

# **U.S. Energy Outlook**

## ***Impact on Petrochemical Markets***

**Southwest Chemical Association**

January 25, 2007

**Bill Sanderson**  
**Purvin & Gertz, Inc.**



**PURVIN  
& GERTZ  
INC.**

# U.S. Energy Outlook

Ø About Purvin & Gertz

Ø Petroleum Market Outlook

Ø North American Natural Gas

Ø Refining Industry Impacts



# Purvin & Gertz - Background

- Ø **Founded in 1947 – in business for 60 years**
- Ø **Independent firm owned by active consultants**
- Ø **Global Presence with offices in:**
  - Houston, Los Angeles, Calgary, London,
  - Singapore, Buenos Aires, Moscow and Dubai
- Ø **Consulting staff of Chemical Engineers/MBAs**
  - § **Technical, commercial and financial experience**
  - § **An average of 22 years of industry experience**
- Ø **Strategic Alliance with CMAI since 1992**

# Industries Served

- Ø Crude Oil – Market Analysis and Pricing
- Ø Petroleum Products – Refining and Marketing
- Ø NGL – Gas Processing and Marketing
- Ø Natural Gas – Markets and Infrastructure
- Ø Petrochemicals – Feedstock Markets

# U.S. Energy Outlook

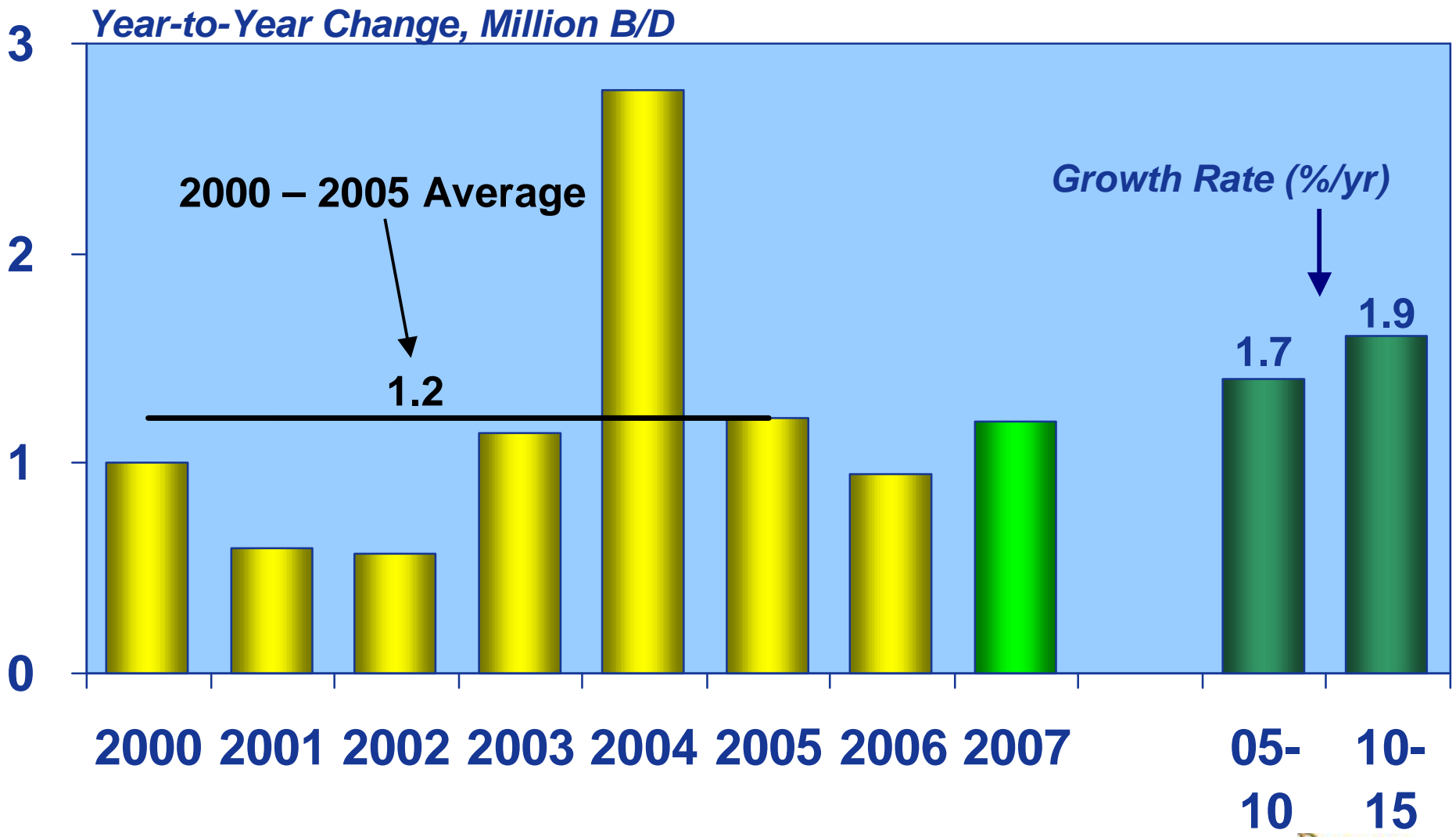
Ø About Purvin & Gertz

Ø **Petroleum Market Outlook**

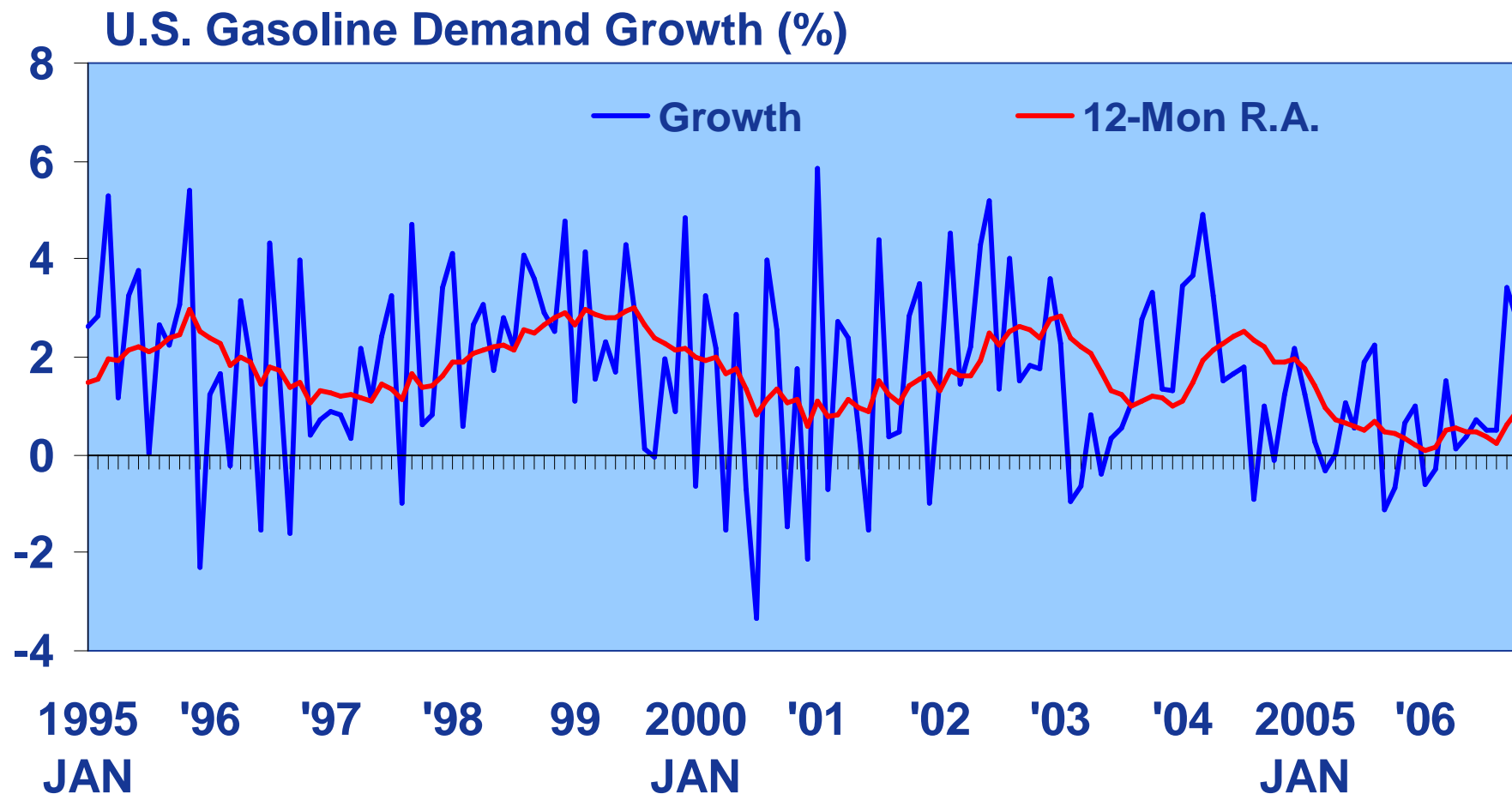
Ø North American Natural Gas

Ø Refining Industry Impacts

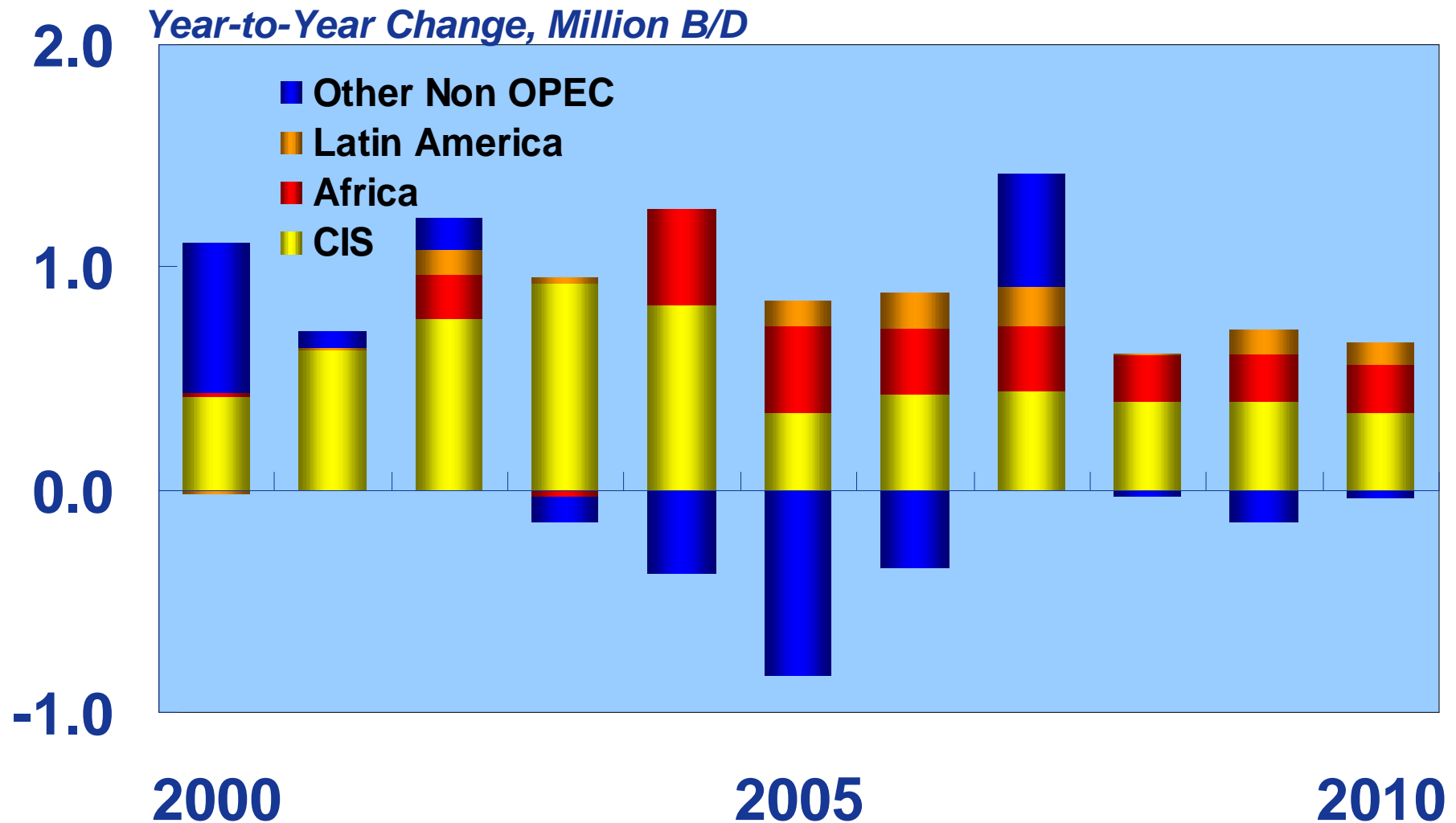
# World refined product demand growth declined in 2005 and 2006, but will recover with moderating prices . . .



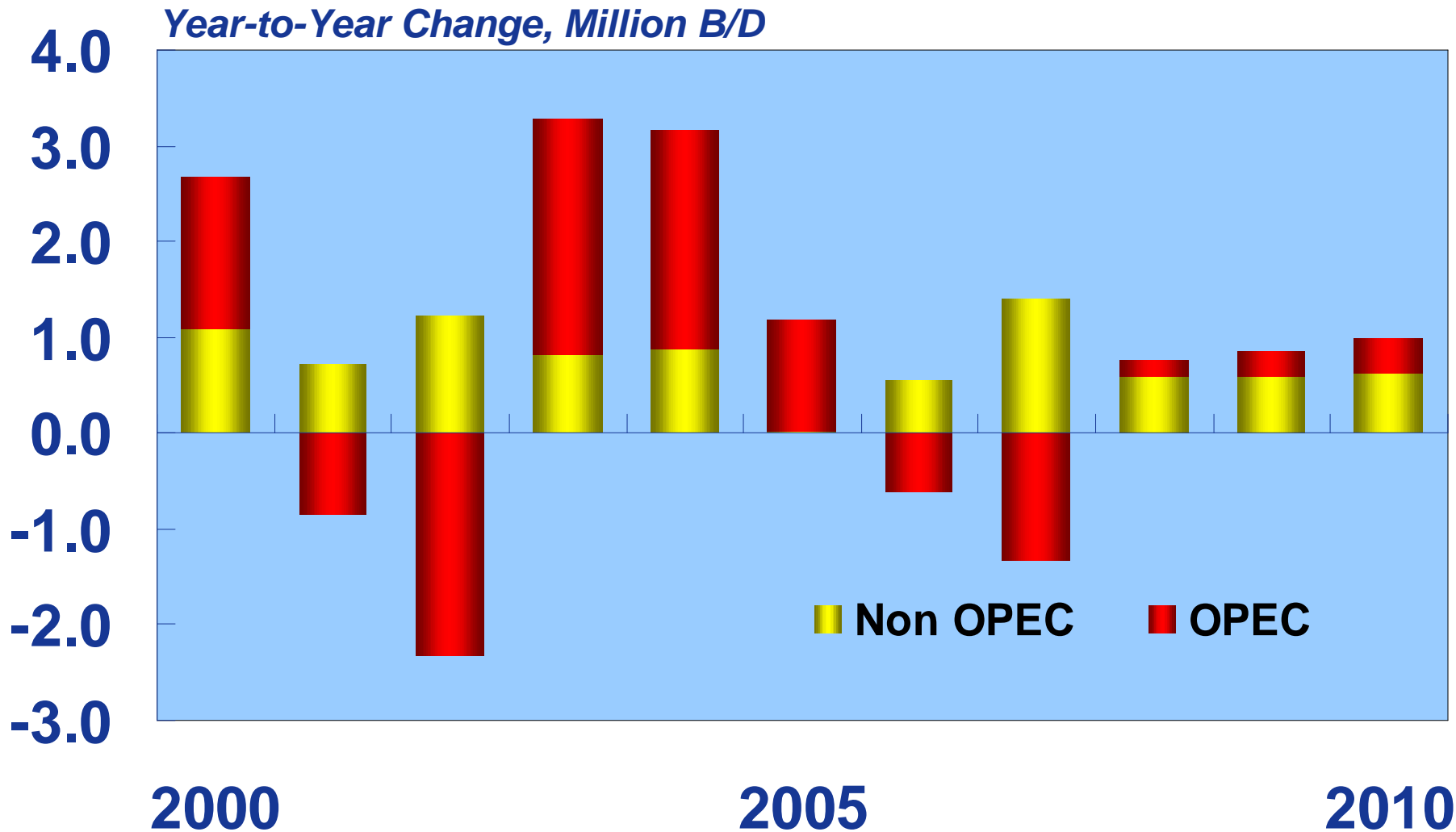
# U.S. vehicle travel growth has fallen since mid-2005 resulting in lower gasoline demand growth . . .



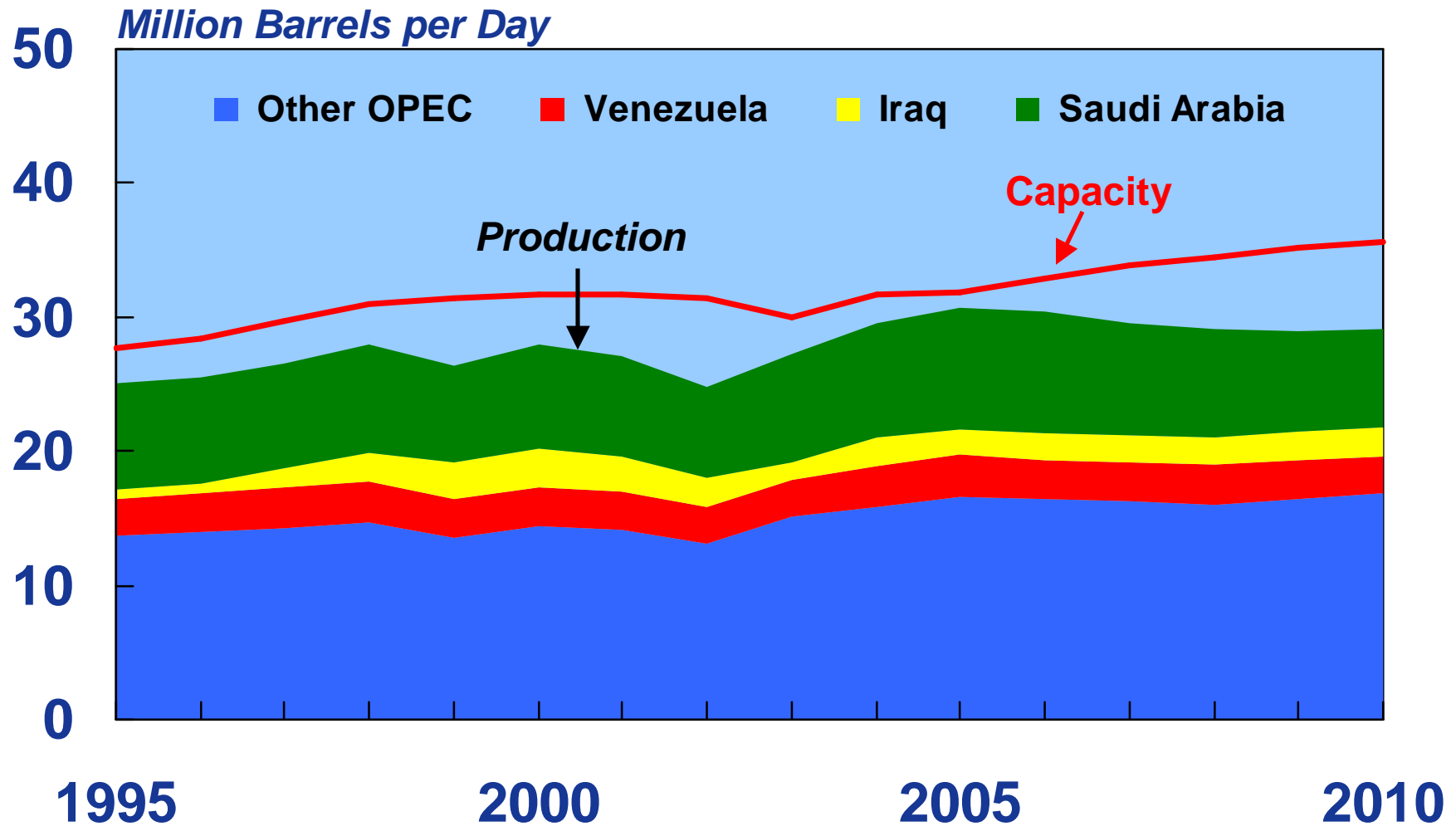
# Non-OPEC production has lagged its potential, but return of GOM will lead a recovery . . .



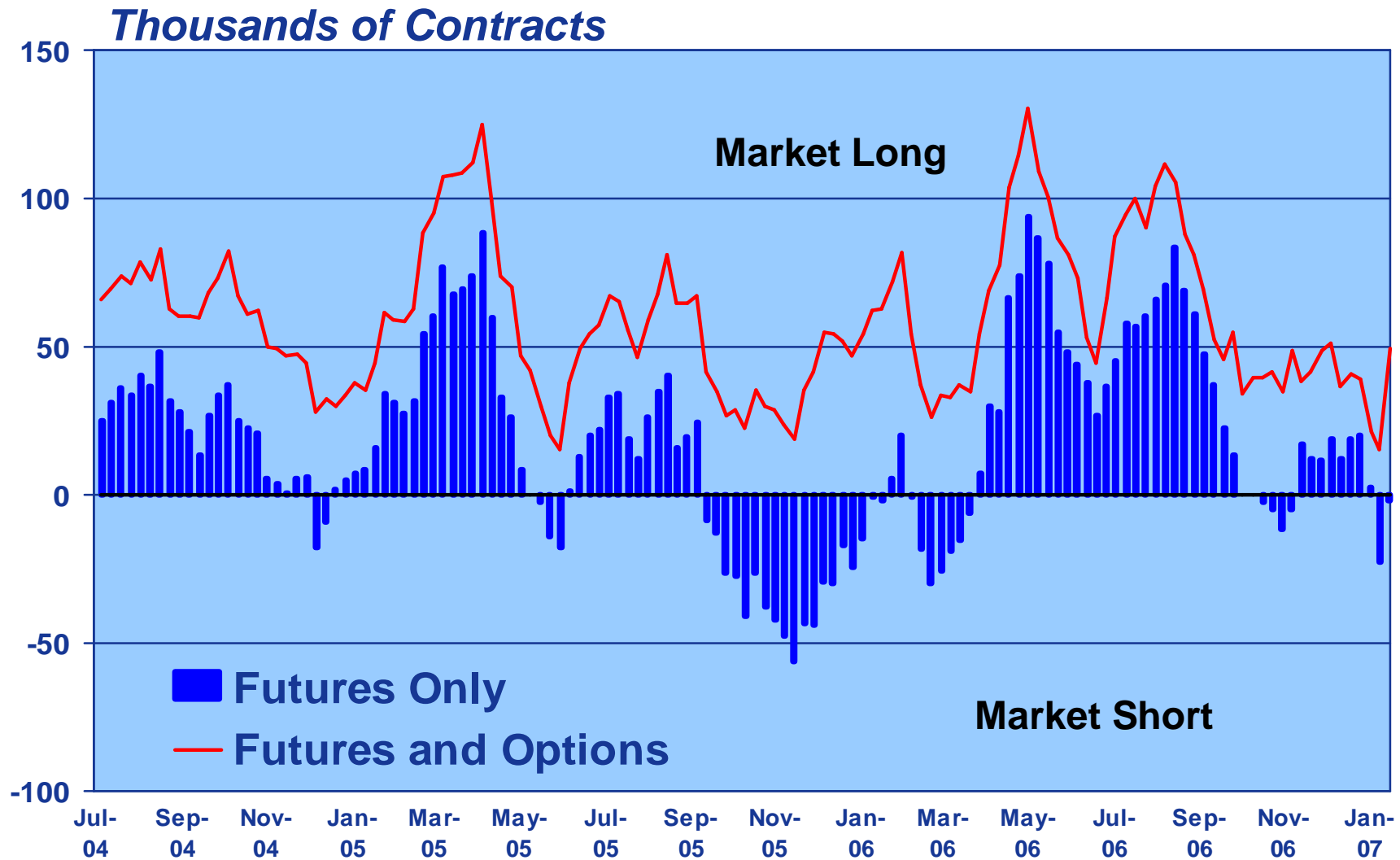
# Call on OPEC was very strong in 2003 - 2005, but slower growth will require short-term cuts . . .



# OPEC spare capacity is recovering, but production capacity remains a long-term concern ...



# NYMEX net non-commercially temporarily turned short and now neutral . . .



# Crude prices are being influenced by bearish short-term factors... mid-term issues remain...

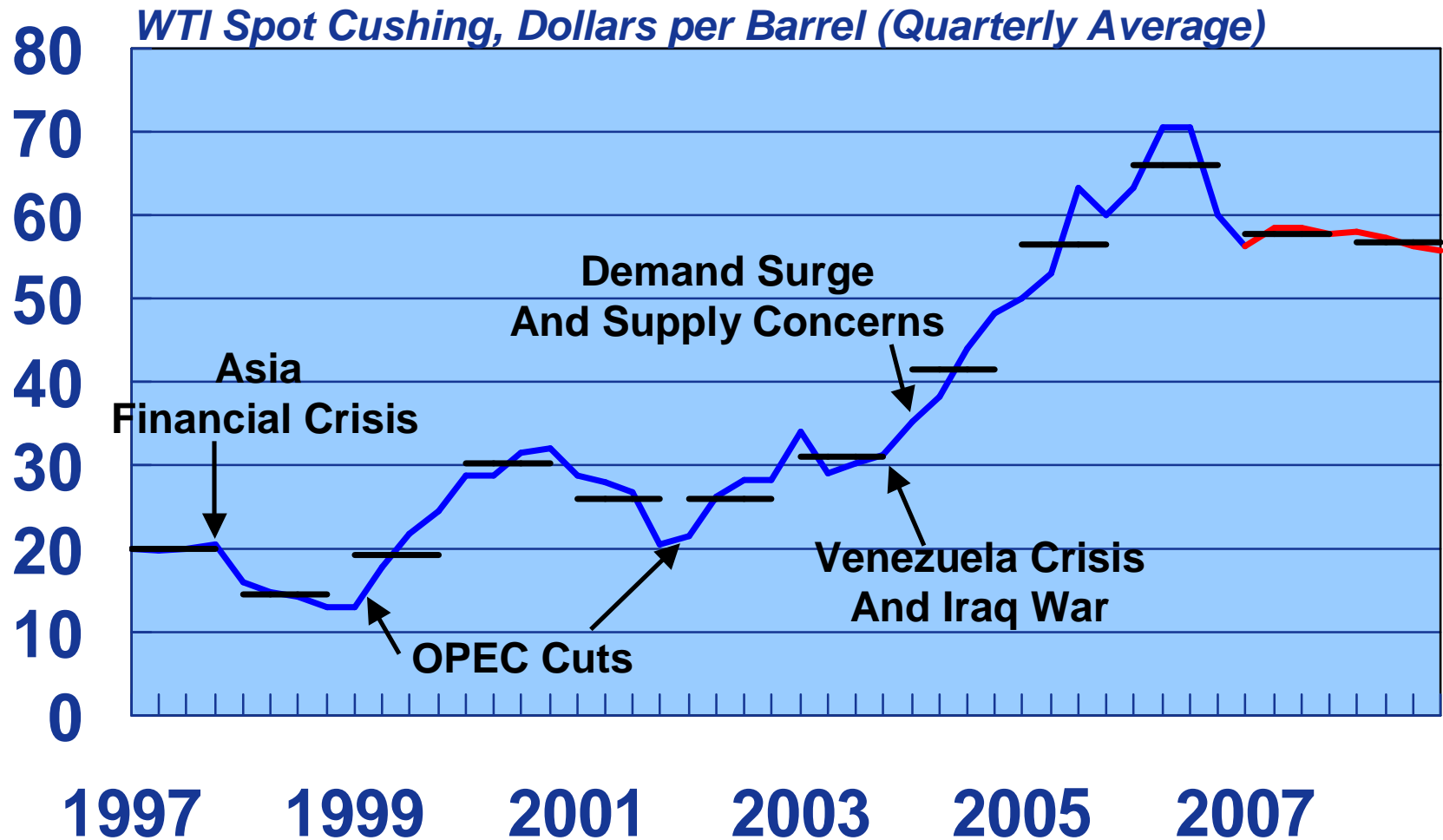
## Bearish Factors

- Ø **Economic risk factors**
  - § High energy prices
  - § U.S. balance of payments
  - § Soft landing so far
- Ø **Global demand slowing**
  - § Warm weather
  - § Overall global demand
  - § U.S. gasoline demand
- Ø **Industry participants turning bearish**

## Bullish Factors

- Ø **Security of Supply**
  - § Iran's nuclear ambitions
  - § Civil strife in Nigeria
  - § Iraq output
  - § Others
- Ø **Non-OPEC Performance**
  - § North Sea
  - § Russia
  - § Mexico
- Ø **Contango forward curve**
  - § Bullish sentiment remains

# Crude price outlook is for continued moderation from recent highs, but a collapse is not likely . . .



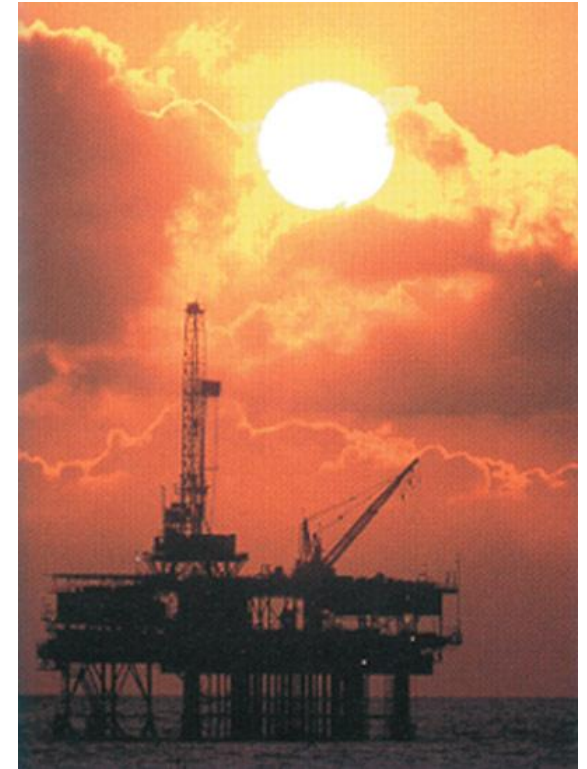
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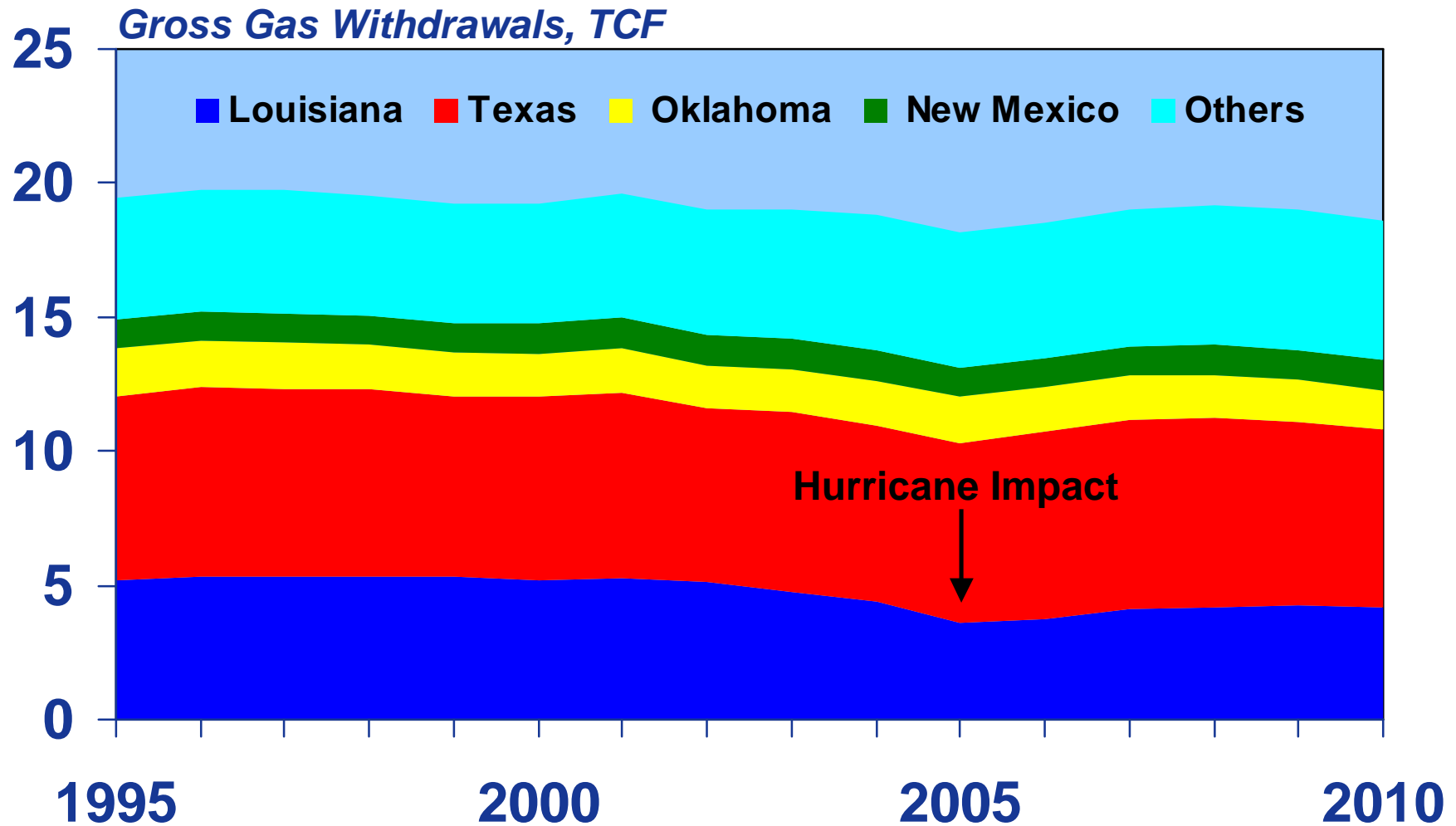
Ø Petroleum Market Outlook

**Ø North American Natural Gas**

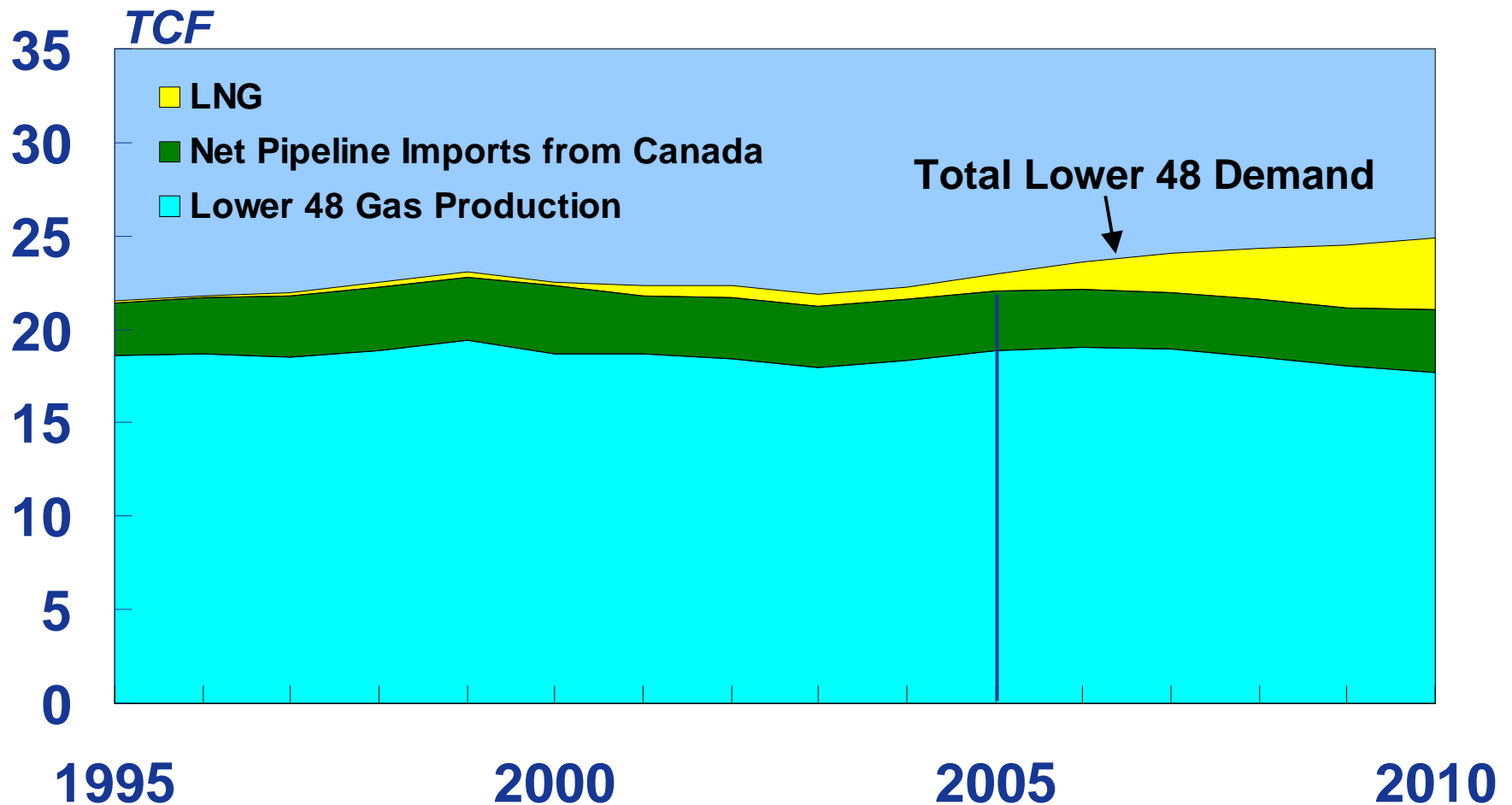
Ø Refining Industry Impacts



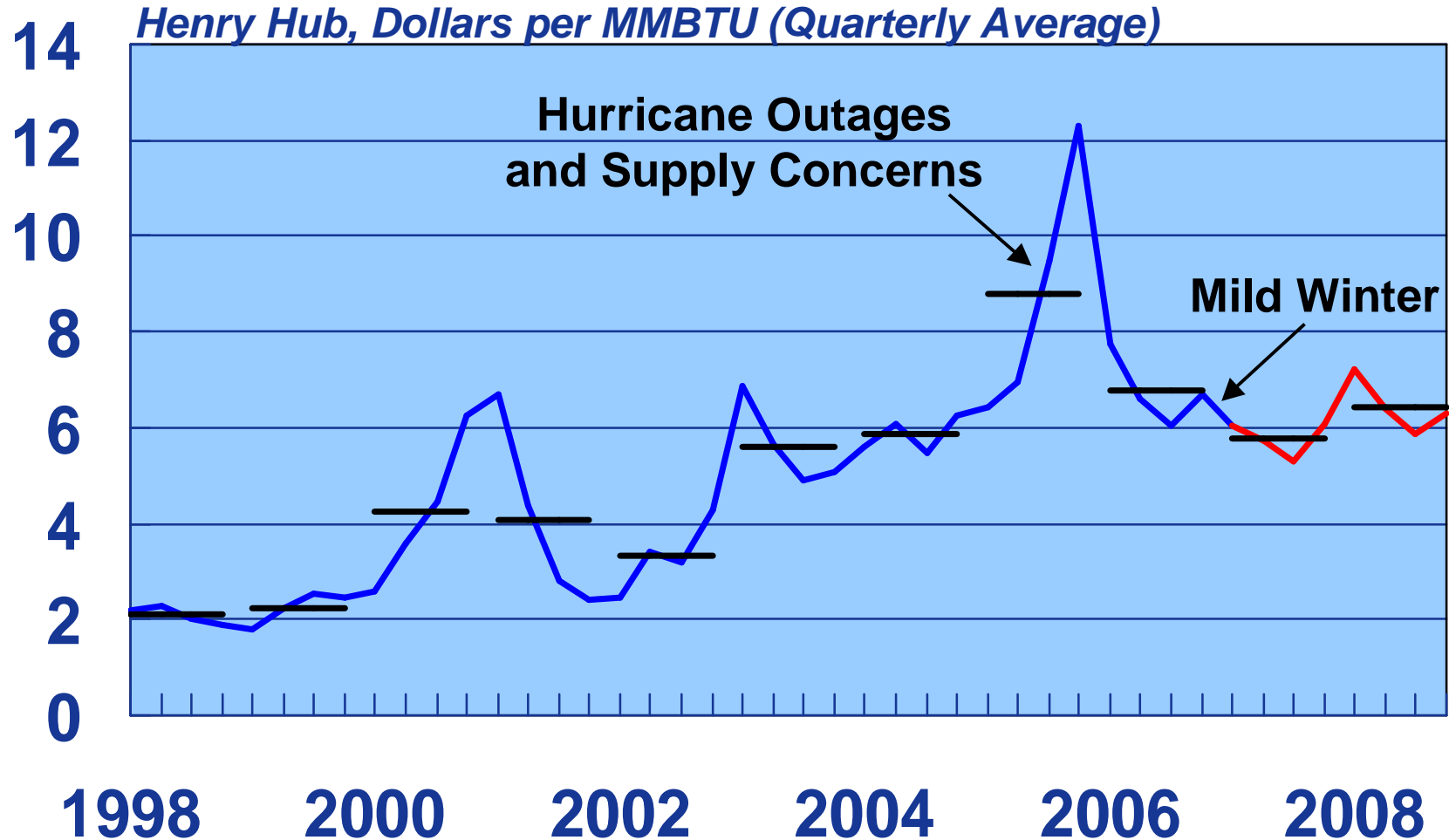
# Strong rig activity resulted in a short-term surge in production with declining production long-term ...



# Supply-limited nature of North American market results price instability during supply problems . . .



# Gas prices were severely affected by supply issues, but low winter demand has moderated prices . . .

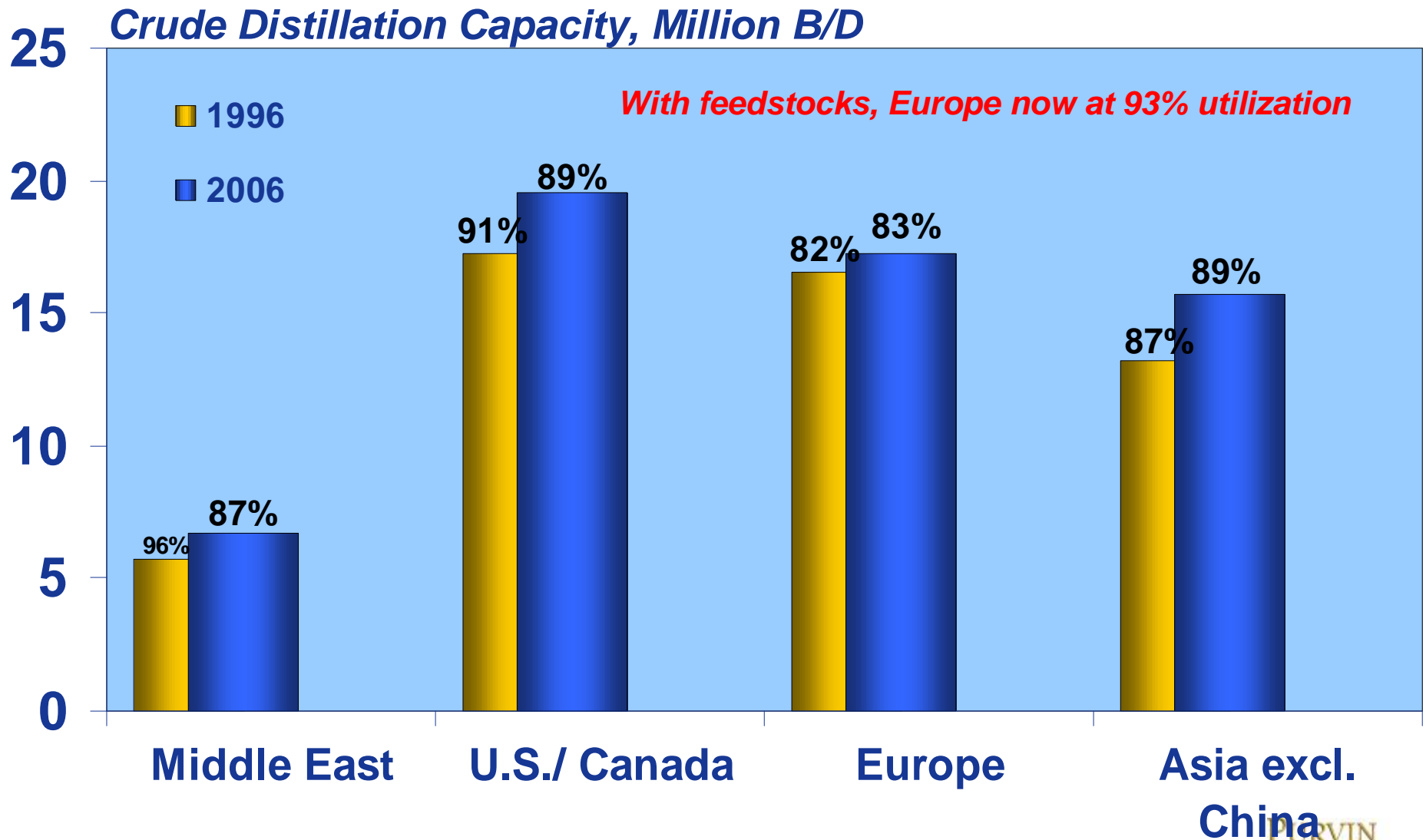


# U.S. Energy Outlook

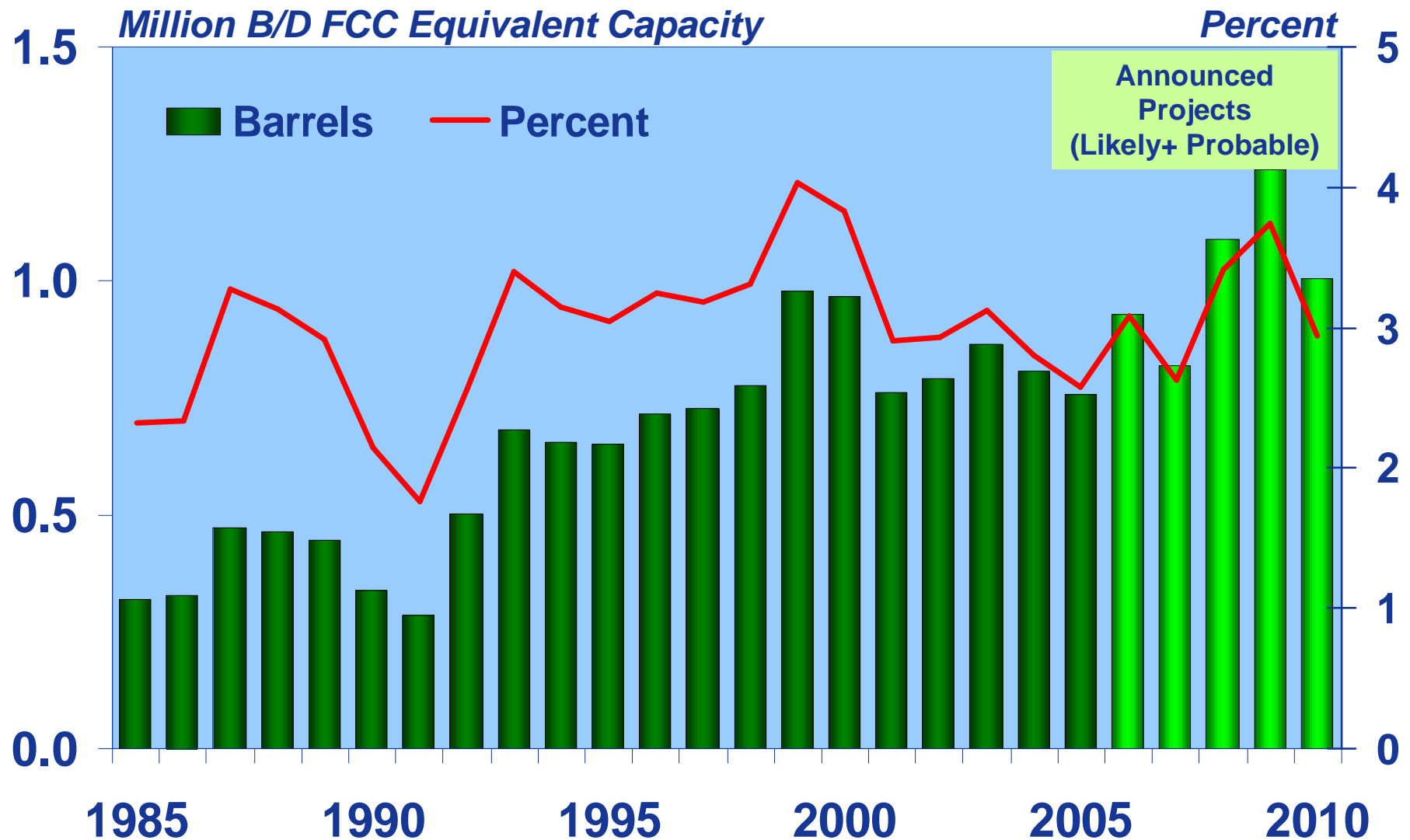
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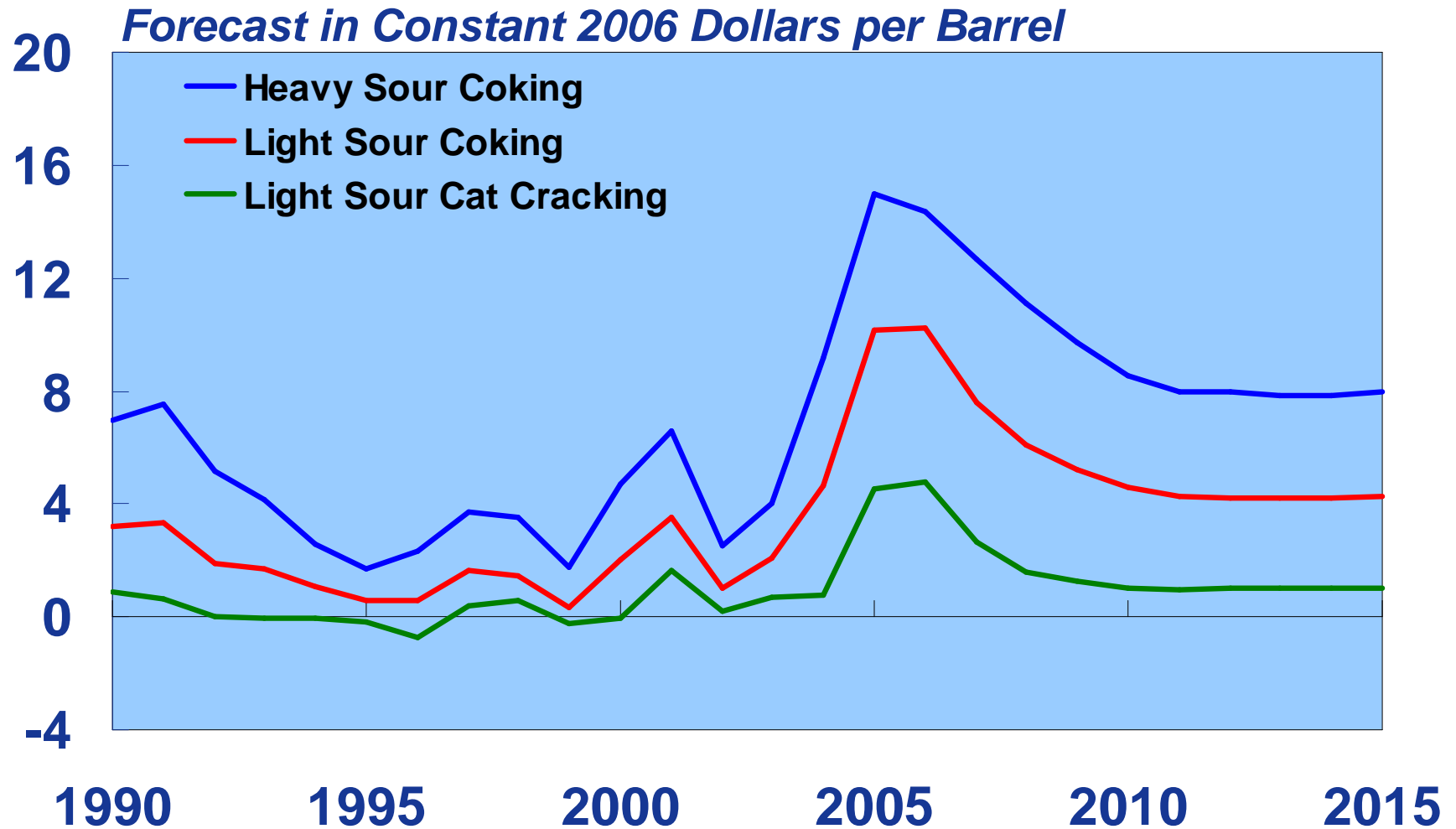
# Economically viable refining capacity remains highly utilized considering all feedstocks . . .



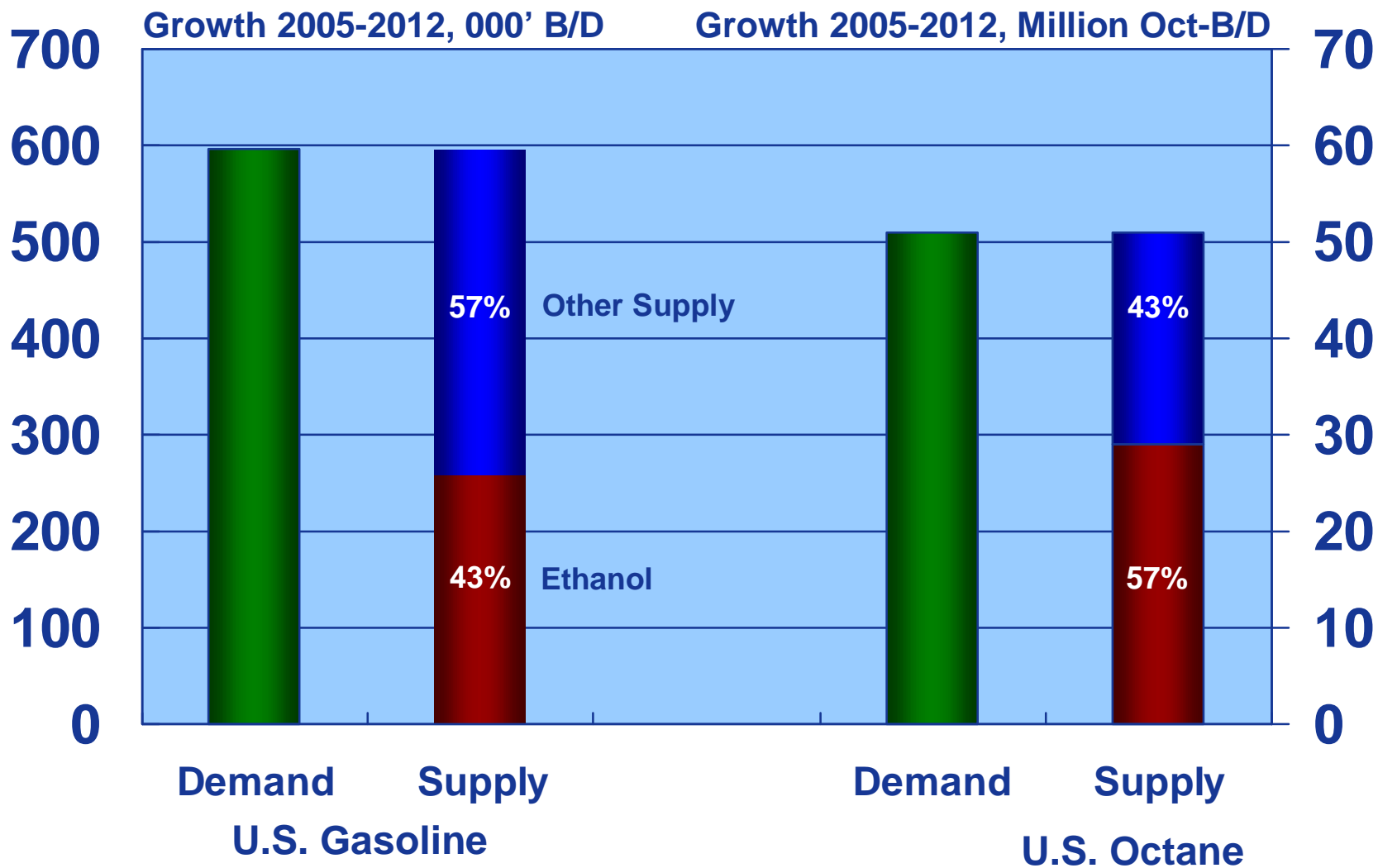
# World conversion capacity additions will be strong as the industry responds to light product demand . . .



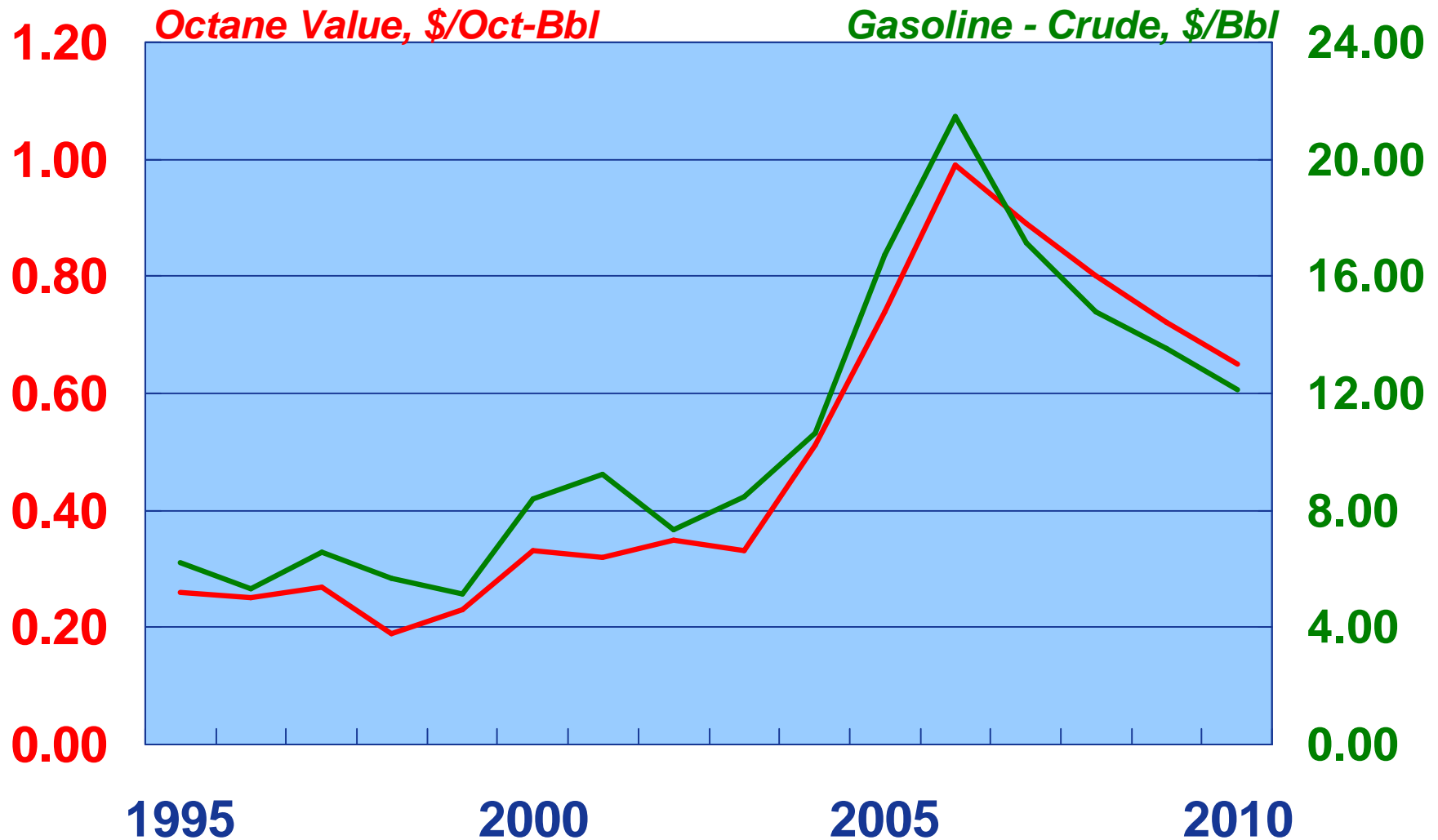
# U.S. Gulf Coast margins are strong as product markets will remain tight for a few years . . .



# RFS will result in ethanol taking a sizable portion of U.S. gasoline demand and octane growth . . .



# U.S. octane values have increased mainly due to the tightening U.S. gasoline market . . .



# Conclusions

- Ø **Crude oil prices have moderated somewhat but long-term strength in prices continues**
  - § **Product demand has slowed due to high prices**
  - § **Supply disruptions and concerns over supply security continue**
  - § **Lack of OPEC spare capacity remains a long-term factor**
- Ø **Limited U.S. gas supplies continue to produce unstable market conditions and upward price volatility**
- Ø **U.S. product prices and octane values reflect tight refining capacity that are beginning to ease**
- Ø **Ethanol will capture a sizable portion of the growth in gasoline volume and octane needs by 2012**

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