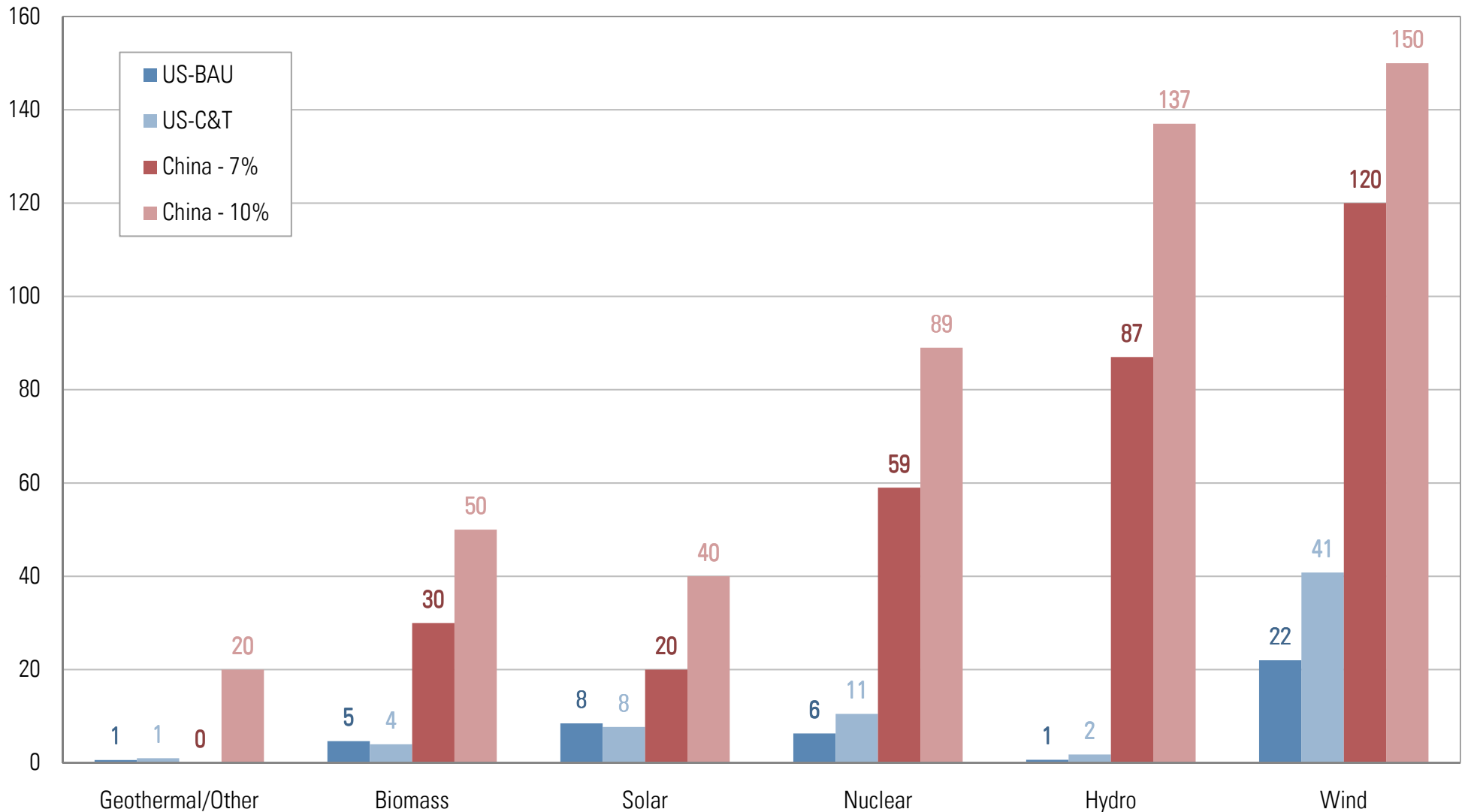
## 5-Year Reductions in the Energy-Intensity of GDP



Source: CEIC and RHG

# The Implications of China's 15% Non-Fossil Target

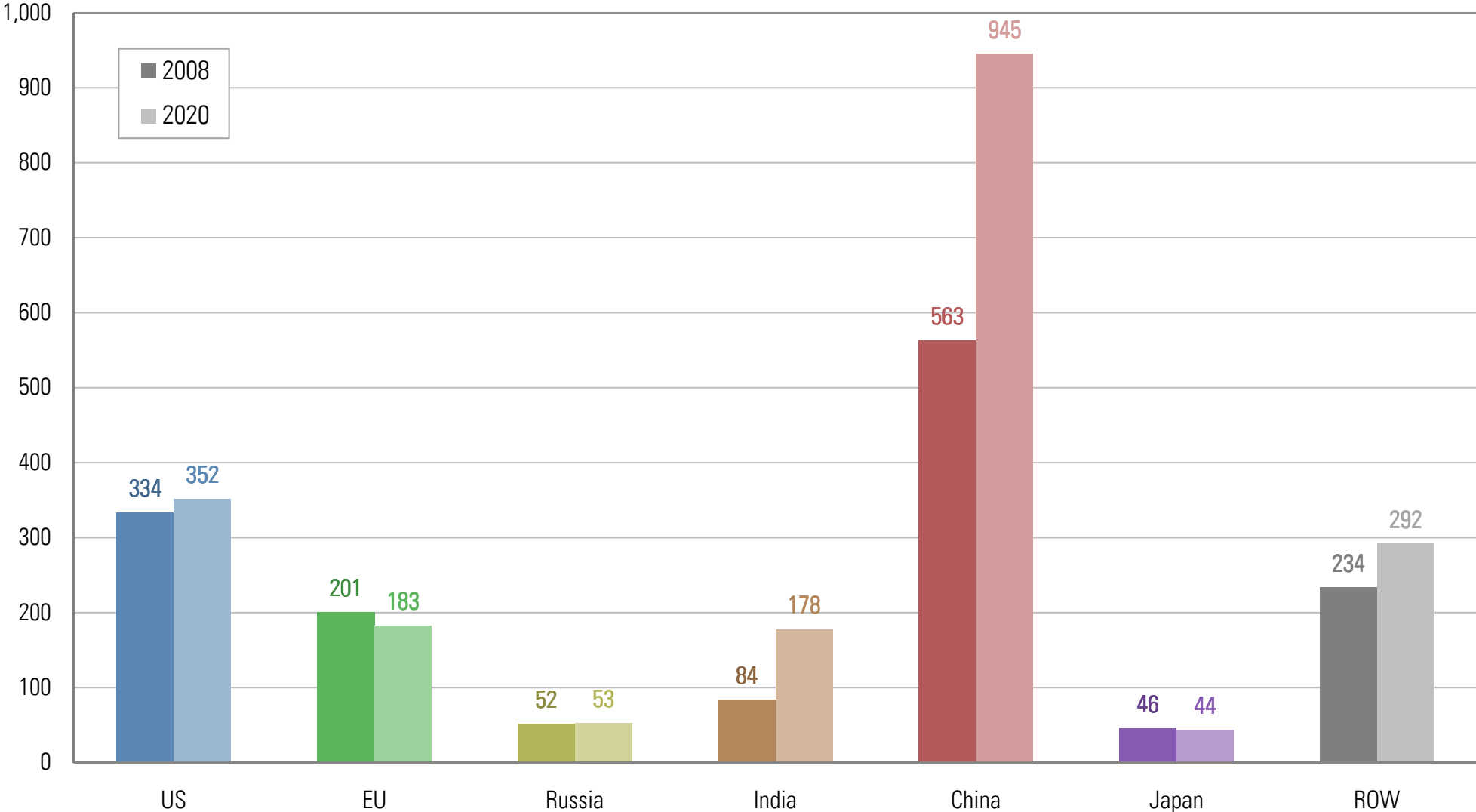
## Projected Capacity Additions 2010-2020



Source: US-BAU is AEO 2011. US-C&T is a generic economy-wide cap-and-trade program with banking and borrowing, international offsets and emissions reduction targets of 17% below 2005 levels in 2020 and 83% in 2050.

# ...But Coal Continues to be King

## Coal-fired power capacity 2008 and 2020

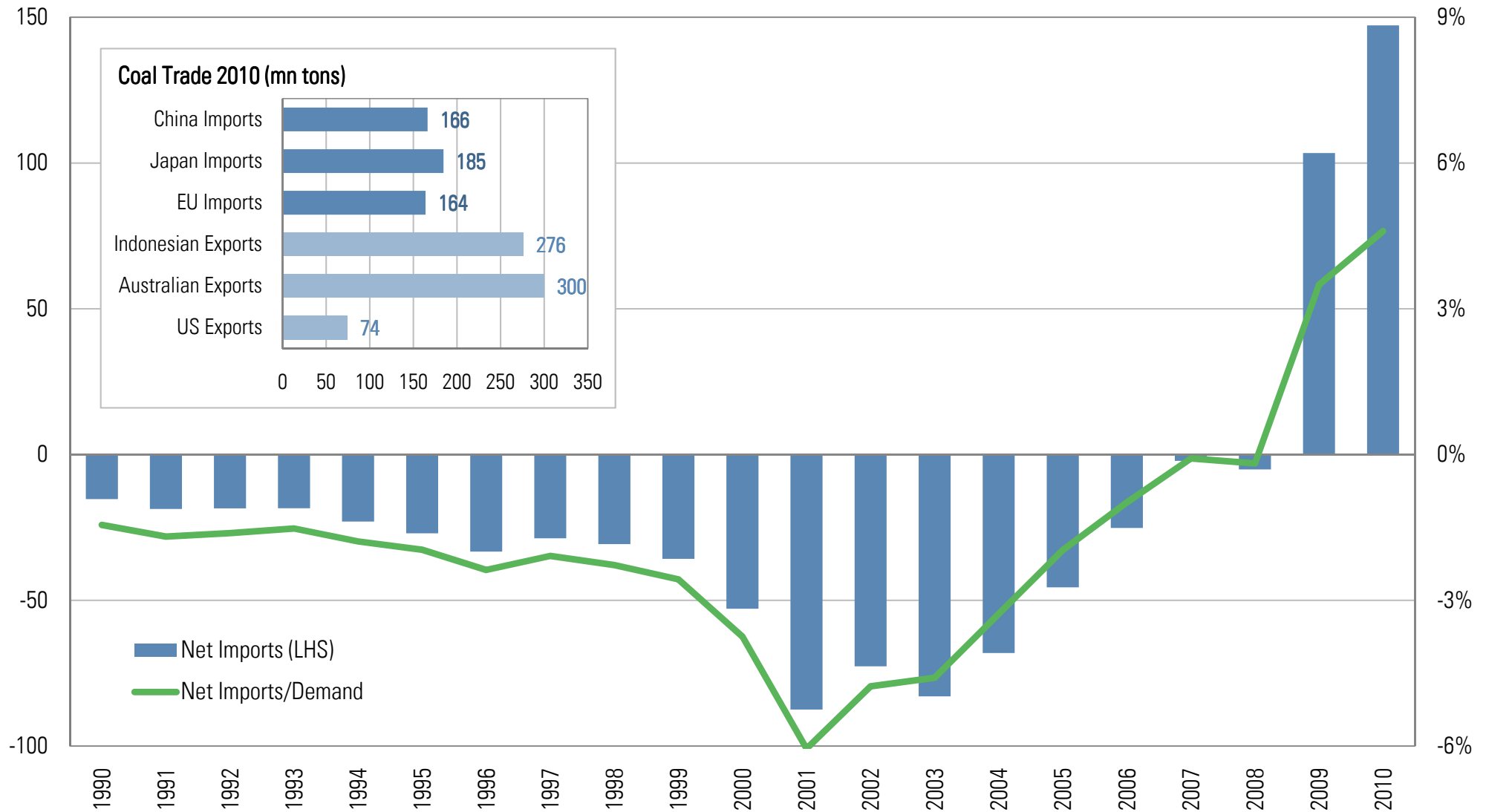


Source: IEA's World Energy Outlook 2010, New Policies Scenario



# China's Coal Demand Spills Into Global Markets

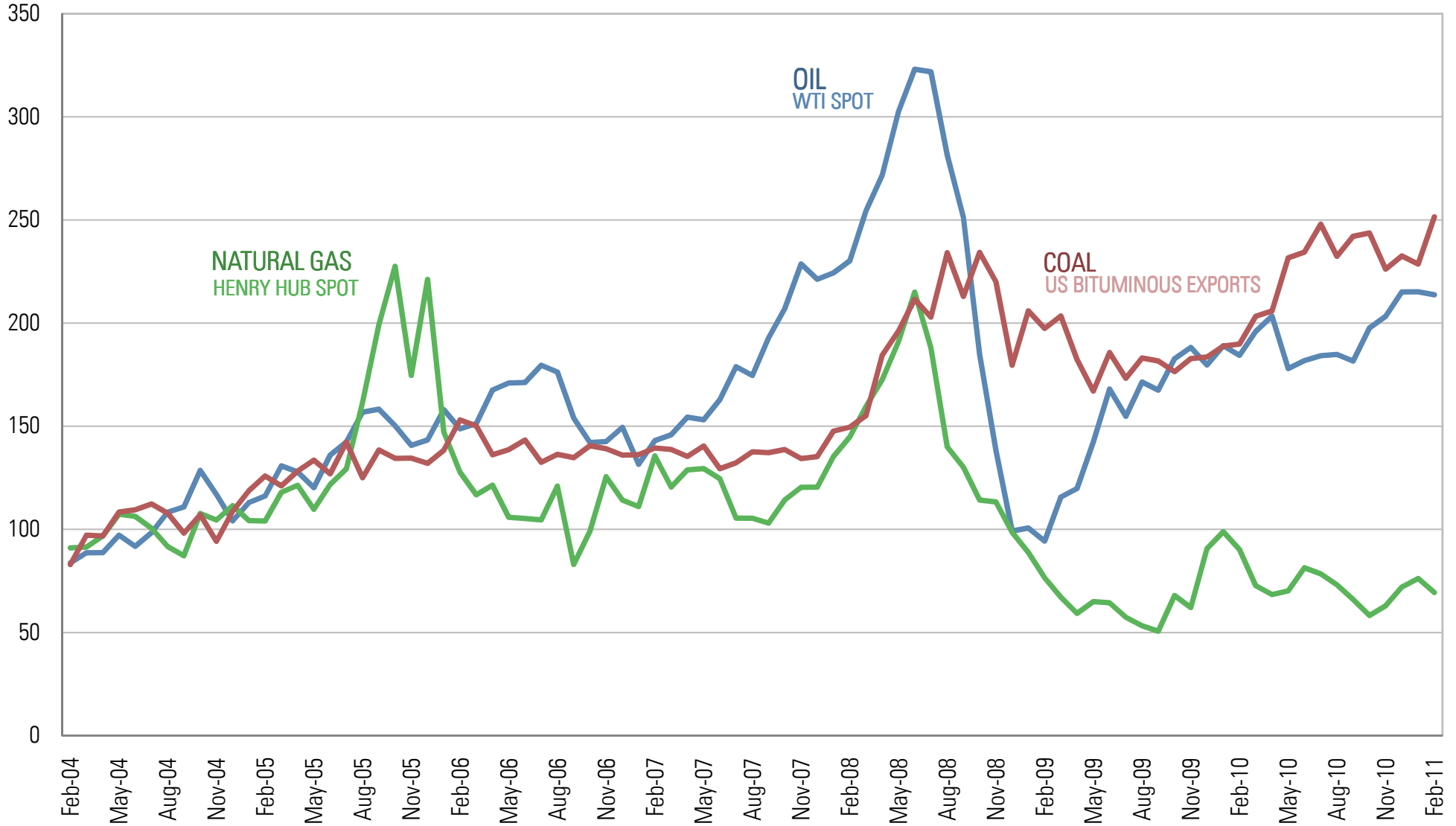
Annual trade balance, mn tons (LHS) and as share of demand (RHS)



Source: CEIC, EuroStat, USITC, ABARE, Badan Pusat Statistik, RHG Estimates

# ...And Shapes Energy Prices in the US

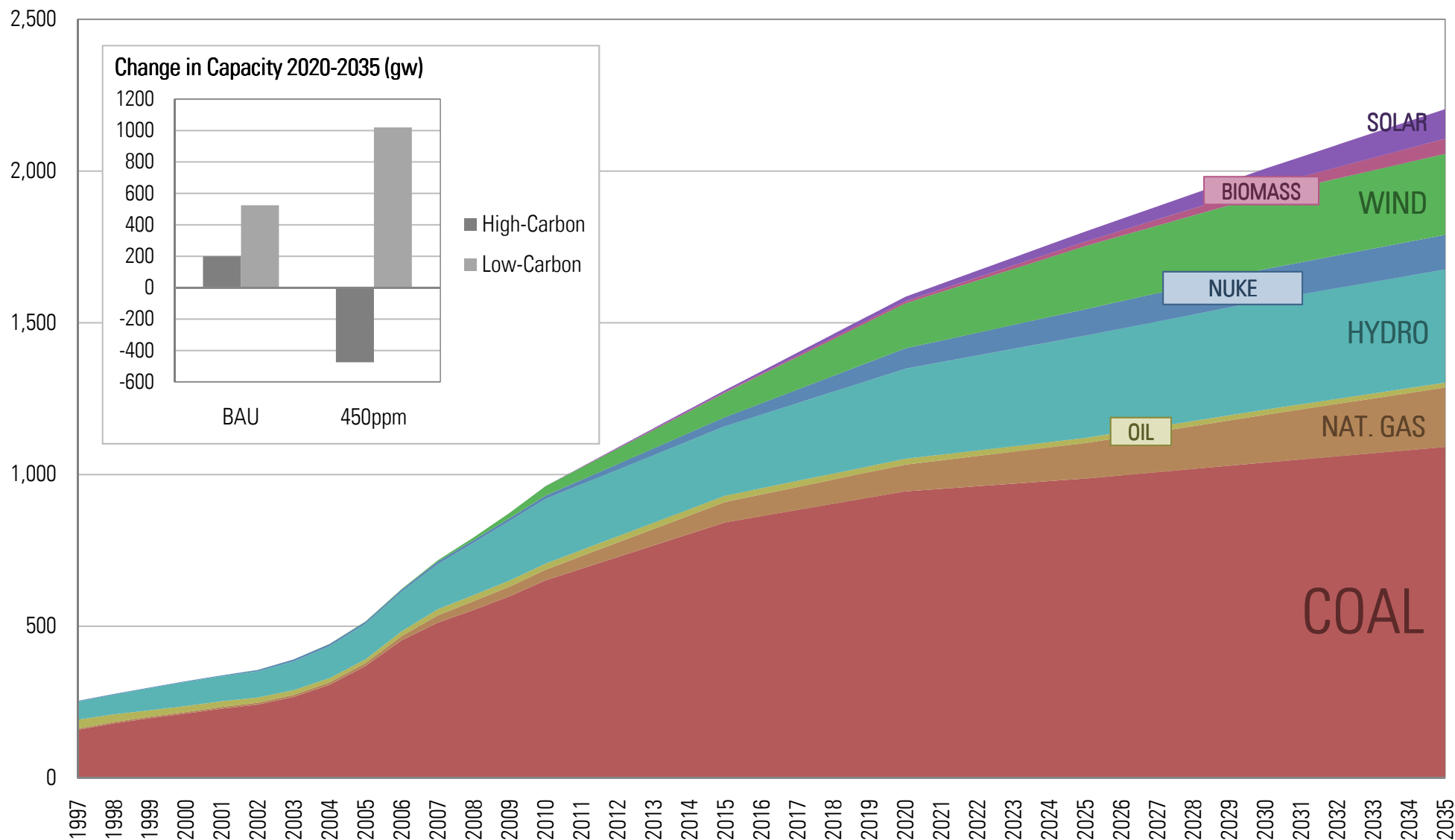
US price index, 2004=100



Source: EIA, USITC, RHG Estimates

# China's Long-Term Decarbonization Challenges

IEA's projected power generation capacity with currently announced policies



Source: IEA and RHG Estimates

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