

***Affordable Electricity  
Stable Energy Pricing  
Increasingly Clean***

***Coal Can Do That!***

November 30, 2006

***Illinois Regulatory  
Policy Studies  
Conference***



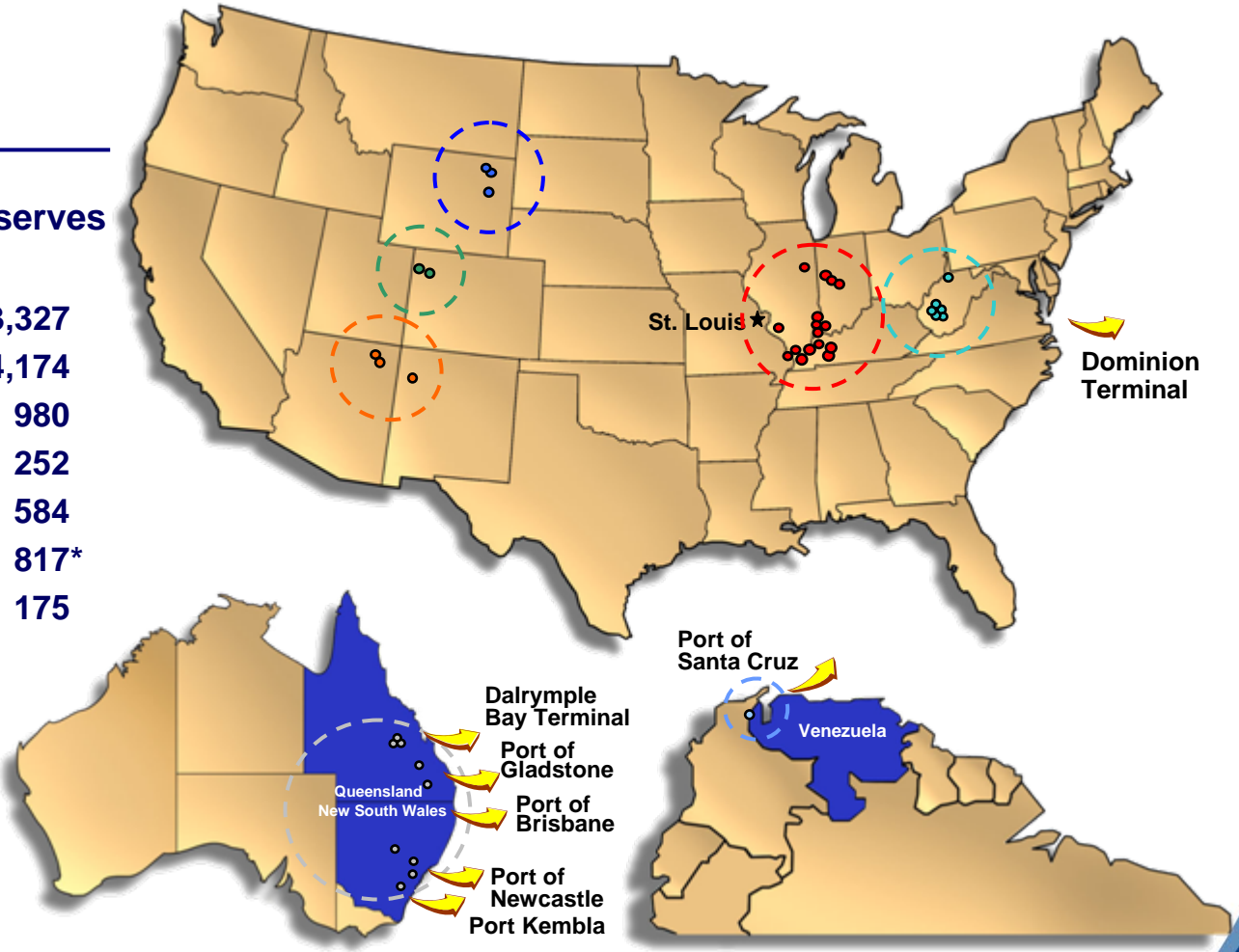
***Jacob Williams  
Vice President  
Generation Development  
Peabody Energy***

**Peabody**

# World's Largest Coal Company: Peabody's Base Portfolio of Operations

2005			
Market Position	Sales	Reserves	
Wyoming PRB	#1	126	3,327
Midwest	#1	38	4,174
Southwest	#1	18	980
Colorado	#1	11	252
Appalachia	#6	14	584
Australia	#5	30*	817*
Venezuela	#1	7	175

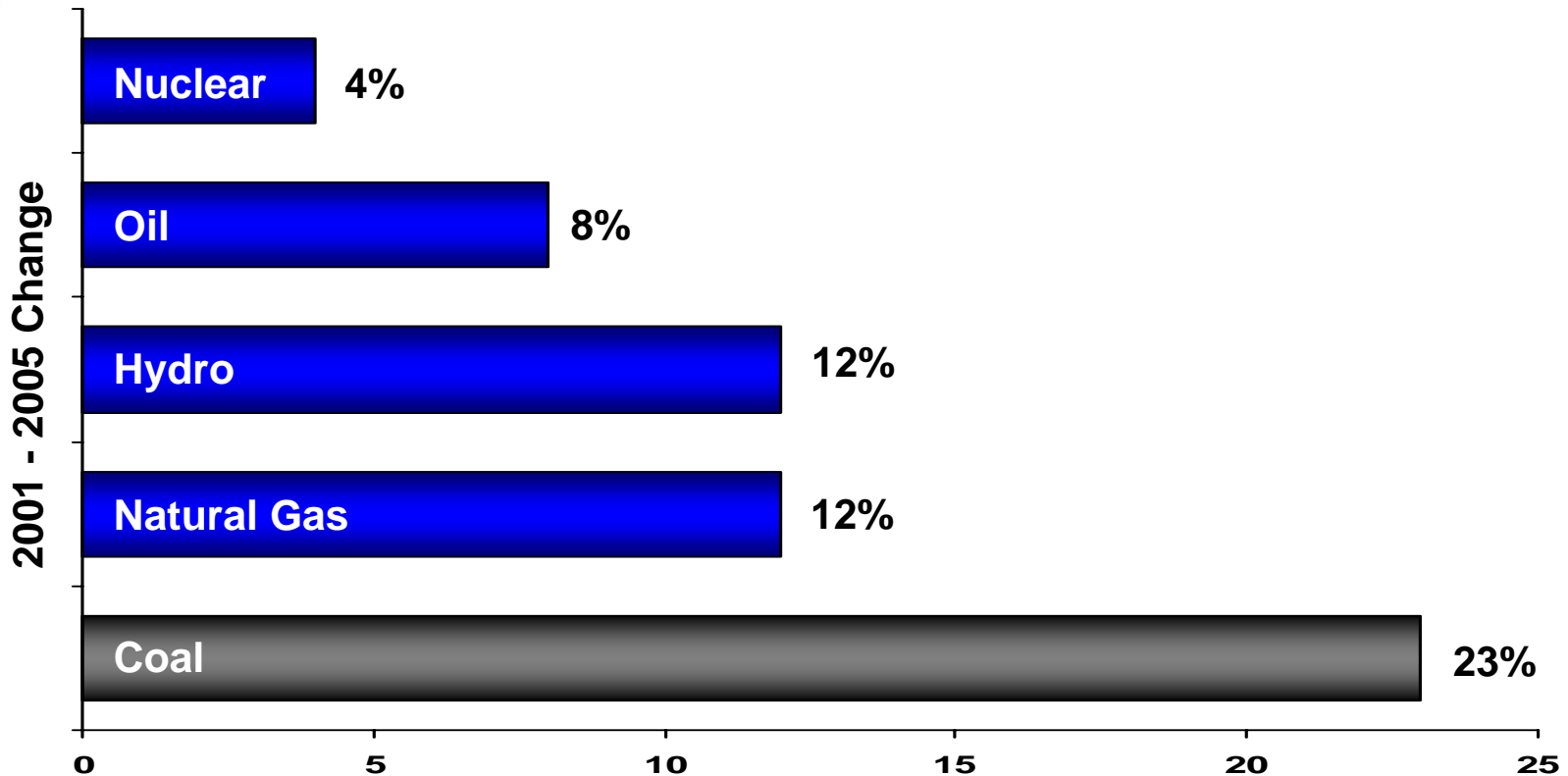
Millions of short tons



• Pro forma including Excel (and operations in development).  
 2005 sales volume in millions of short tons. Venezuela sales volume for Paso Diablo Mine, of which Peabody owns a 25.5% interest. Reserves based on 2005 proven and probable for areas shown. Source: Peabody analysis & industry reports.

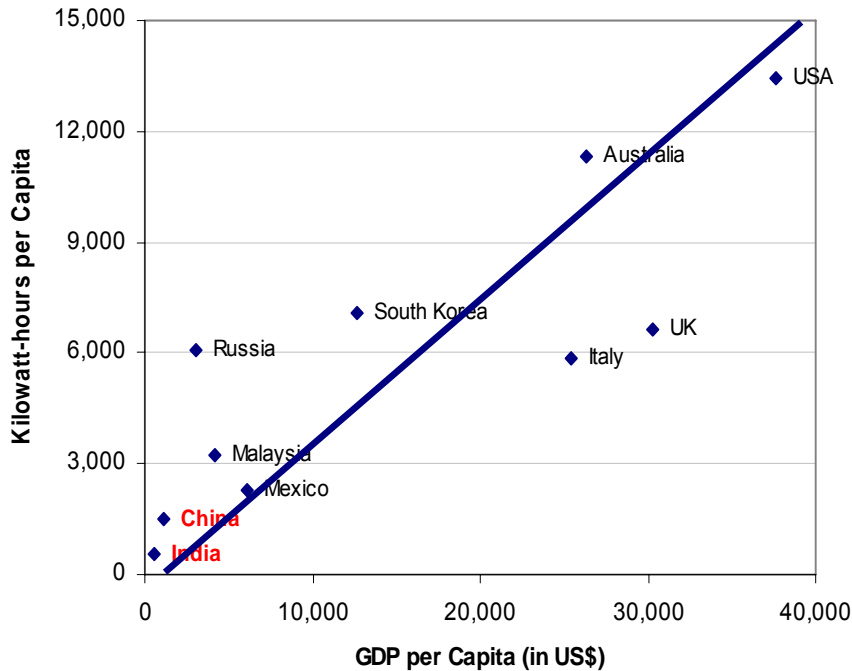
# Global Coal Use Soars 23%, or 1 Billion Tons, in 4 Years

*Four-Year Percent Change in Global Energy Consumption*

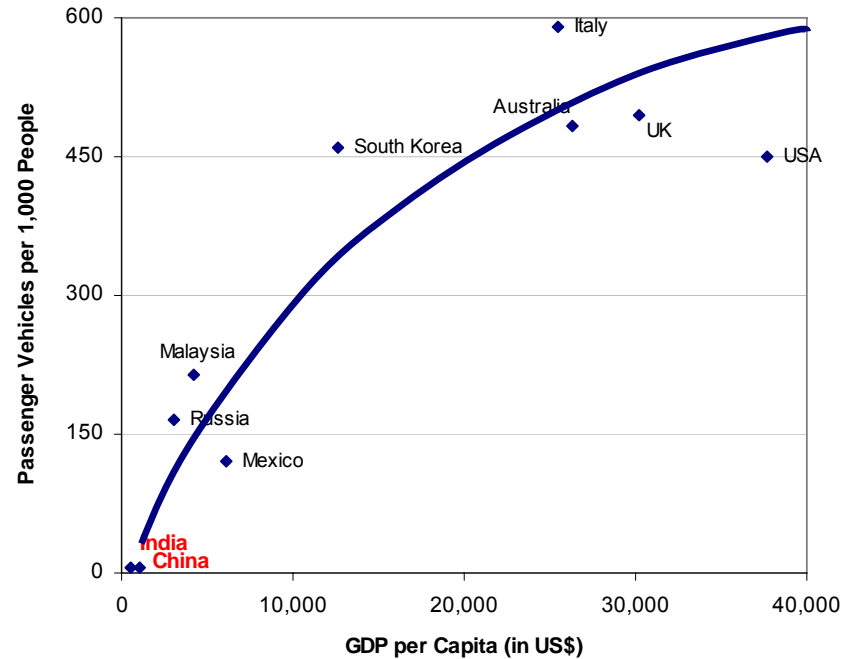


# Developing Countries Will Greatly Expand Per-Capita Energy Use

**Electricity Usage per Capita**



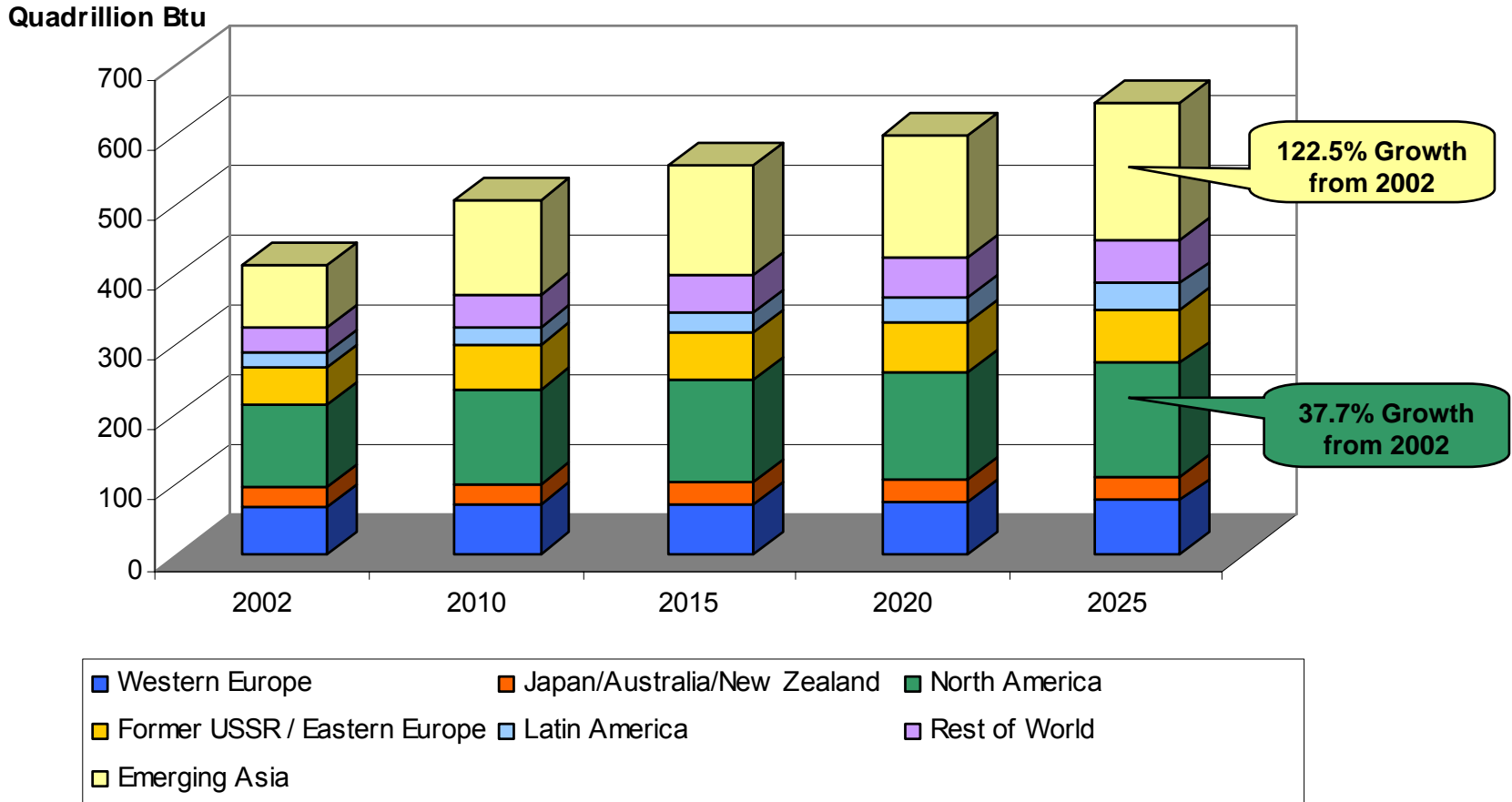
**Passenger Vehicles per Capita**



**Per-Capita Coal Use Just 1/3<sup>rd</sup> (China) and 1/9<sup>th</sup> (India) the U.S. Level**

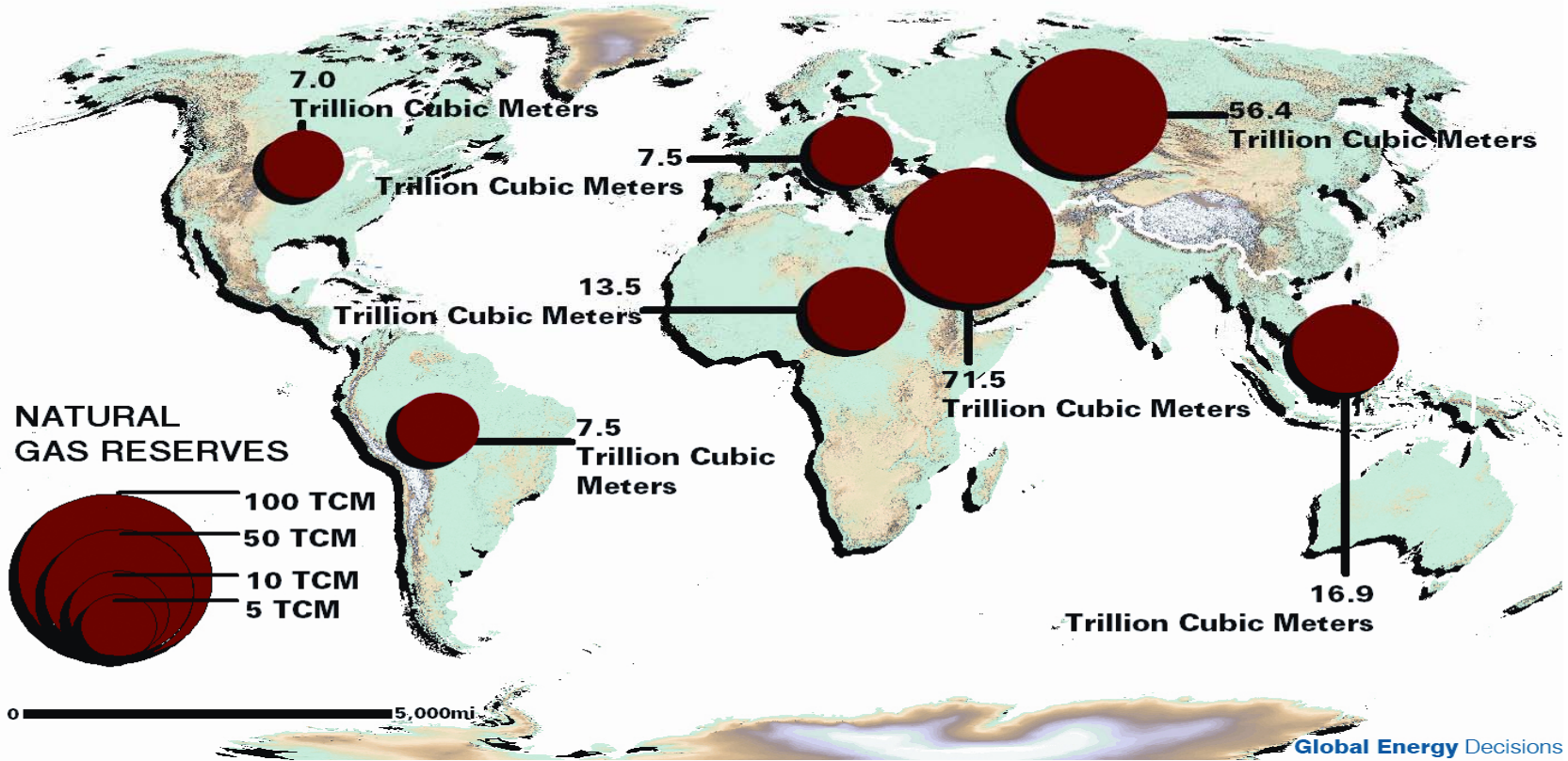
# Developing Regions Drive Energy Consumption Growth

## *Total Primary Energy Consumption by Region*



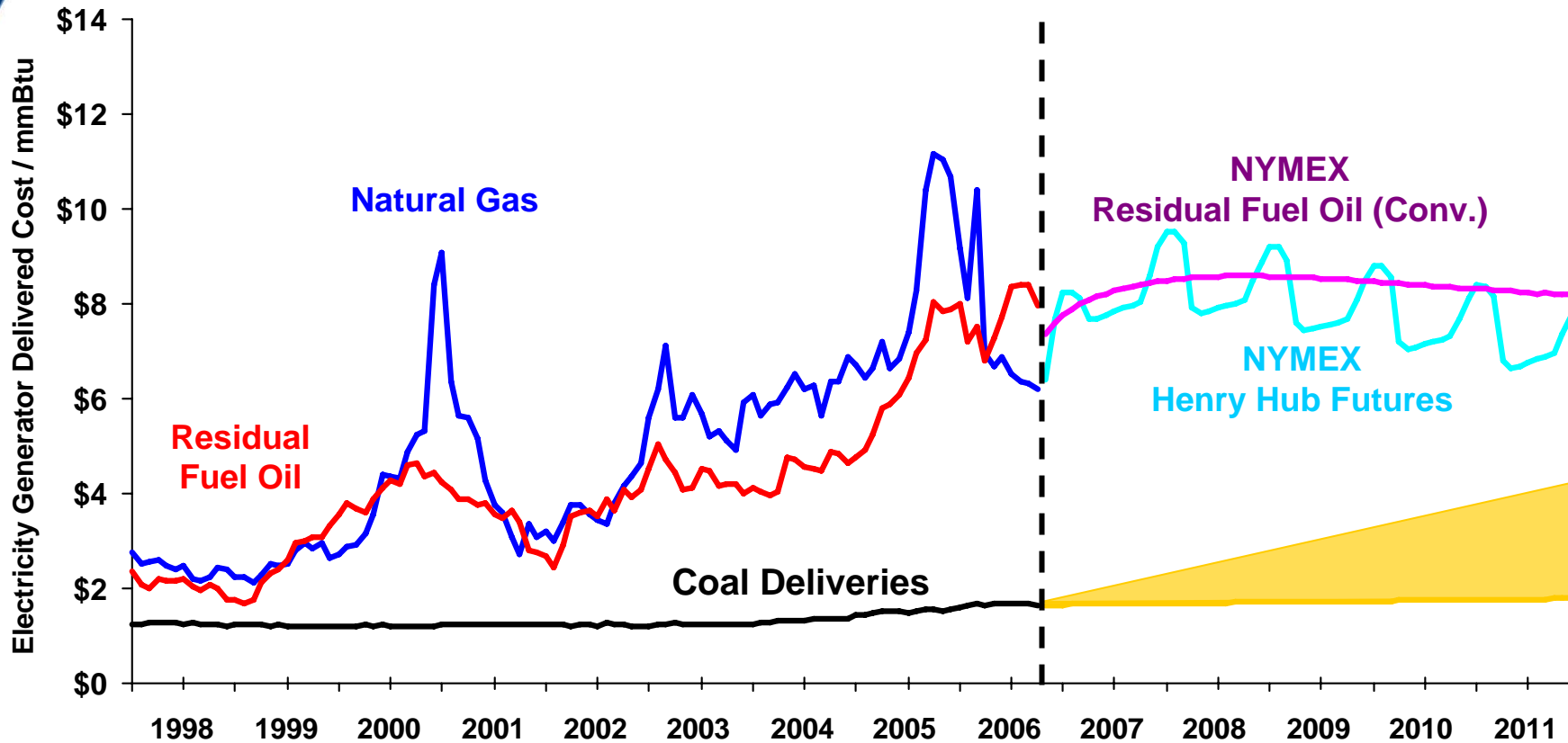
# Like Oil, Natural Gas Supplies Rely on High-Risk Regions

*Most Gas Reserves Are in the Middle East and Asia*



# High Oil & Gas Prices Magnify Coal's Competitive Advantage

*Prairie State Advantage  
Significant Reduction of Delivered Fuel Cost Volatility*

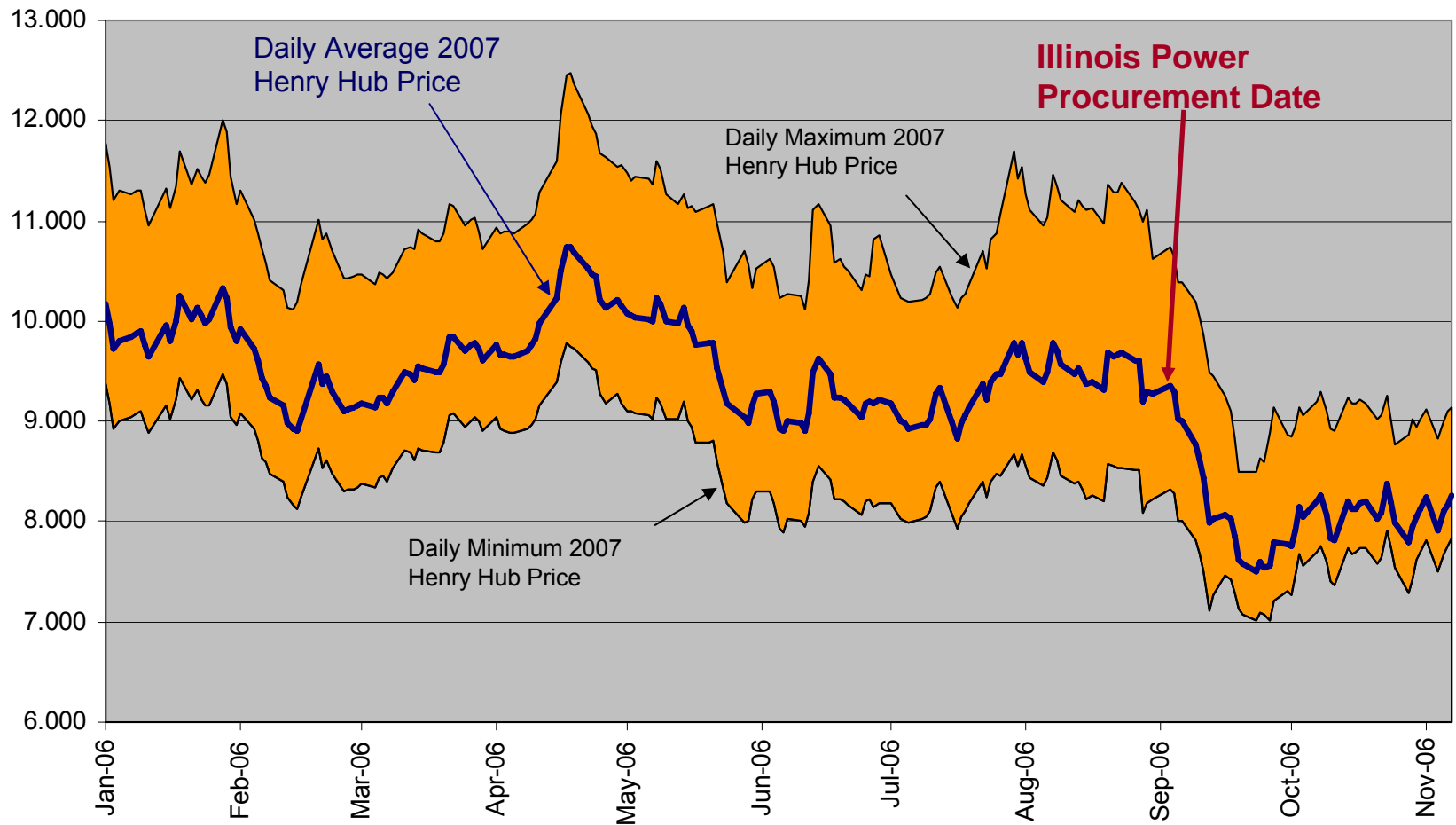


Delivered cost of fossil fuel at steam electric utility plants.

Source: Platts Fossil-Fuel Receipts at Steam-Electric Utility Plants through November 2005. EIA February 2006 Short-Term Energy Outlook, December 2005 – December 2006. NYMEX HH Futures November 2007 – December 2011, ino.com on October 17, 2006.

# Gas/Power Procurement: Timing is Everything

## Calendar 2007 Henry Hub Gas Price

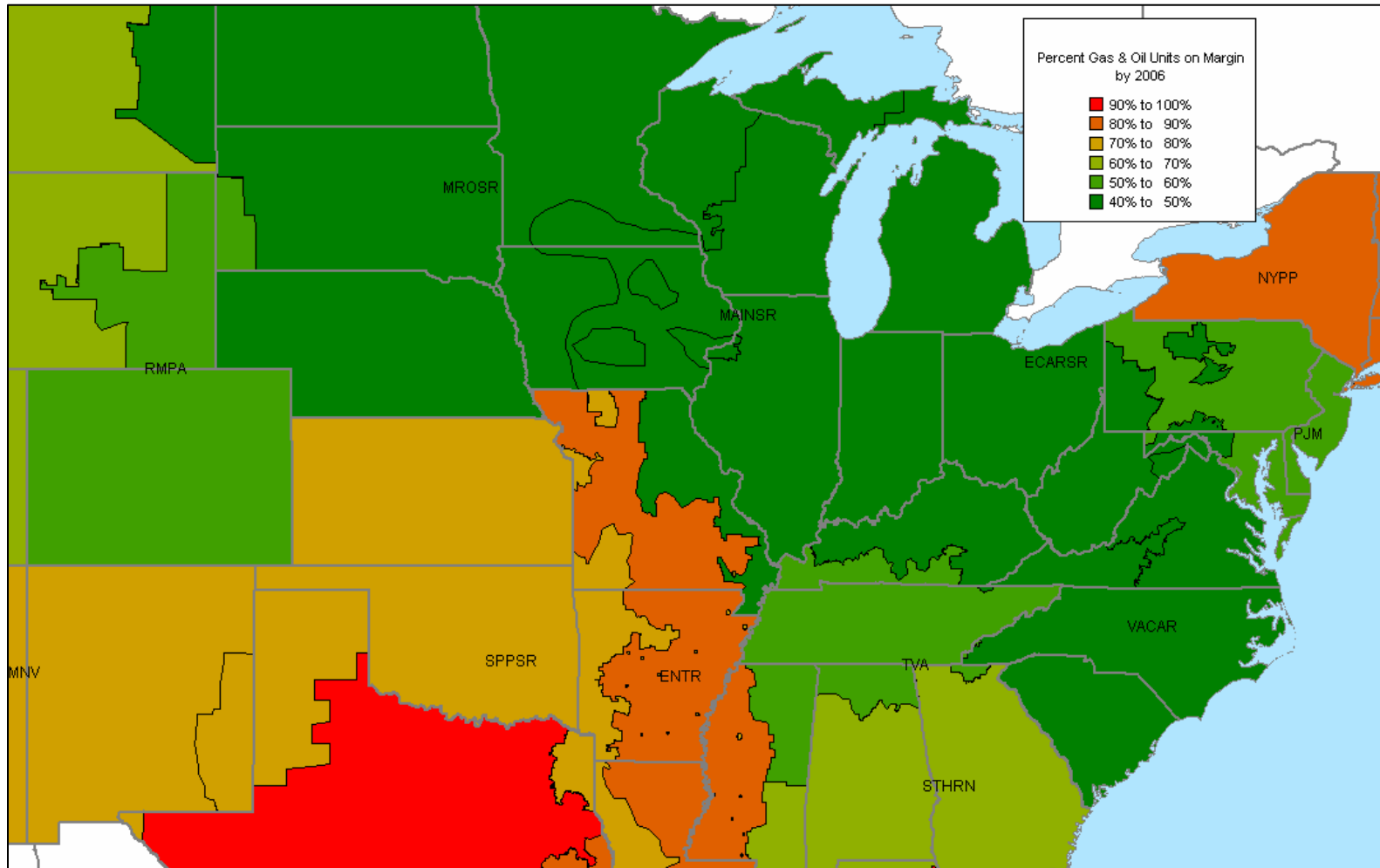


**2007 Gas Prices Drop Over \$1.00/mmbtu (\$7–8/MWh) after Auction**



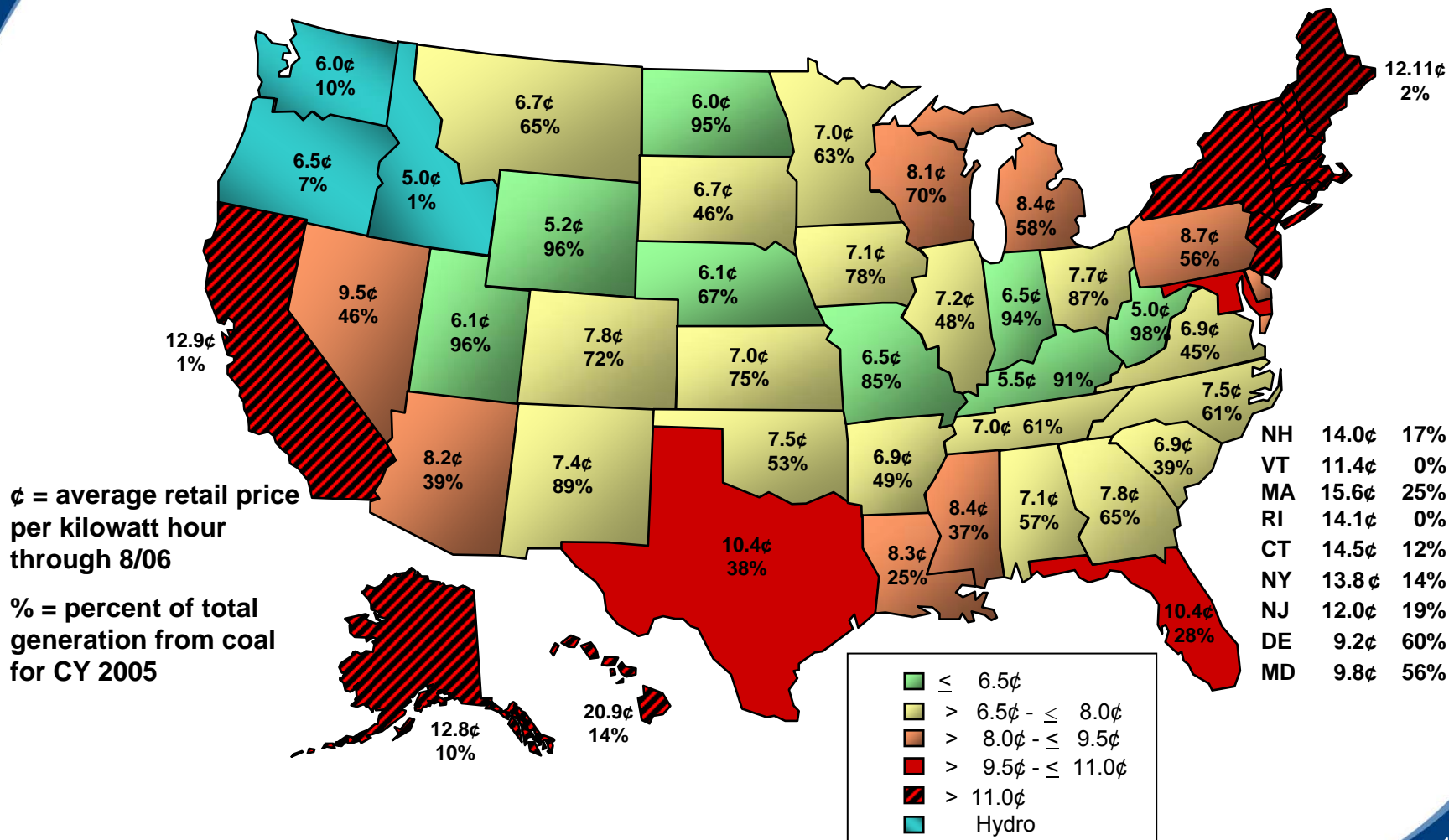
# Gas/Oil Set Electric Market Price Almost 50% of the Time

*% Hours Gas/Oil Generation Marginal Fuel*



# Over 51% of U.S. Electricity is from Coal Source of Low Cost Electricity in U.S.

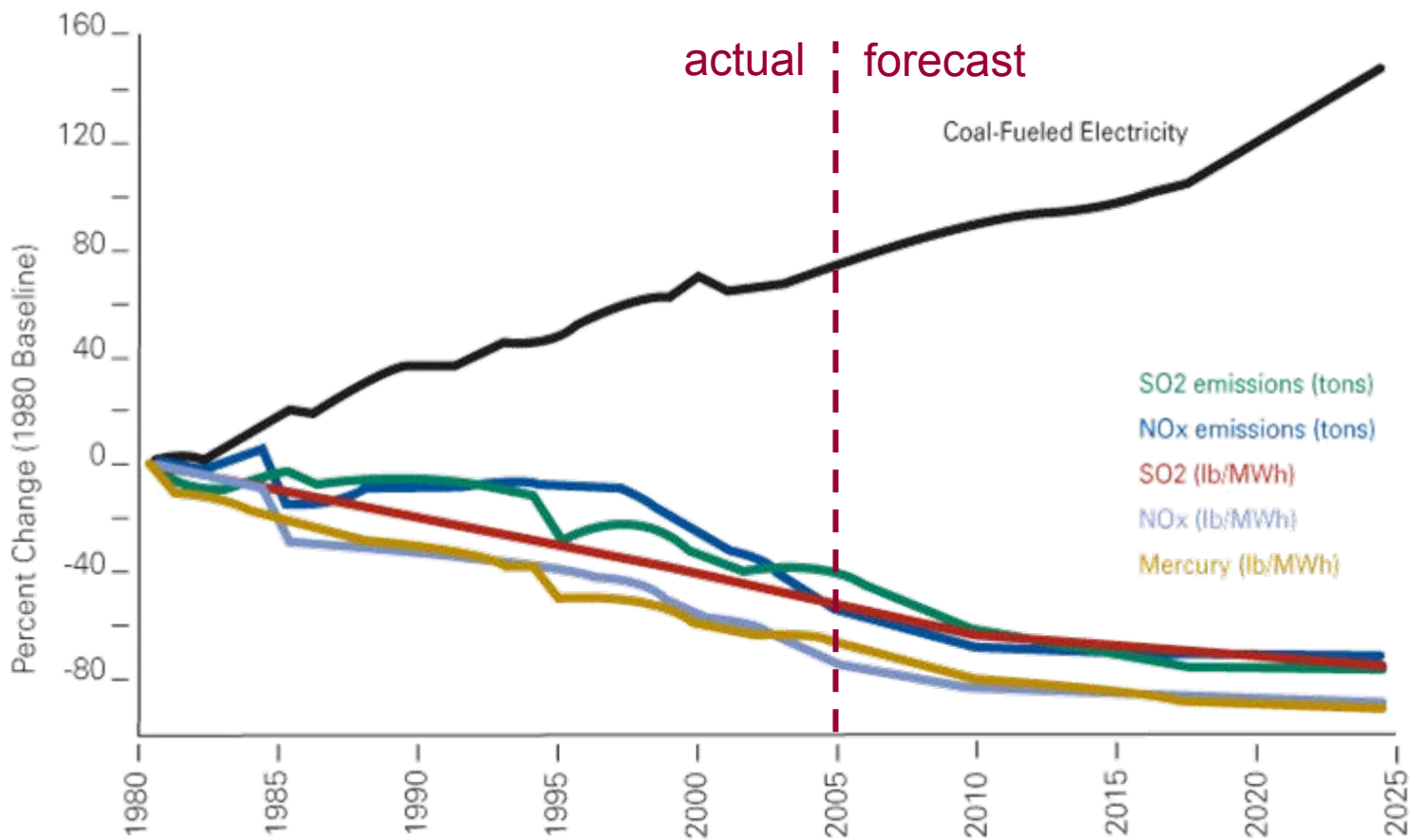
## Retail Cost Per kWh & Percent of Coal Generation



Source: Energy Information Administration, November, 2006.

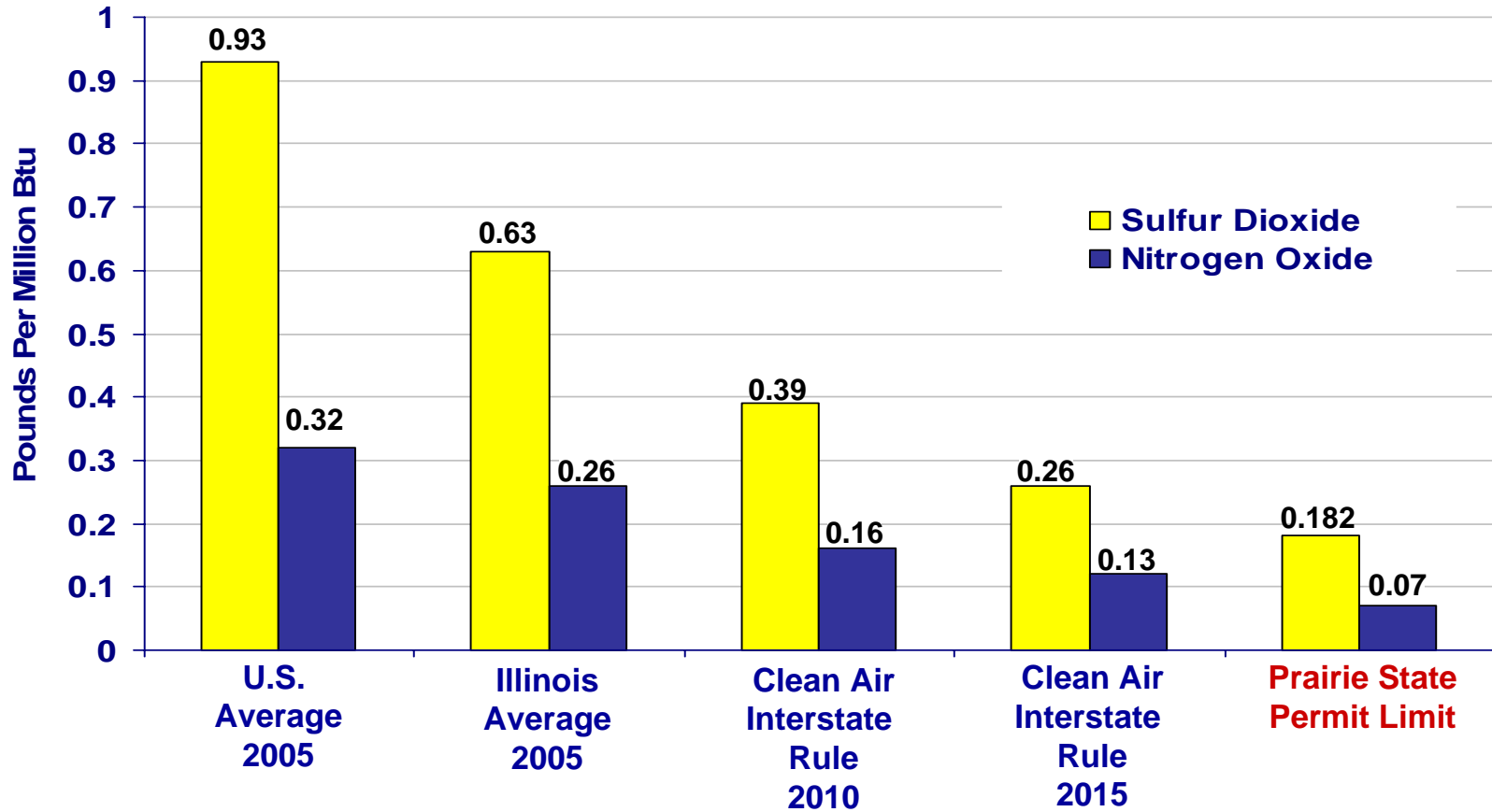
# Coal-Based Electricity Increased 80% Since 1980 While Emissions Improved

*Reductions Continue with Existing Plants*



# Prairie State Low-Cost, Low Emissions Energy

Cleanest Coal plant in Illinois if On-line Today



Source: EPA National Air Markets Program; EIA Annual Review 2005

# Prairie State Energy Campus

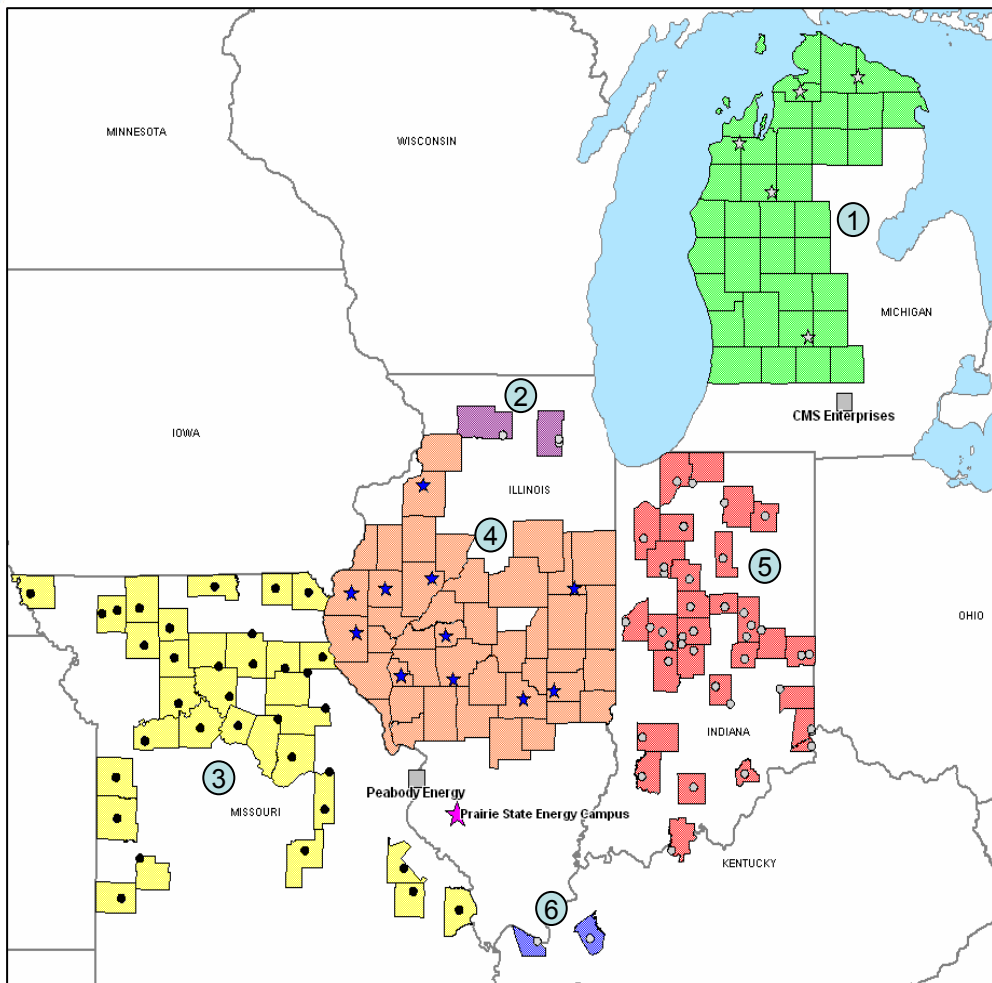
## *New Low-Cost, Clean Coal Generation*



**Prairie State Energy Campus  
Washington County, Illinois**

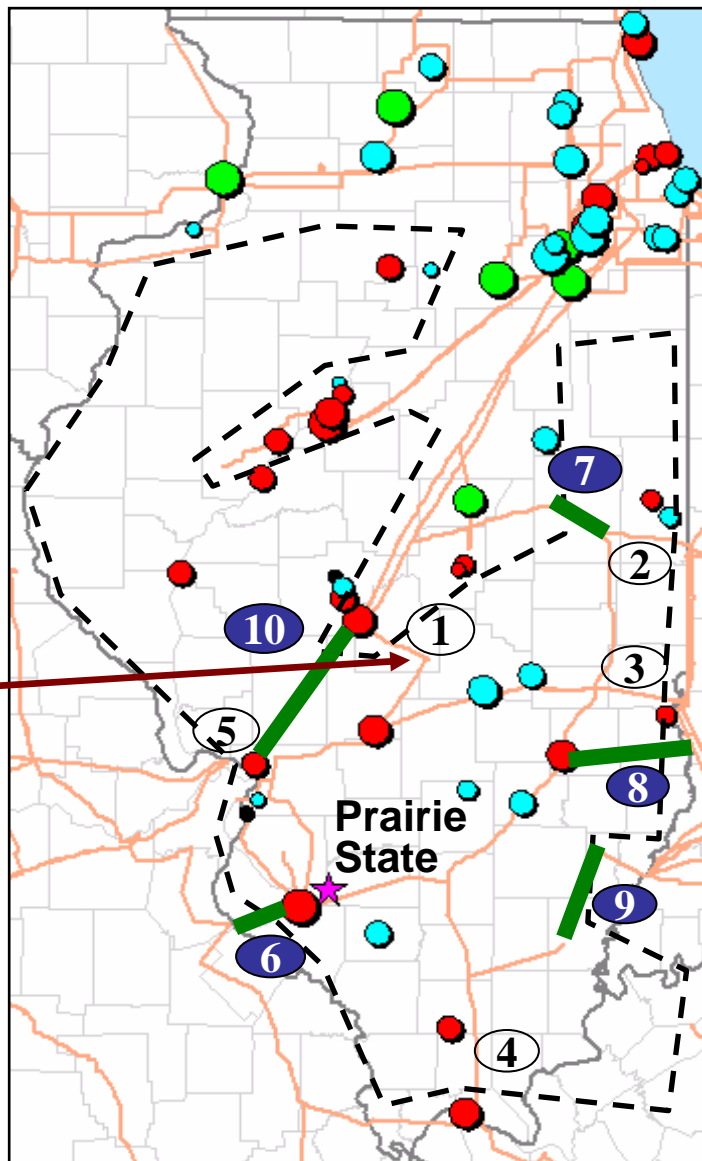
- 40 miles Southeast of St. Louis in Illinois
- 1,600 MW supercritical generating plant fueled by 6+ million ton/year adjacent mine
- Received all permits needed to operate plant
- Cleanest coal plant in Illinois and 15% more CO<sub>2</sub> efficient than existing coal fleet
- 53% of project owned by a group of Midwestern municipals and cooperatives
- Additional 30% of ownership is committed CMS and Peabody
- Average 2,000 construction jobs over 4 years and 450 long-term jobs
- Targeting generation in the 2011 timeframe

# Prairie State Partners Serve Nearly 2 Million People In 5 States



1. **Wolverine Power Supply Cooperative, Inc.**
  - Abbreviation: *WPSC*
  - 400,000 people served
2. **Northern Illinois Municipal Power Agency**
  - Abbreviation: *NIMPA*
  - 52,000 people served
3. **Missouri Joint Municipal Electric Utility Commission**
  - Abbreviation: *MJMEUC*
  - 800,000 people served
4. **Soyland Power Cooperative, Inc.**
  - Abbreviation: *Soyland*
  - 156,000 people served
5. **Indiana Municipal Power Agency**
  - Abbreviation: *IMPA*
  - 340,000 people served
6. **Kentucky Municipal Power Agency**
  - Abbreviation: *KMPA*
  - 54,000 people served

# Transmission Enhancements Needed to Access Broader Electricity Market



**Only 1 HV Transmission Path Connecting Northern to Central/Southern Illinois**

## Legend:

- Coal
- Natural Gas
- Nuclear
- Existing HV Transmission Lines
- Potential HV Transmission Lines
- ① Existing HV Transmission Path
- ⑥ Potential HV Transmission Path

# Potential Improvements in Illinois Electric Procurement Process

- Enhance transmission into the State and within the State to allow:
  - More out-of-state generation to bid in to Illinois auction
  - More generation within Illinois to bid Intrastate (North to South and South to North)
  - Few bids from out-of-state low cost generators (AES IPL, Associated Electric, Cinergy, EKPC, KCP&L, LGE, MidAmerican, NIPSCO & Vectren)
- Portion of power could be purchased on much longer term (10 – 20 years) basis to foster new, very clean coal and renewable resource competition
  - Old coal and nuclear units could never had been built with 3 year contracts
- Procure power at different times throughout the year to avoid potentially buying all at an absolute or relative peak price period.
- Procure power in “natural” generation abilities, not just full requirements. More generators able to compete.



# Peabody Participating in Multiple Btu Conversion Opportunities

## Gasification

### (Industrial or Pipeline)

- 30% ownership in Econo-Power International
- PRB and Illinois Basin coal transformed into low-Btu gas
- Cost effective at \$5 to \$6/mmBtu



- Agreement with Arclight to evaluate Illinois location for pipeline-quality gas
- ConocoPhillips and Fluor participating in technology and plant design
- Pipeline-quality natural gas competitive as low as \$6 per mmBtu

## Liquefaction



*Planned "Coal to Diesel" Plant in Inner Mongolia, China*

- High gas prices point to need for coal-to-liquids
- Coal-to-liquids at \$35 – \$40/barrel oil
- Peabody partnership with Rentech for coal to liquids plant

## Hydrogen



- Peabody part of FutureGen Industrial Alliance
- Goal: Generation and hydrogen; near-zero emissions; CO<sub>2</sub> sequestration
- Alliance includes Southern Company, AEP, Huaneng
- \$700 million from DOE; \$250 million from industry

## Steps to Achieve Affordable Energy and Increasing Clean

- Coal-based generation and Btu conversion projects must play a major role to provide affordable energy in the US
- Lead times on these projects from conception to completion are 6 – 10 years and significant resources (\$10 – 20 M during permitting)
  - Require predictable permit and appeal timelines
- Capital intensive investment (multiple billions) with asset life of 30 – 40 years
  - Require implicit (ratebase) or explicit long term contracts to finance
- Coal-based generation and Btu conversion projects are part of the solution to an increasingly clean environment.