Global Energy Markets Overview

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Introduction

- Argus, who we are & what we do
- Today's energy markets
  - Why are prices high?
  - What does it mean for the region?
- The Role of China
- The Future

About Argus Media

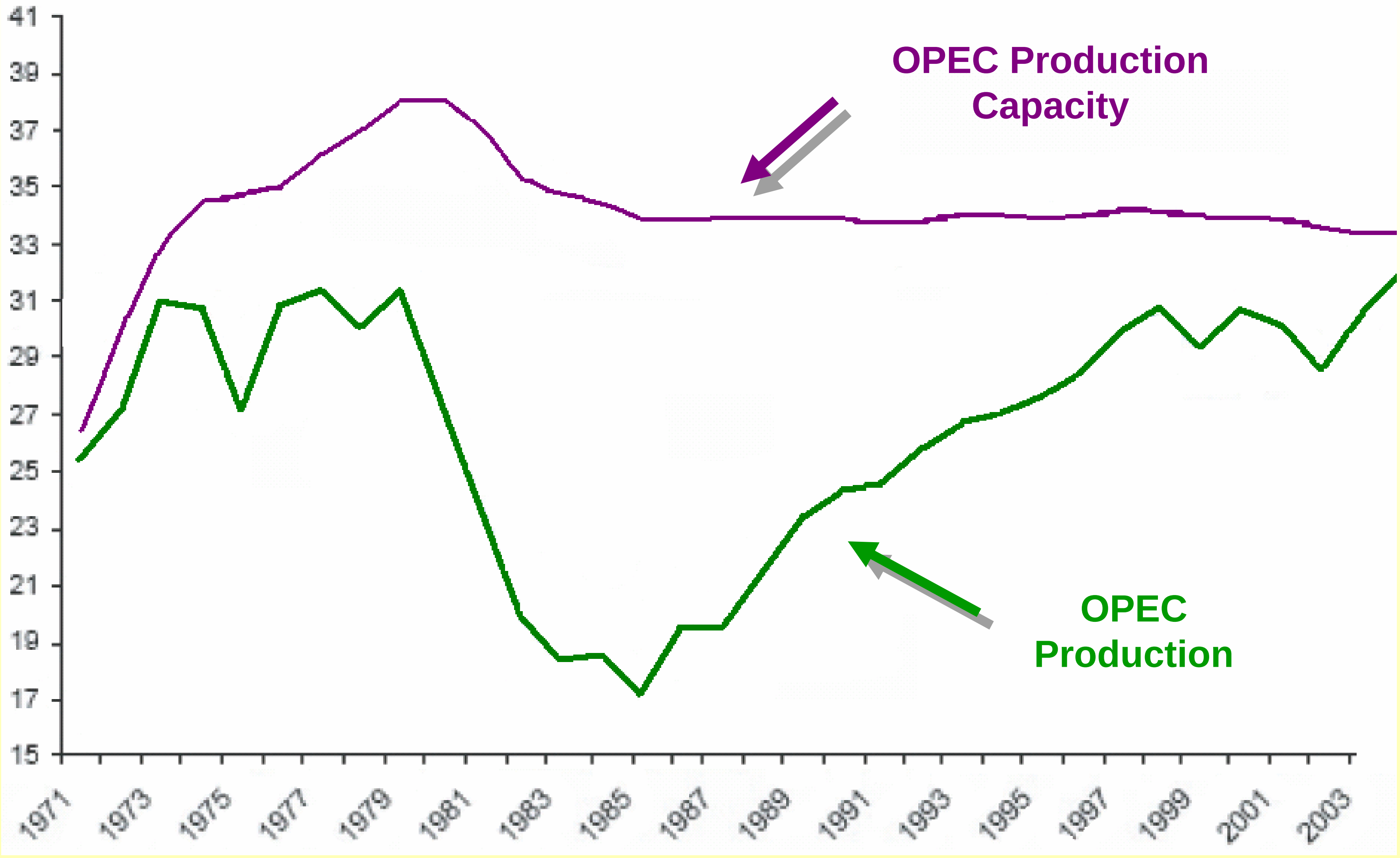
Independent Global Price Reporting and Analysis

- Largest independent pricing service
- More than 35 years of experience
- Offices in London, Singapore, Tokyo, Beijing Moscow, Washington, Dubai, Houston
  - Over 200 employees worldwide
- Pricing and analysis of all major global energy markets
  - Global benchmarking
- Characterized by independence and analytical expertise

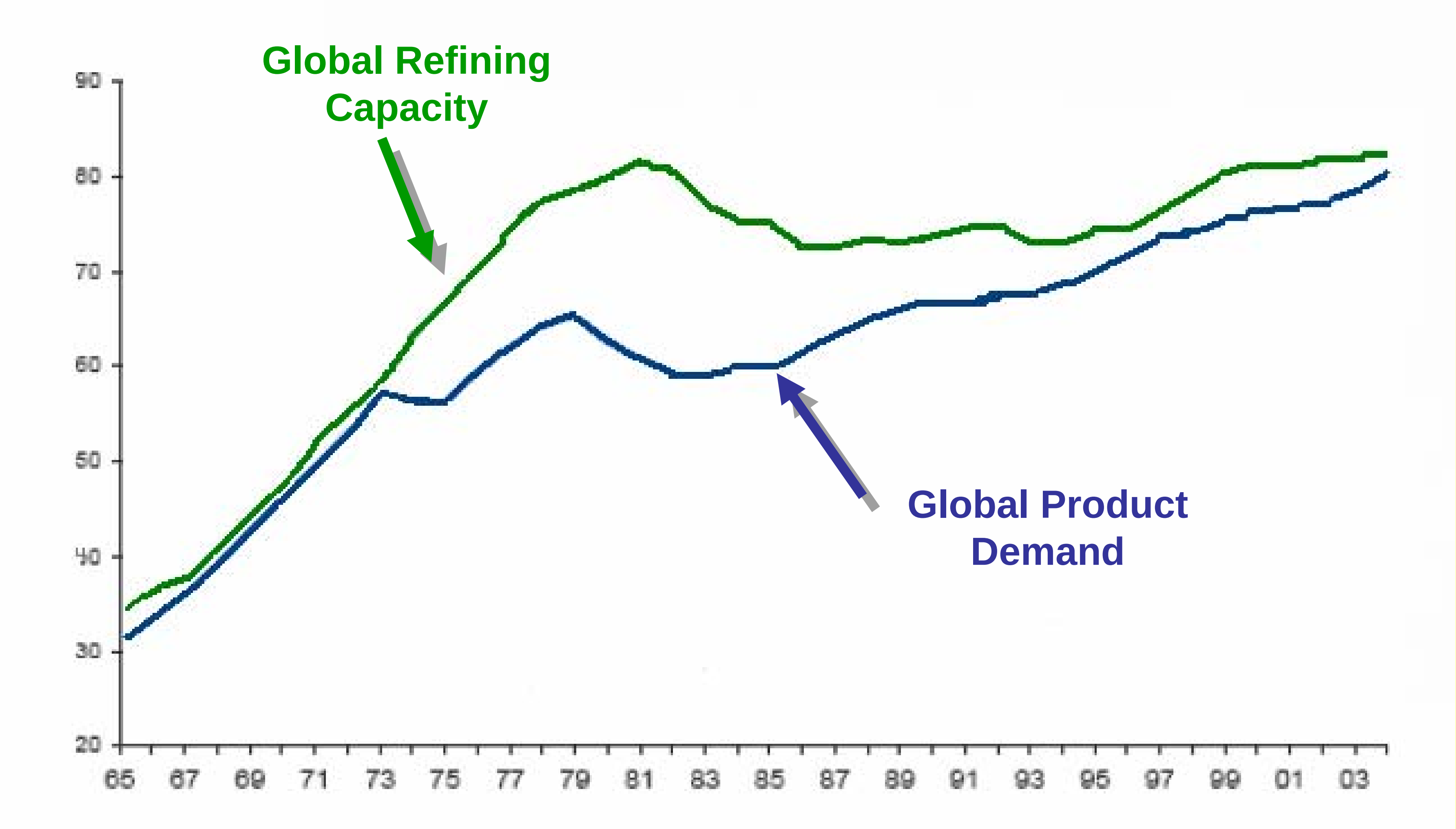
Today’s Market

- Market Fundamentals
  - Oil prices have been too low for years so they are high now
    - Inadequate investment in production capacity, refining and shipping
  - Mismatch between crude supply (abundant) and refining capacity (scarce) AND
  - Sweet refining capacity (too much, especially in China) and growing sulphur content of crude
  - Demand growth from China and the US (and India a little)
- Politics
- Sentiment
  - Fear of the unknown
  - Obsession with stock data
- Speculators?
  - Increasing volatility, but not higher prices

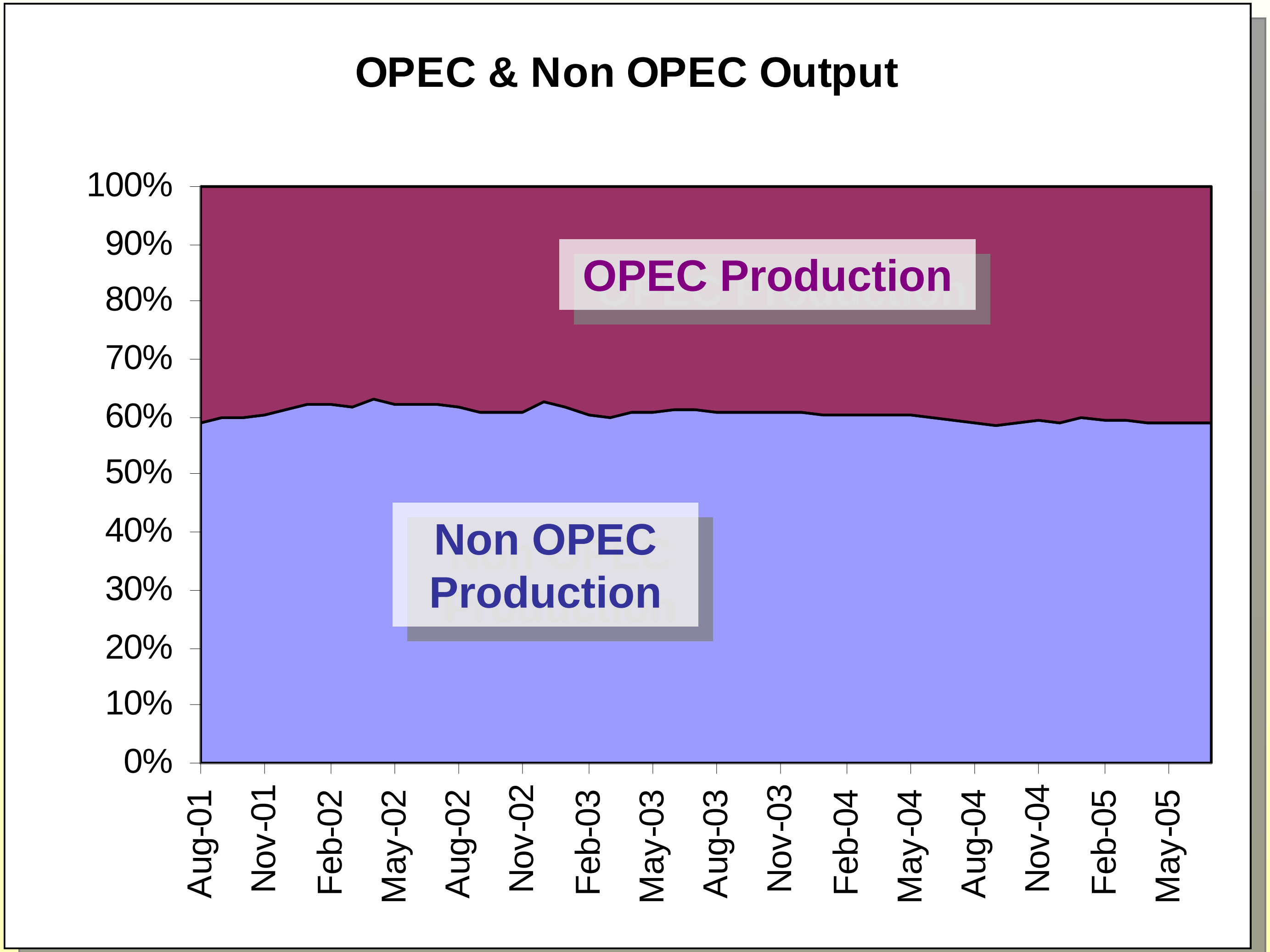
OPEC Production Capacity



Global Refining Capacity



OPEC Production



OPEC's share of production has remained constant at about 40%

Why does politics matter?

- OPEC (or other producers) cannot make up for loss of a major oil producer
  - This is a fundamental shift
  - Excess capacity is wrong kind of crude
    - China **can't** refine more sour crude
- Too much production capacity is in the wrong place
  - Iraq
  - Iran
  - Nigeria
  - Venezuela
- Politics has altered the structure of the market
  - Markets are worried prices will go higher so they hedge as though it will
  - High forward prices encourage physical buying now, which keeps pressure on prices
  - Also attracts funds who think it indicates higher future prices

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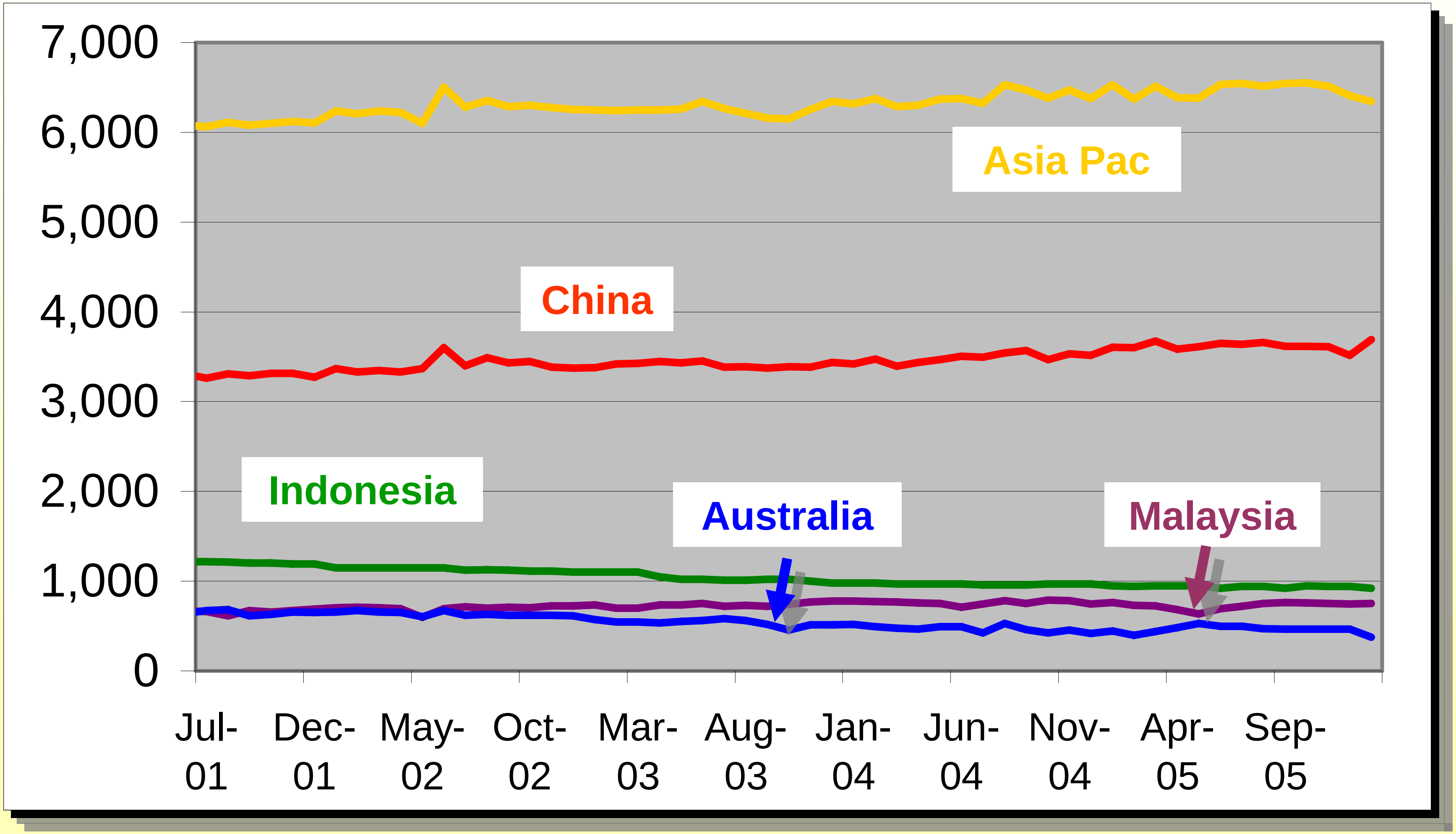
Asian Supply – Main Producers



Asian Demand

- China played major role in initial spike
  - Strong growth in demand and little price sensitivity
  - But demand growth is slowing
- India is growing but more slowly
- Japan demand is dropping slightly
- Region is fairly energy intensive and inefficient (except Japan, Korea, Singapore and Anzac)
    - Subsidies
    - Long period of low energy prices discouraged investment in efficient technologies
- Region imports 2/3 of oil supply and that will grow

Asian Structural Problems

- Subsidies encourage demand
  - Send wrong signals
    - Consumers are insulated from market conditions and do not adjust consumption accordingly
    - So when prices rise, demand does not fall
  - Distort markets
    - Can lead to shortages
  - Have limited benefit
    - Subsidizing gasoline benefits wealthier automobile owners
    - Diverts resources - Indonesia was spending more on fuel subsidies than development funding
- Governments are trapped
  - Risk of civil unrest if subsidies are cut, but economic risks if they remain

What about alternatives?

- Cost is the problem
  - Biodiesel, Ethanol, Fuel Cells, Wind, Solar, GTL, CTL
  - High energy prices make alternatives more competitive
- Government has role to play
  - Incentives to encourage development of new technologies
  - Encourage consumption of renewables/alternatives
    - Financial incentives – subsidies to producers, tax breaks
    - Government mandates
  - Discourage fossil fuel consumption
    - Carbon or BTU taxes
    - Fuel efficiency requirements
- Change takes lots of time
  - Infrastructure requirements are expensive and solutions take time to implement
  - We are stuck with oil for a while longer

The role of China

- Emerging Consumer
  - In 2004, passed Japan as 2nd leading oil market
  - Growth in demand has flattened
- Driver of international markets
- Energy diplomat
  - Chinese companies increasingly turning abroad for supply
    - West Africa, Unocal, Sudan, FSU
- Emerging market
  - LPG, fuel oil, crude are unregulated markets, gasoil and gasoline may be deregulated over time

Chinese Demand Patterns

- China market developing differently
  - Preference for gasoil (diesel) over gasoline
    - Reliance on trucks, rail, generators to compensate for poor electricity supply
    - Demand growth heaviest in industry (compared to India where demand growth is in services and agriculture)
  - Continued heavy use of fuel oil – but this is flattening out
    - Generating fuel and industrial use
    - Being replaced by coal
    - Gas also taking incremental demand
  - Bulk of demand is in areas far from main production and refining areas
    - Transportation systems are clogged
  - Little appetite for strict environmental changes

Chinese Demand Has Driven Global Markets

- China demand growth has accounted for bulk of growth in world demand
  - Chinese demand growth
    - 300,000 b/d - 400,000 b/d in 2006 (estimate)
    - 200,000 b/d in 2005
    - 900,000 b/d in 2004
    - 500,000 b/d in 2003
  - Heavy demand for West African crude
    - Ongoing need for sweet crude
  - Continued emphasis on building sweet refining capacity will ensure WAF imports continue to rise

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Looking Ahead

The Future - Demand

- Demand to remain steady
  - Chinese growth is slowing
    - But in long run, it will continue to show demand growth that will be satisfied by imports
  - US and global consumers have shown that they can take high prices (at least so far)
    - Real prices still below record levels
  - India showing signs of growth
    - Economic reforms will lead to stronger growth in demand but will be 5-7% per year
  - No real alternatives to oil-based economy in next 20+ years

The Future - Supply

- Supply will have trouble catching up
  - Planning and investment cycles are long (3-7 years)
  - Investment constraints to continue
    - AG producers resistant to foreign investment
    - Russian legal framework is uncertain
    - Hard to build refineries in the US and Europe
- Non OPEC production will eventually top out
  - North Sea, US
  - Russia & FSU are possible exceptions
- Most of the world's available oil is in unstable and difficult regions
  - AG, West Africa, FSU

The Future - Prices

- Robust demand and constrained supply is a formula for high prices
- OPEC no longer can make up for loss of a significant producer
  - Crisis will have strong impact on prices
- Speculators can smell an opportunity but they increase volatility, not prices
- But beware the unknowable
  - A sharp economic contraction could change this equation

Thank You

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