

The U.S. – Global Picture For Oil and Natural Gas

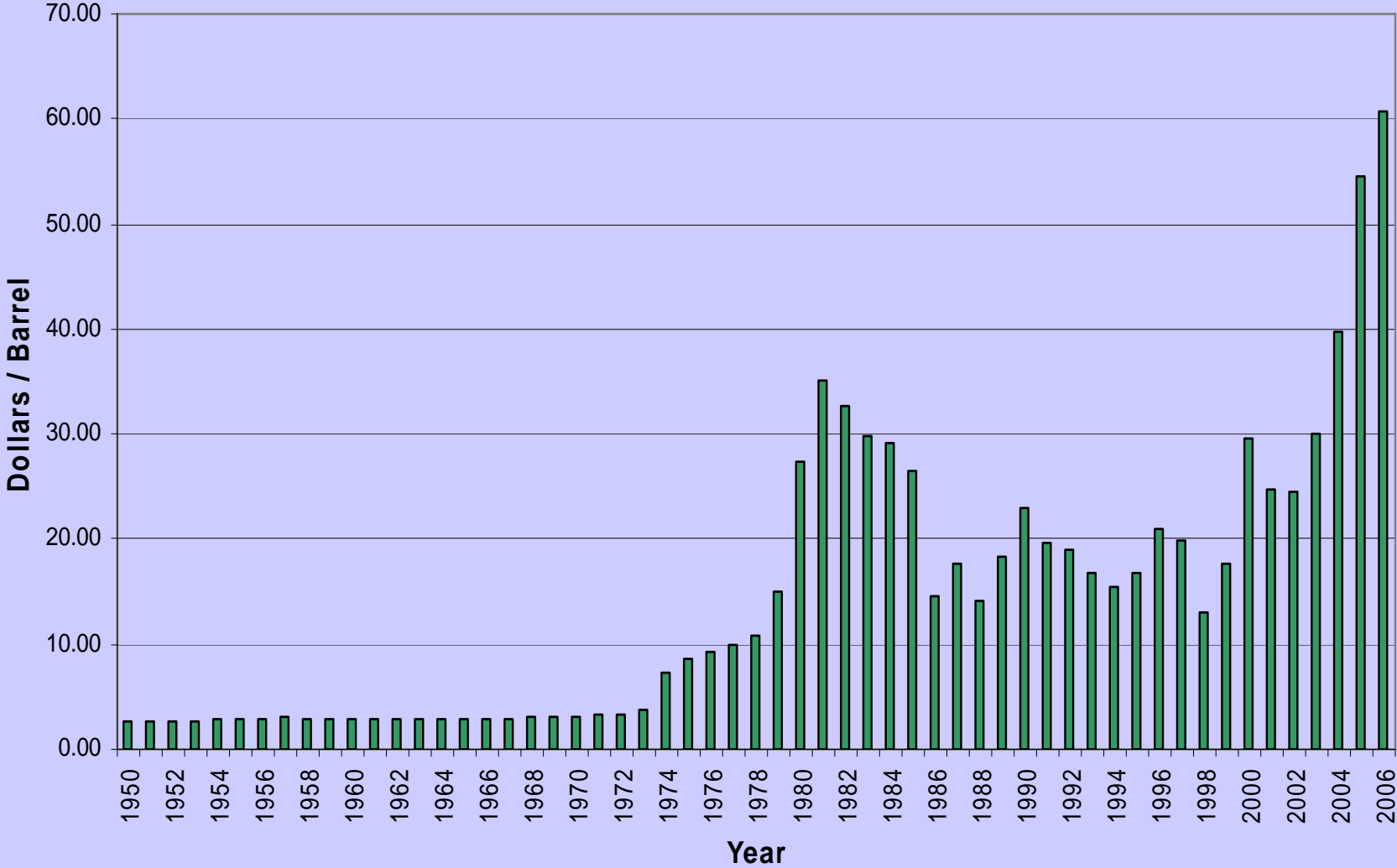
**GEOL 4233
January, 2008**

The Global Outlook (Oil)



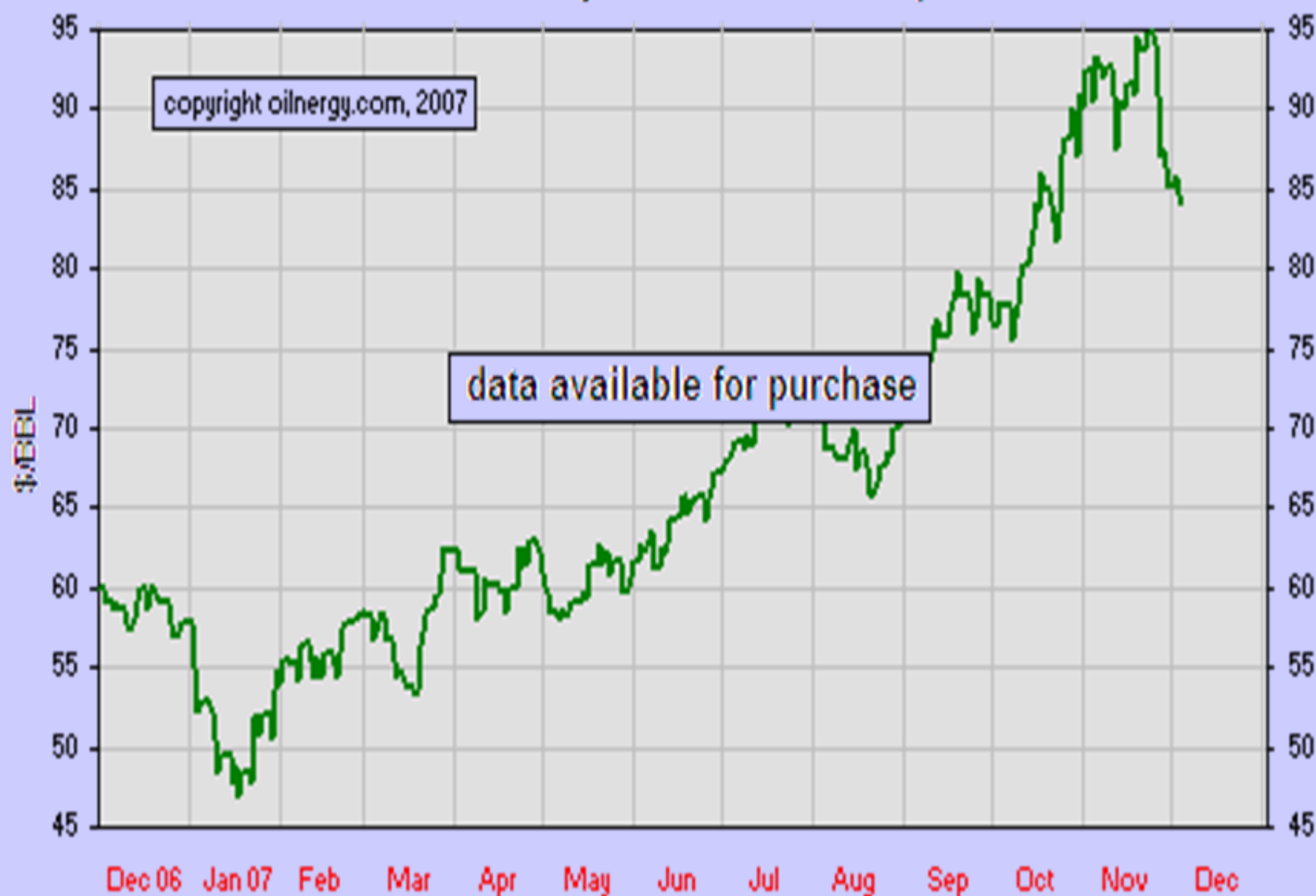
Average Oklahoma Crude Price

(Not Inflation Adjusted)



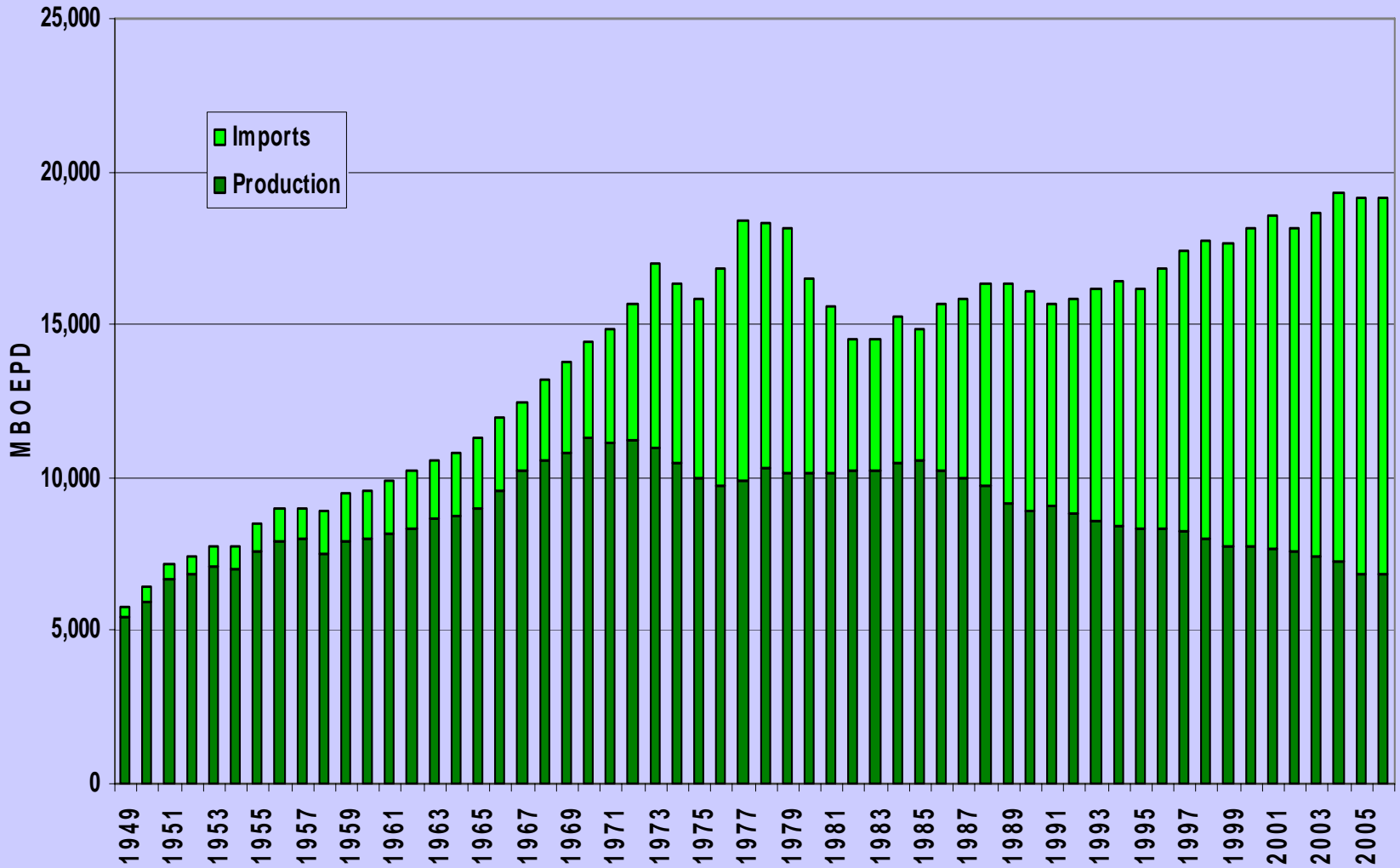
Data From Oklahoma Corporation Commission

WTI Crude Oil - Daily Posted Price in 12 previous months

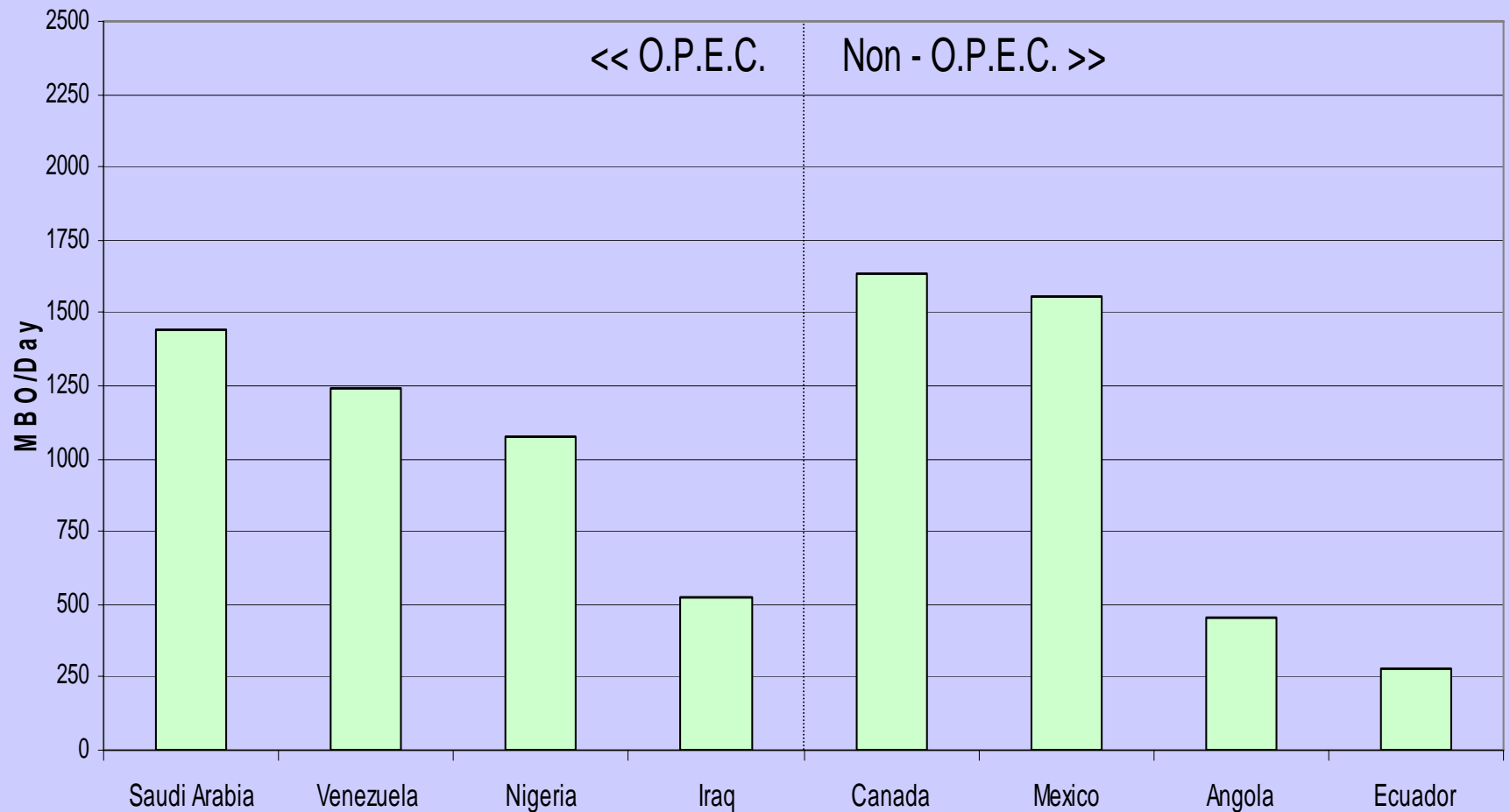


U.S. Oil Production - Imports

(Data From E.I.A.)



Major* Sources of U. S. Crude Oil Imports (2005 E.I.A. Estimate)



* > 250 MBOPD

A Silver Lining ?

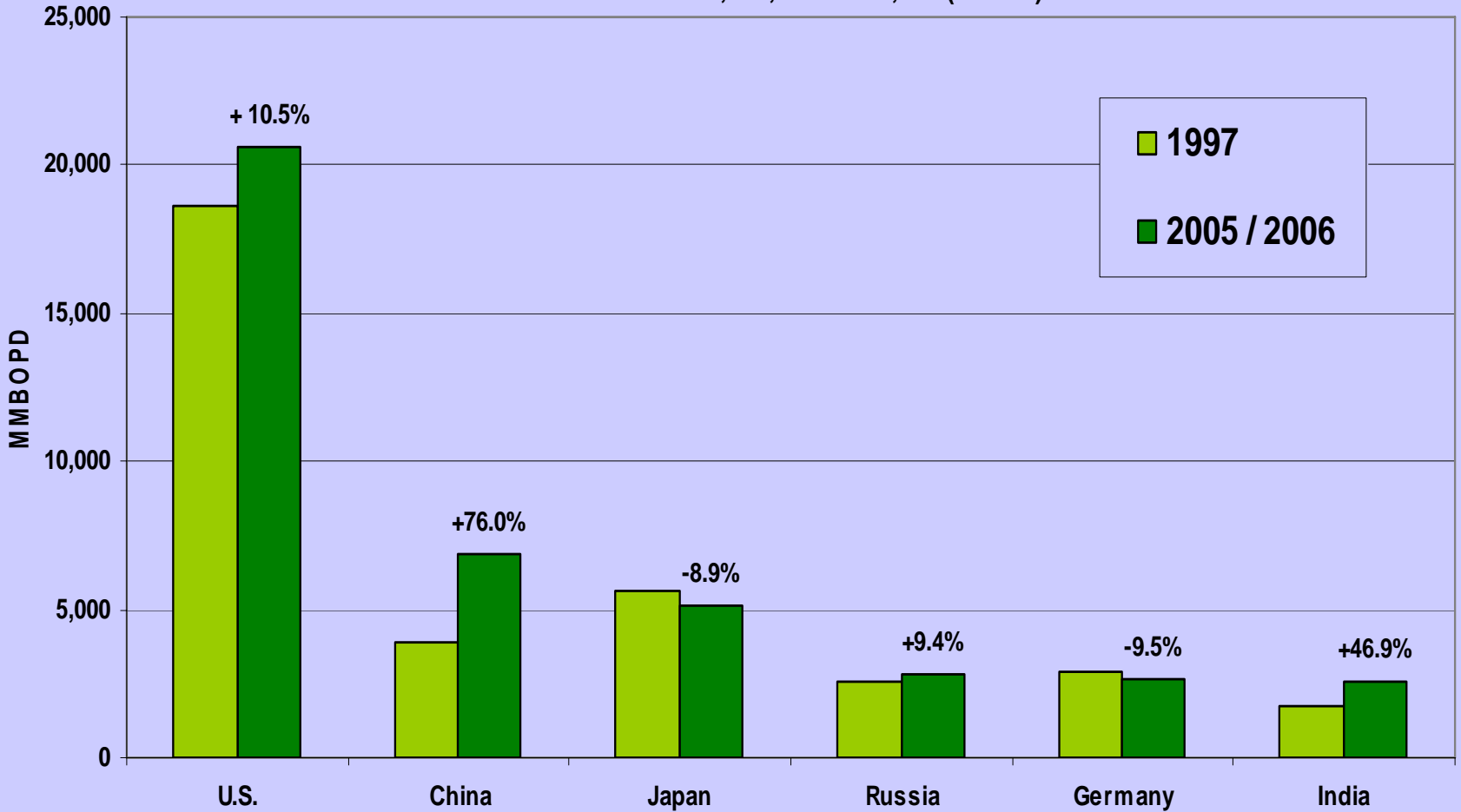


The 'Developing' World



Oil Consumption Trends

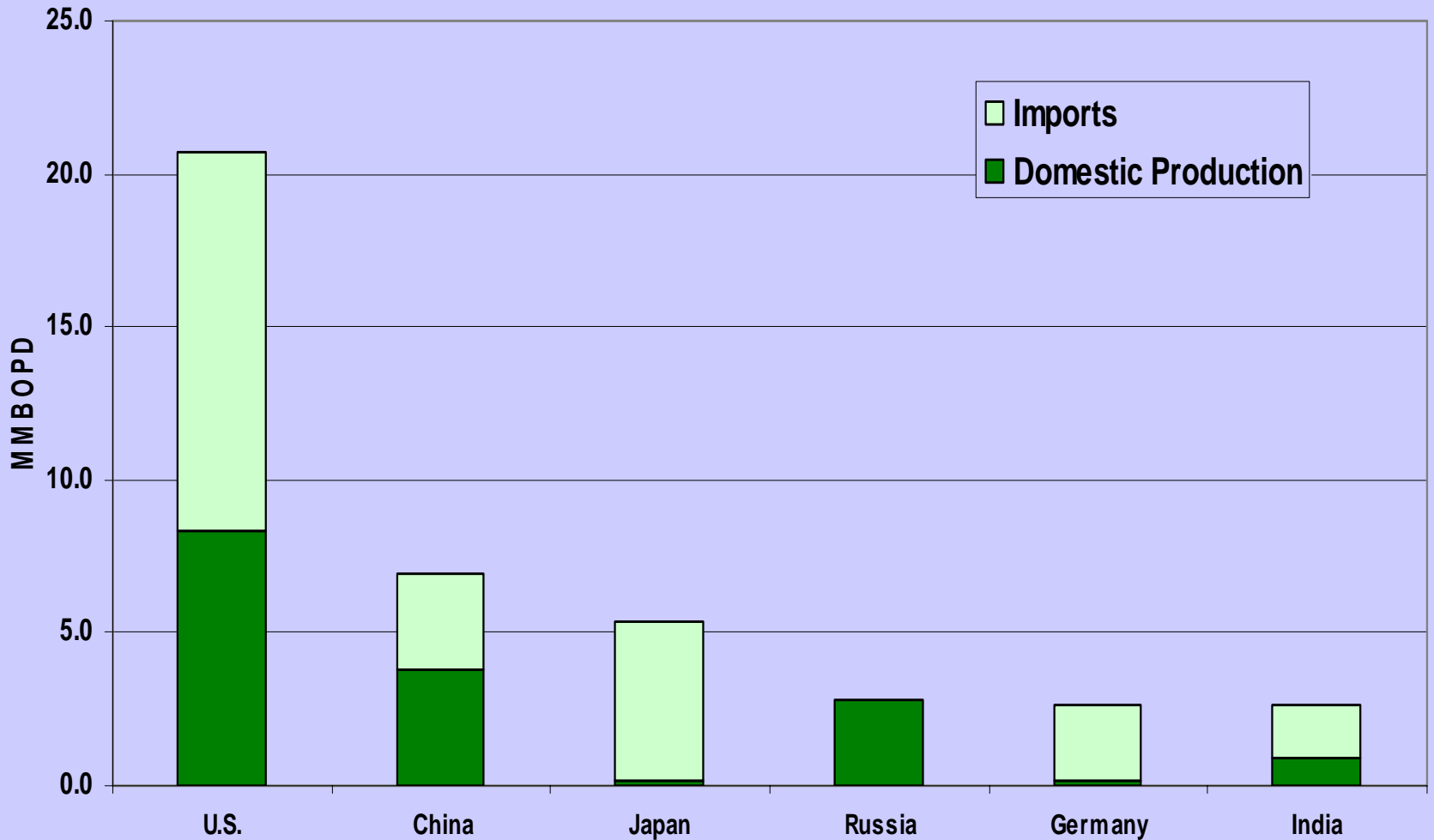
Global Total: 1997 - 73,293, 2005 - 84,028 (+14.6%)



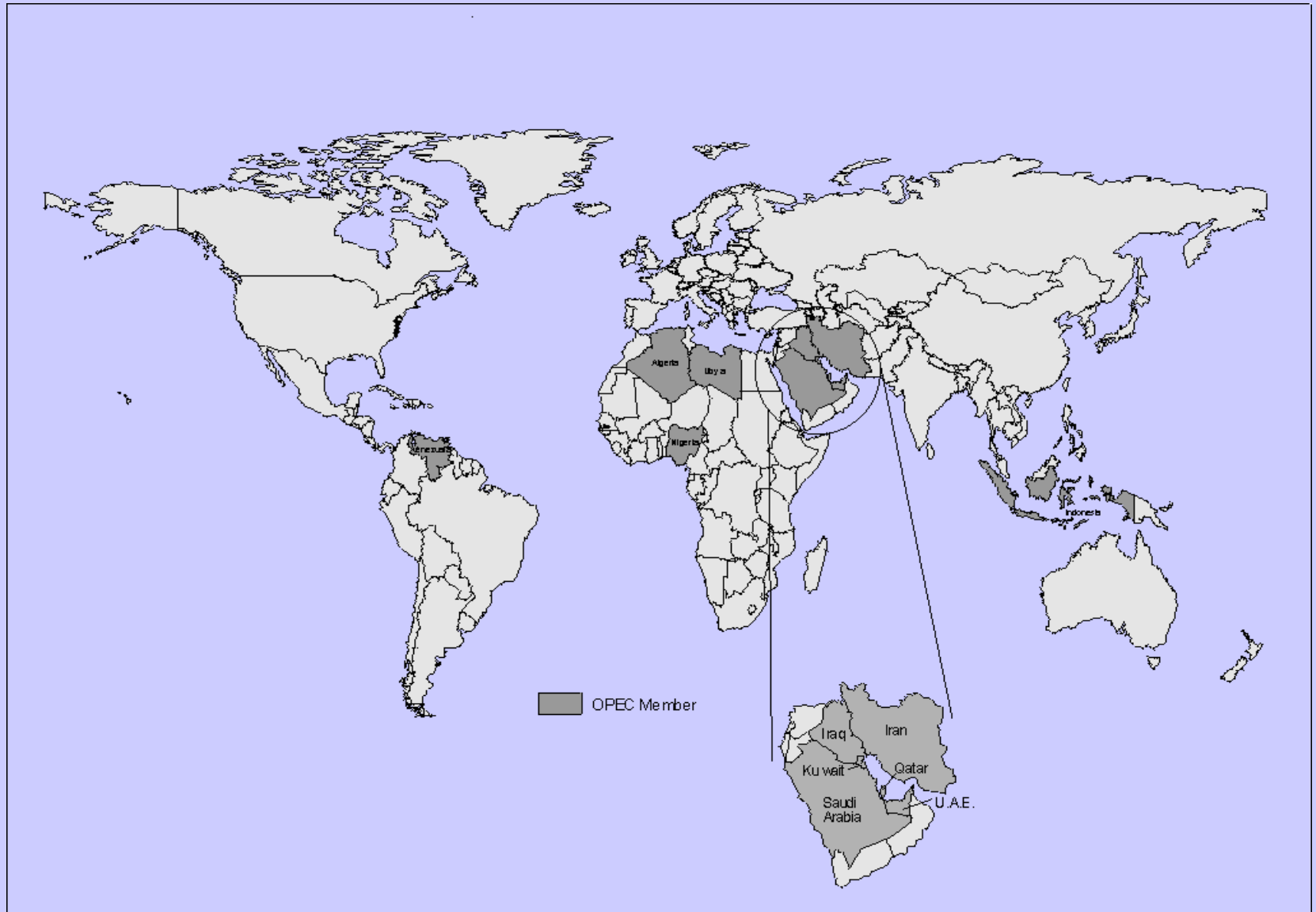
Data from E.I.A.

Oil Source For Top Consuming Nations

(2005-2006 Data From E.I.A.)

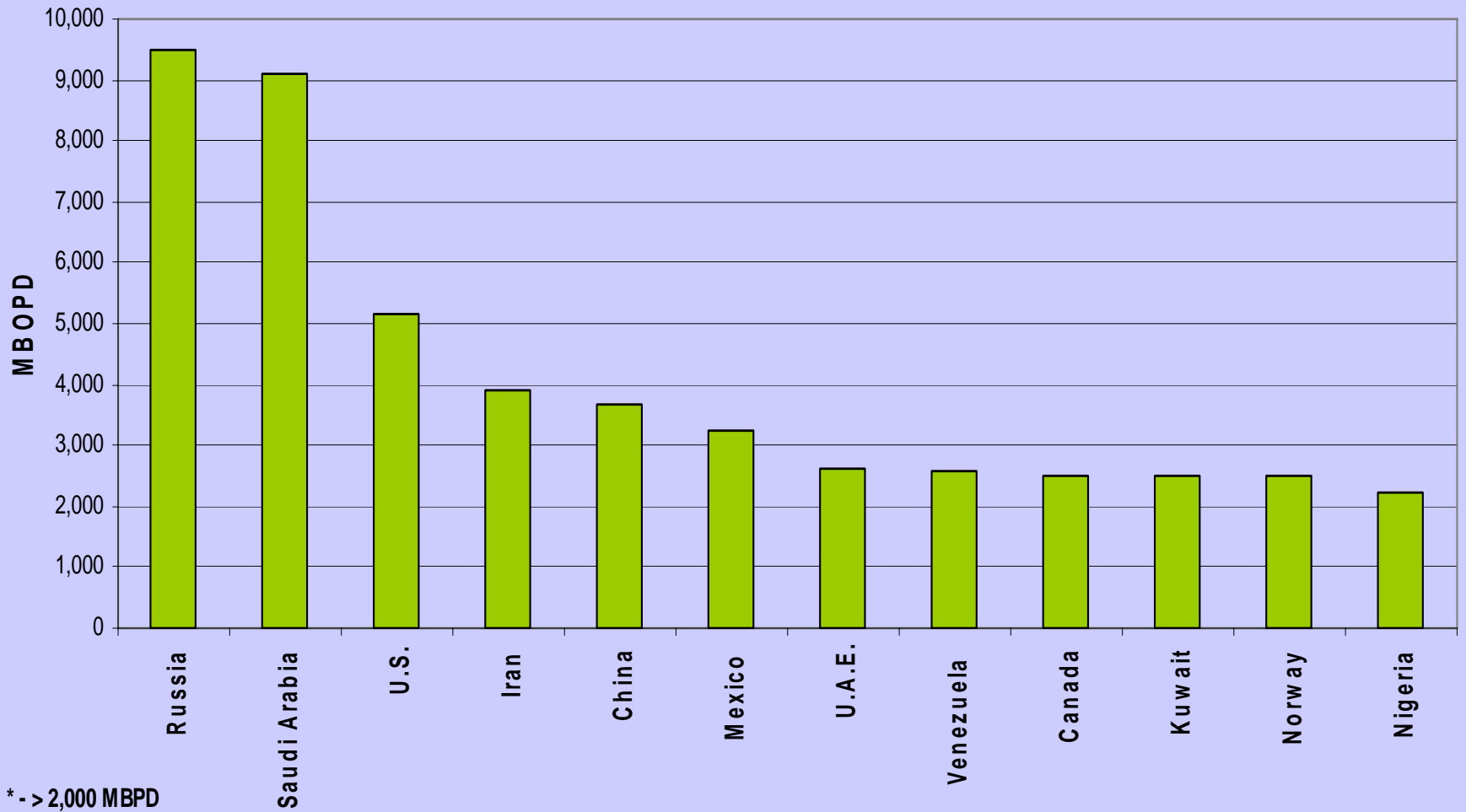


Map of world regions showing OPEC member states.



Major* Crude Oil Producers

2006 Estimated Average (Oil & Gas Journal) - NGL Excluded

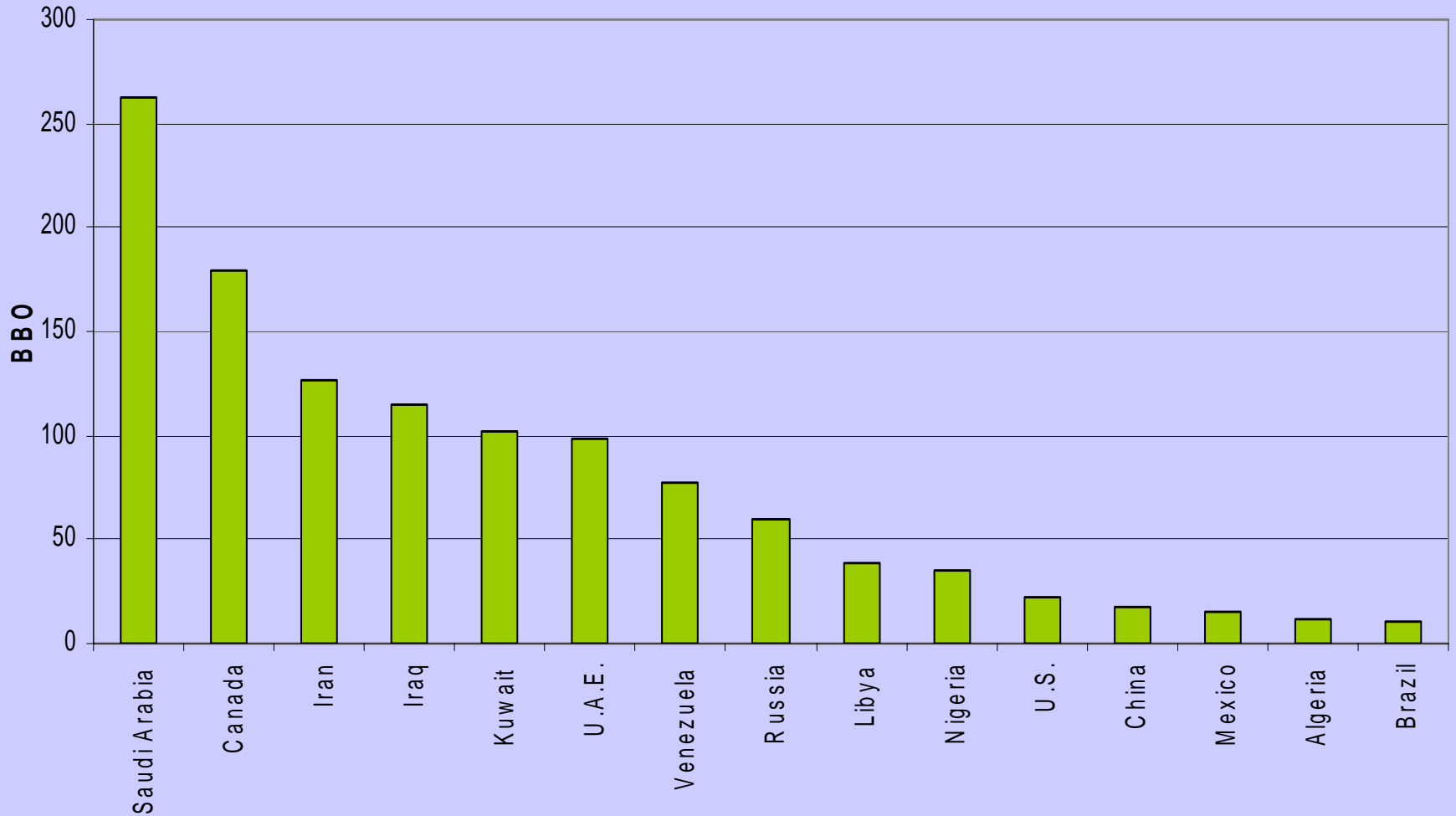


* - > 2,000 MBPD

World Oil Reserves

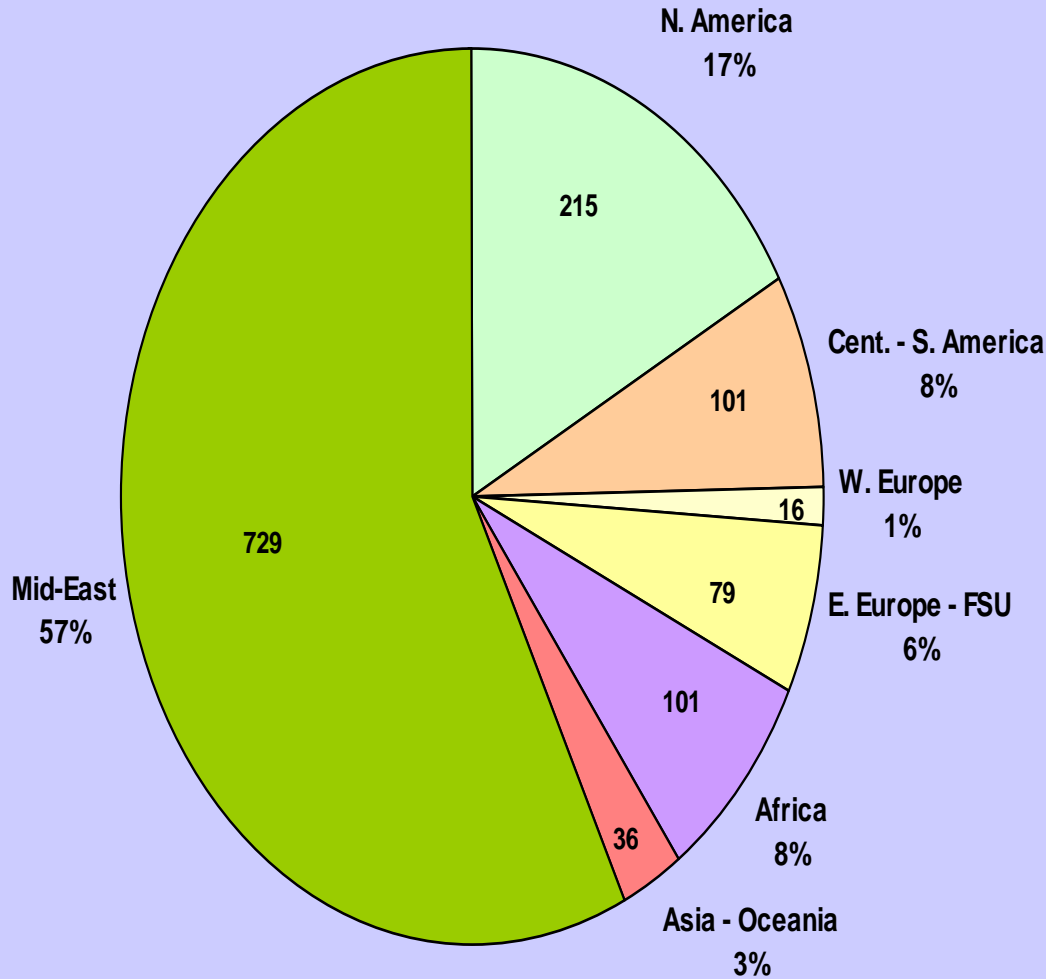
1-1-2005 Data from E.I.A.

Nations with > 10 BBO Reserves



Proved World Oil Reserves

(Data From E.I.A.)

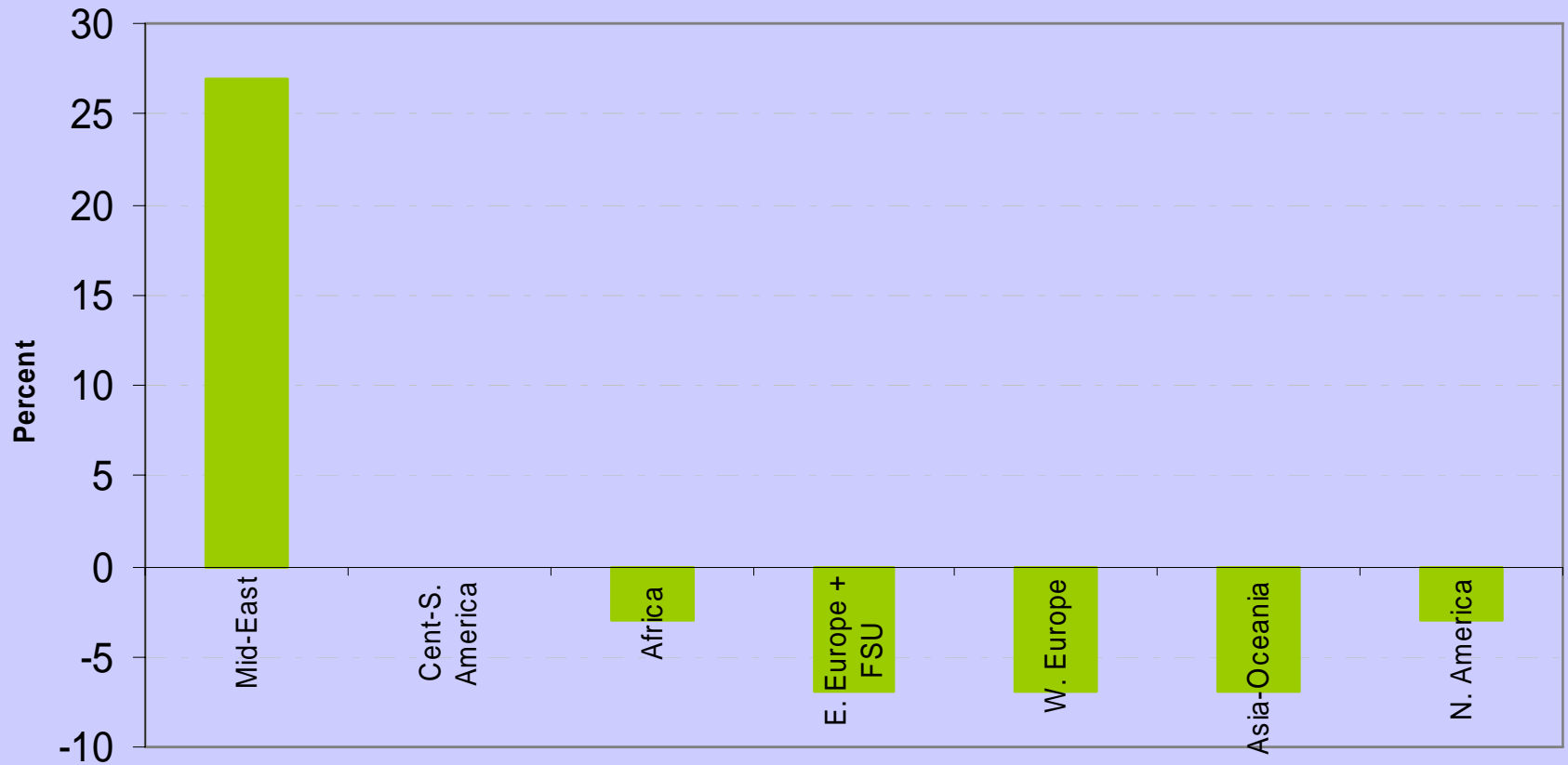


In *BBO* / Total = 1277 *BBO*
Estimate for Jan. 1, 2005

Oil Reserves Percentage Less Production Percentage

By World Region

(1-1-2005 Reserves vs. 2003 Production)



Data from E.I.A.

'Peak Oil'

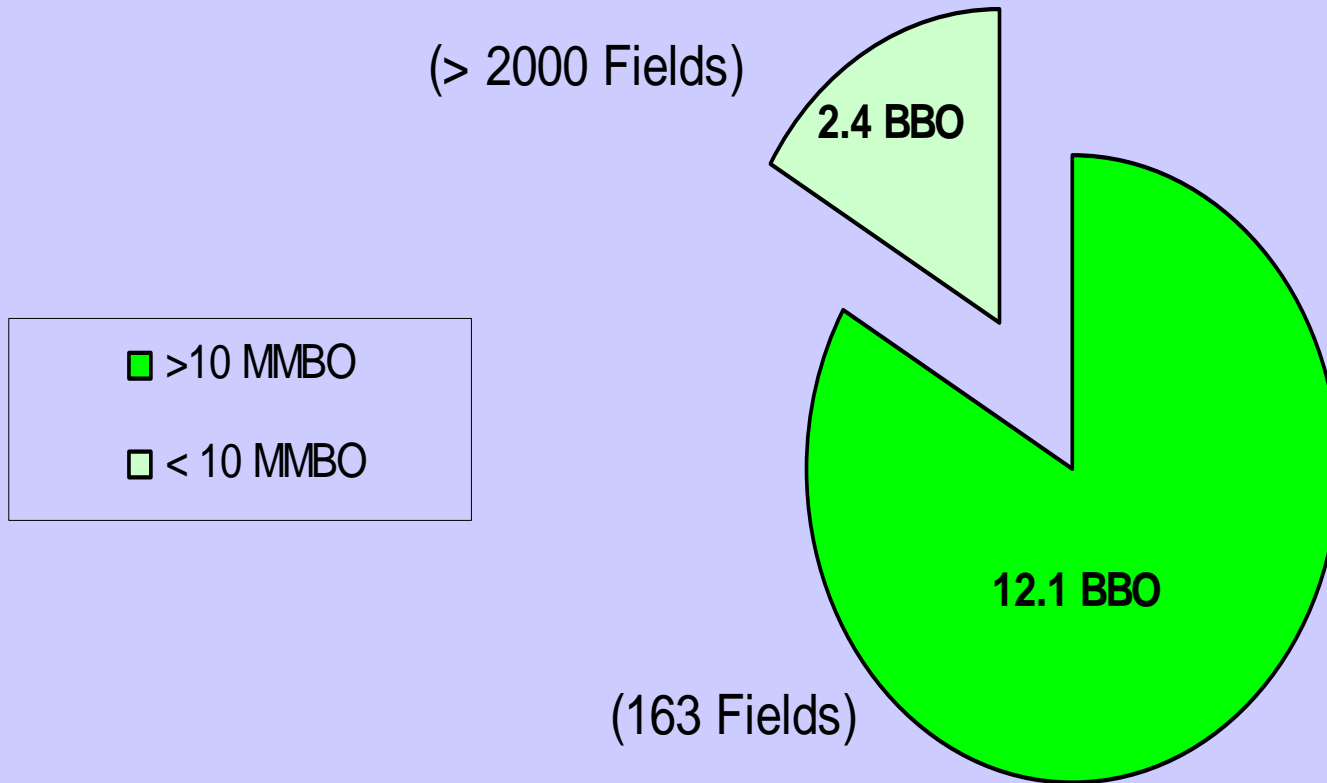


Depletion is Universal



Oklahoma Cumulative Oil* Production vs Field Size

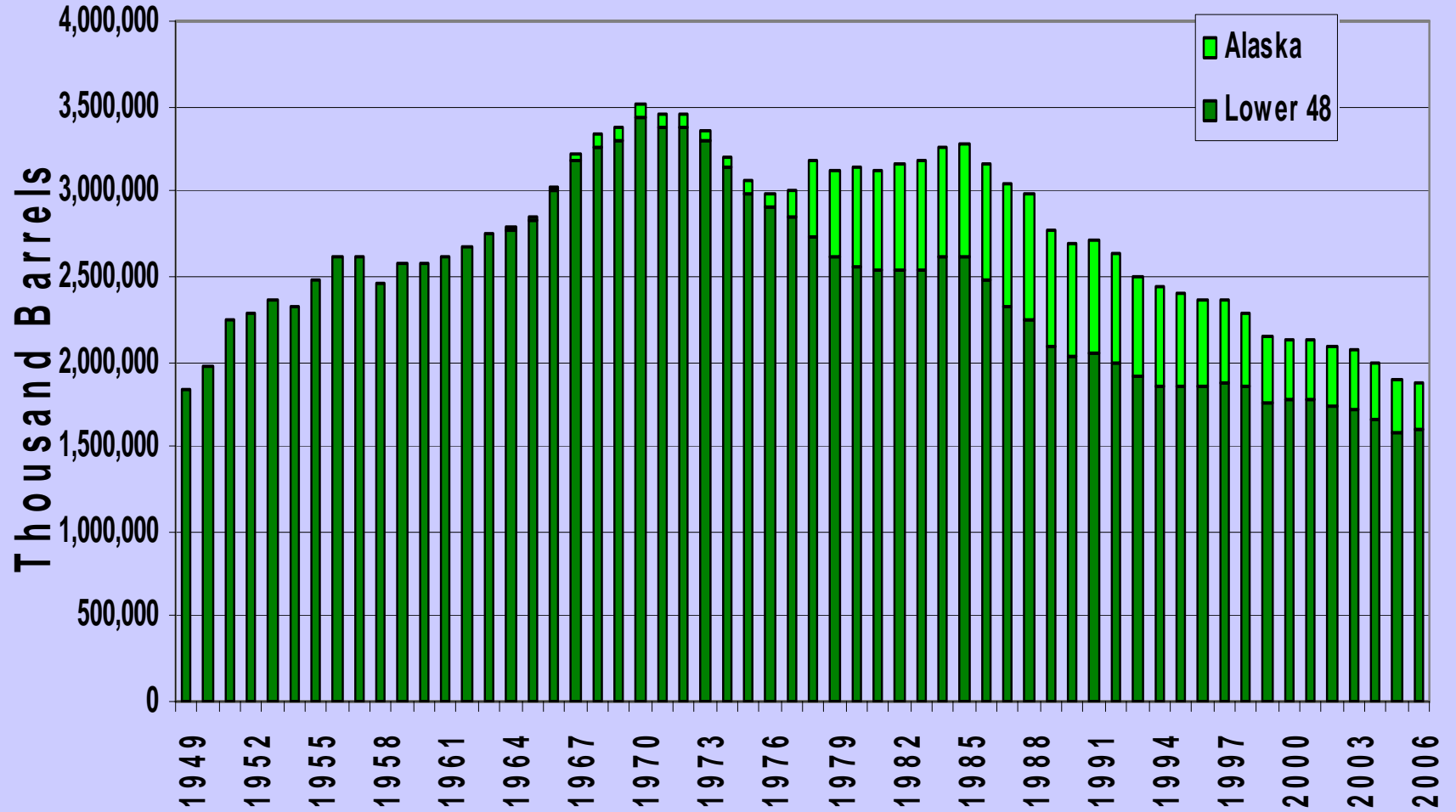
From International Oil Scouts Association

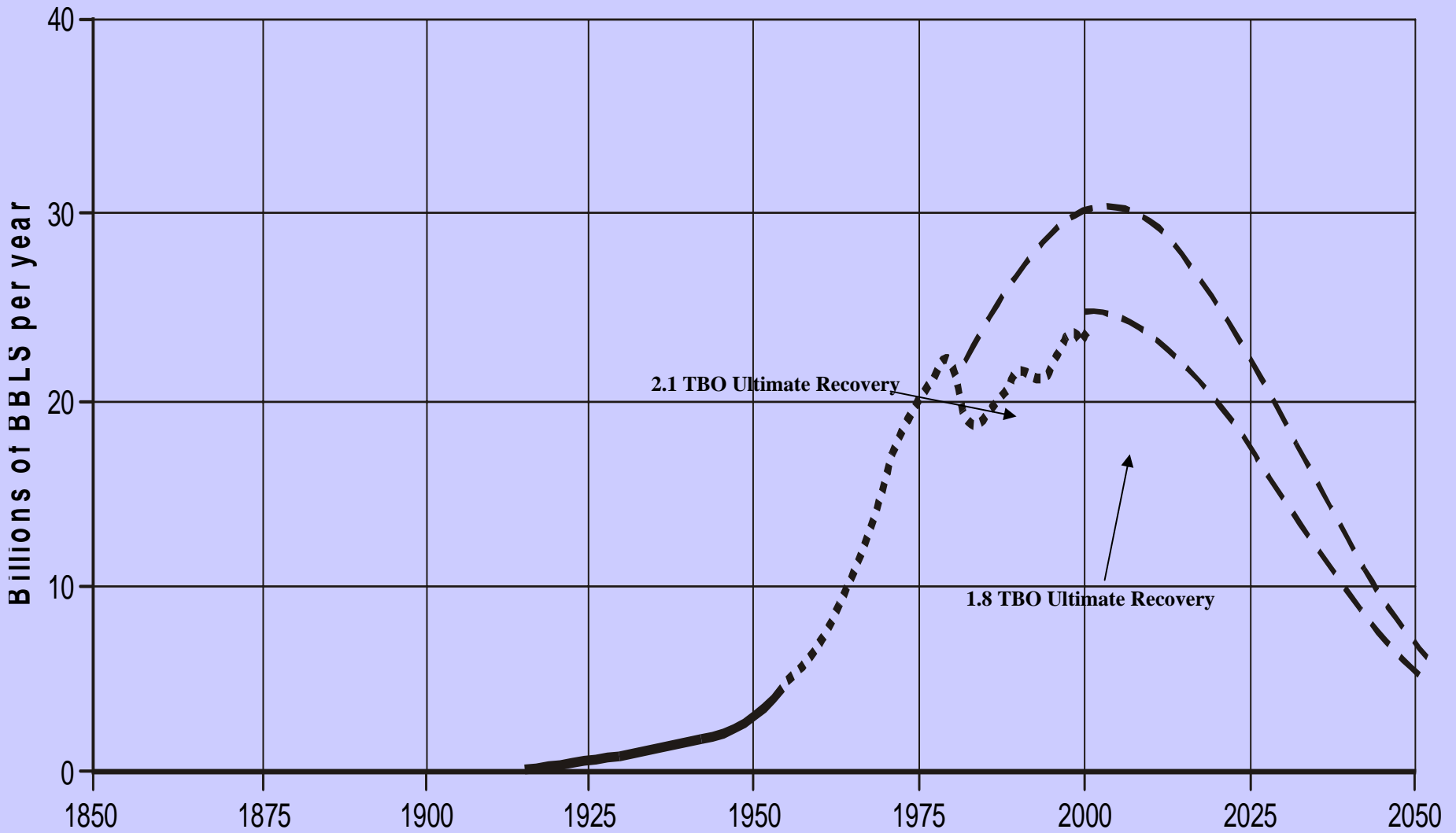


* -Including Condensate through 1/2000

U.S. Crude Oil Production

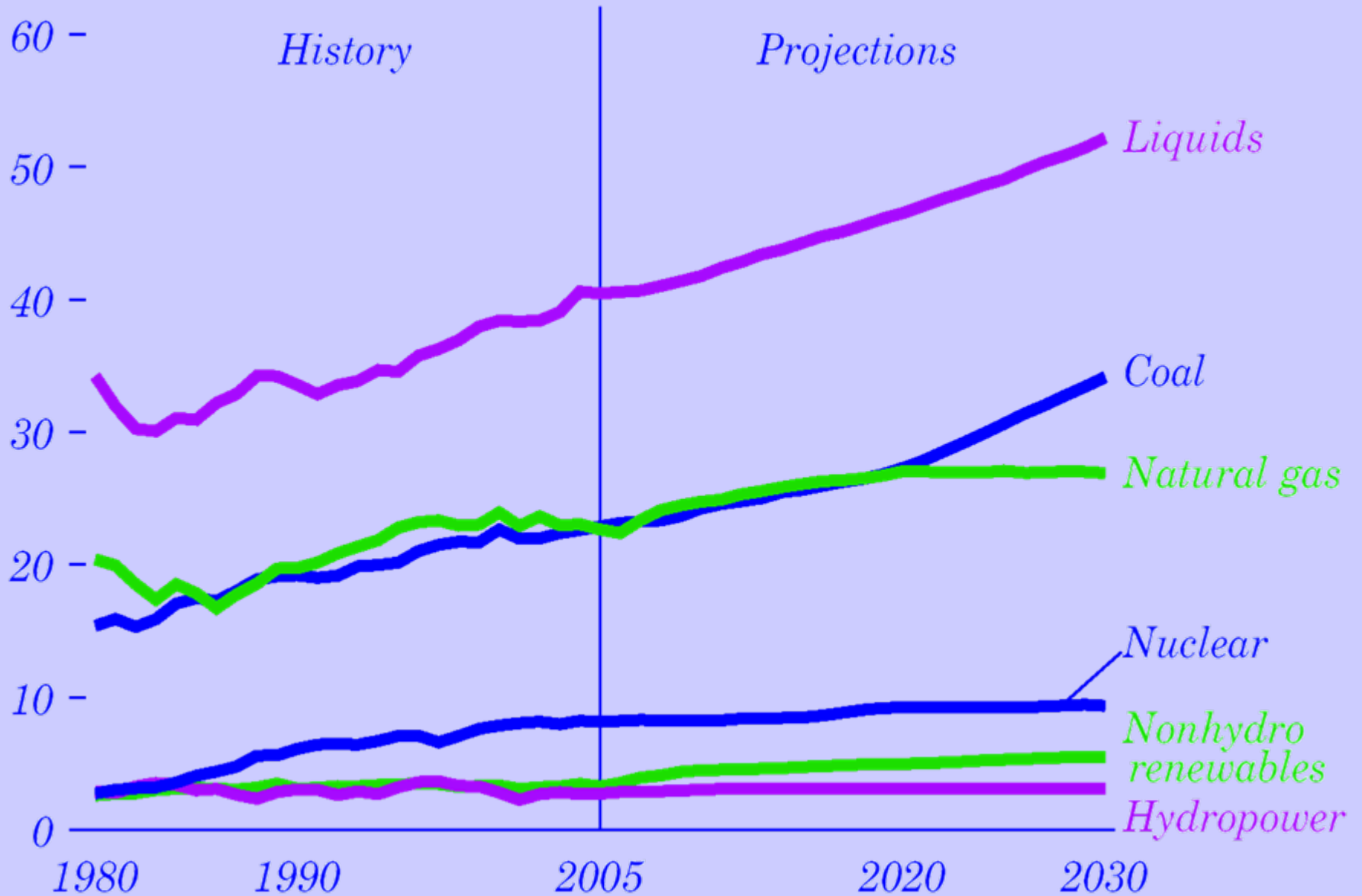
(From E.I.A.)



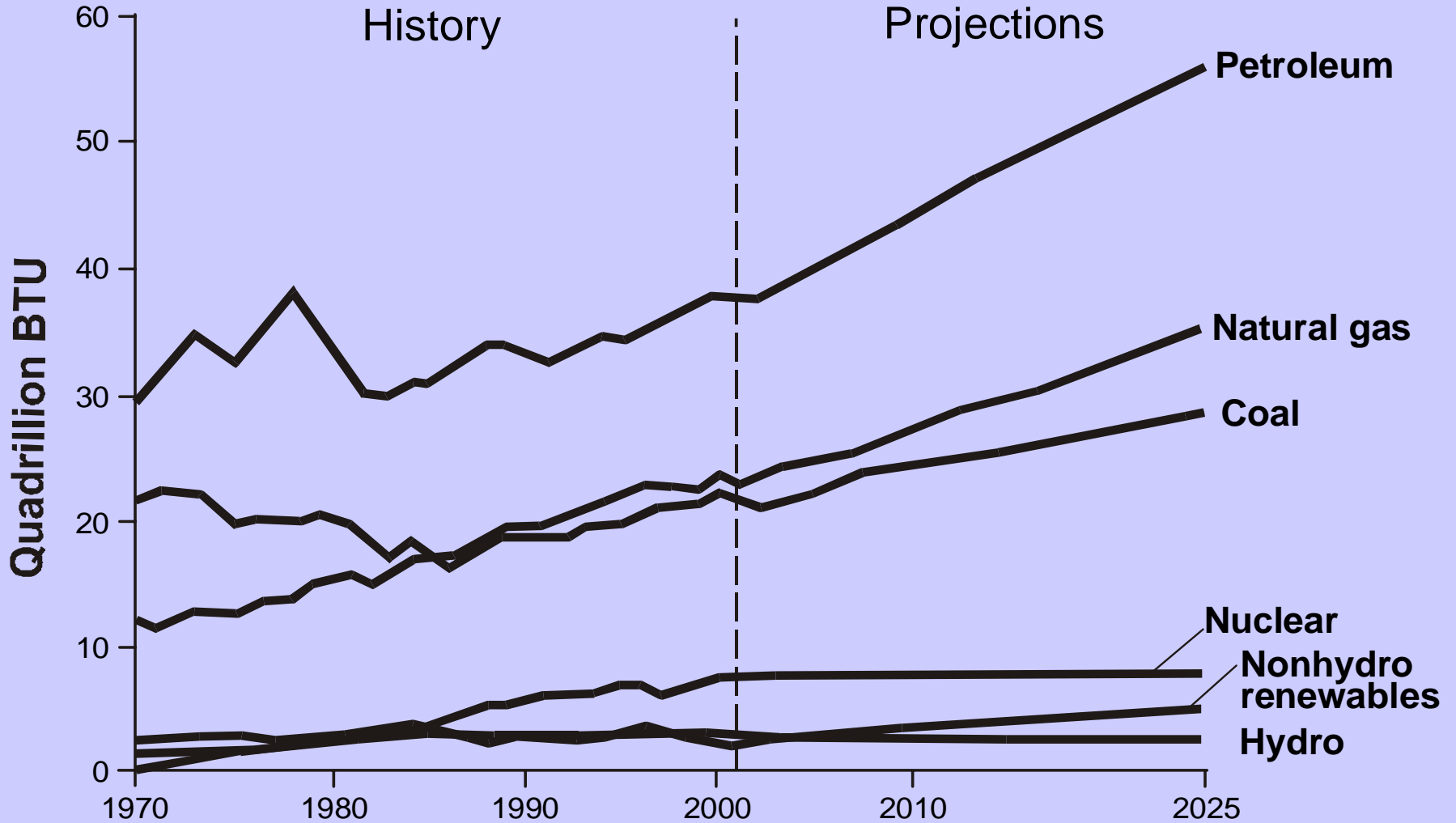


World oil production through 2000 (heavy dots) showing projected production through 2050 (dashed lines) for two possible ultimate recoveries. From Deffeyes (2001).

United States 2005 annual energy outlook—early release, 1980-2030. From E.I.A., (2007).



United States 2003 annual energy outlook—early release, 1970-2025. From E.I.A., (2003).

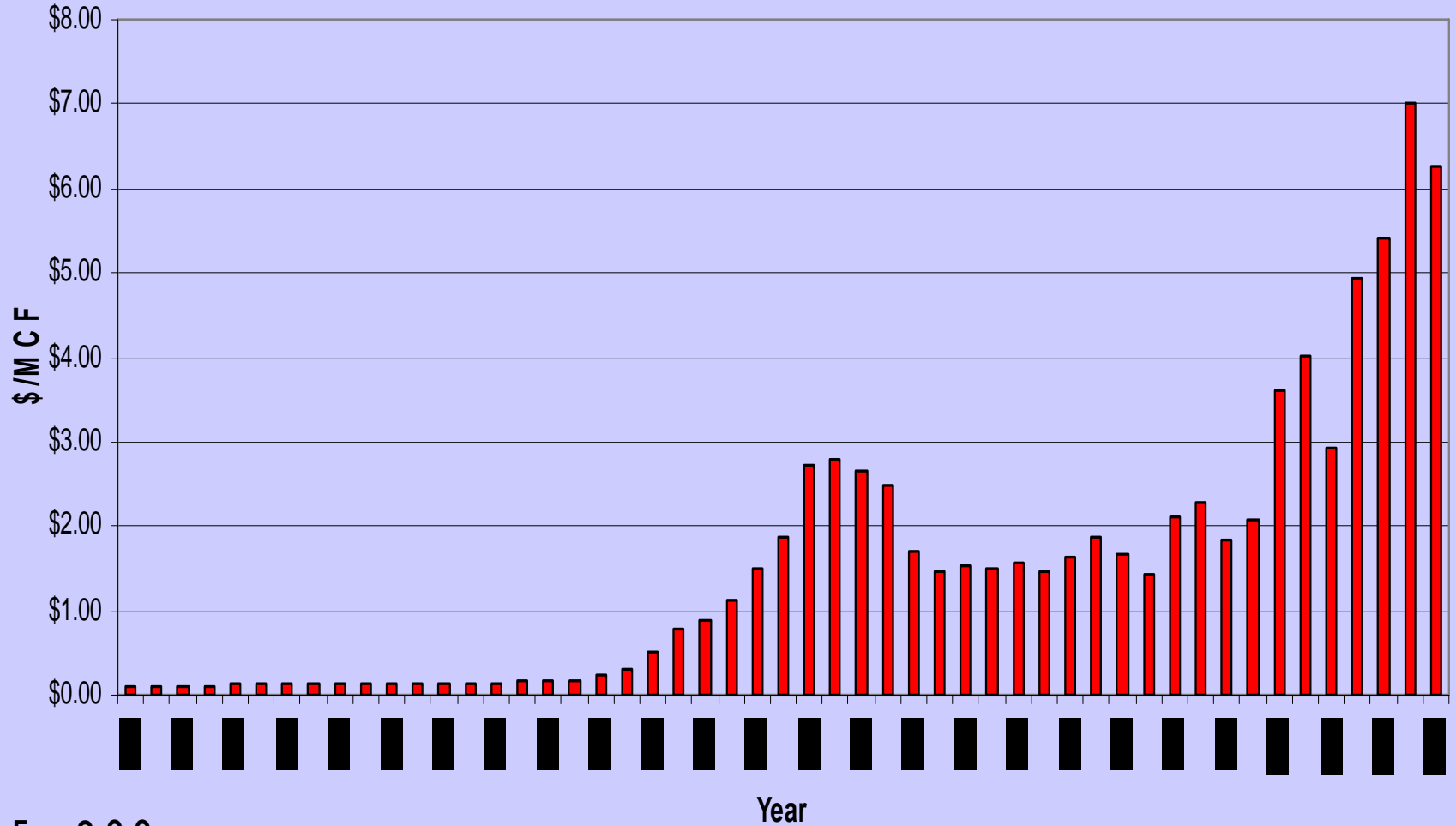


The Global Outlook (Natural Gas)



Average Oklahoma Wellhead Natural Gas Price

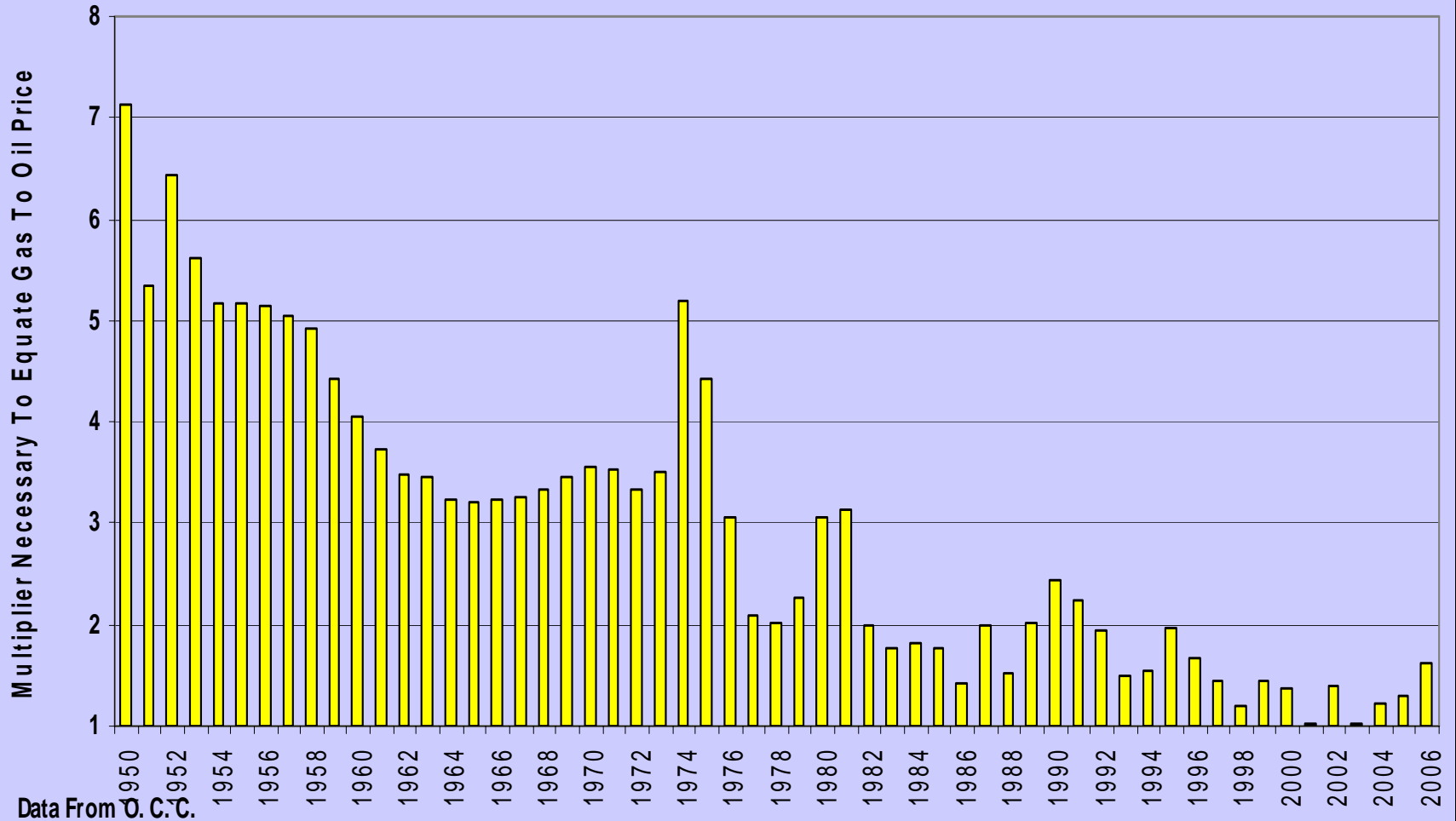
Not Inflation Adjusted



From O. C. C.

Oklahoma Gas Price Undervaluation Relative To Oil

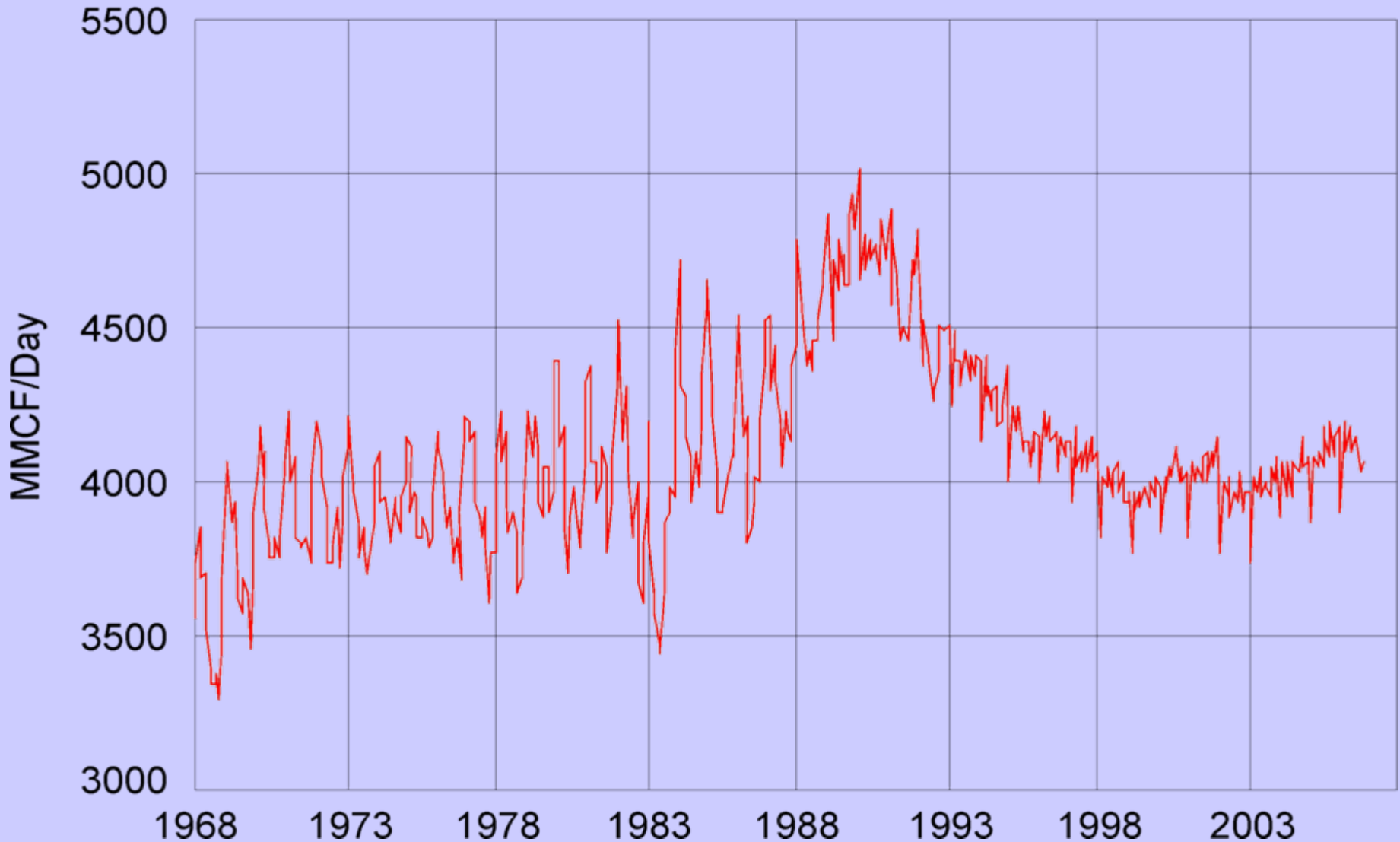
(6 MCF/ Barrel)



Data From O. C. C.

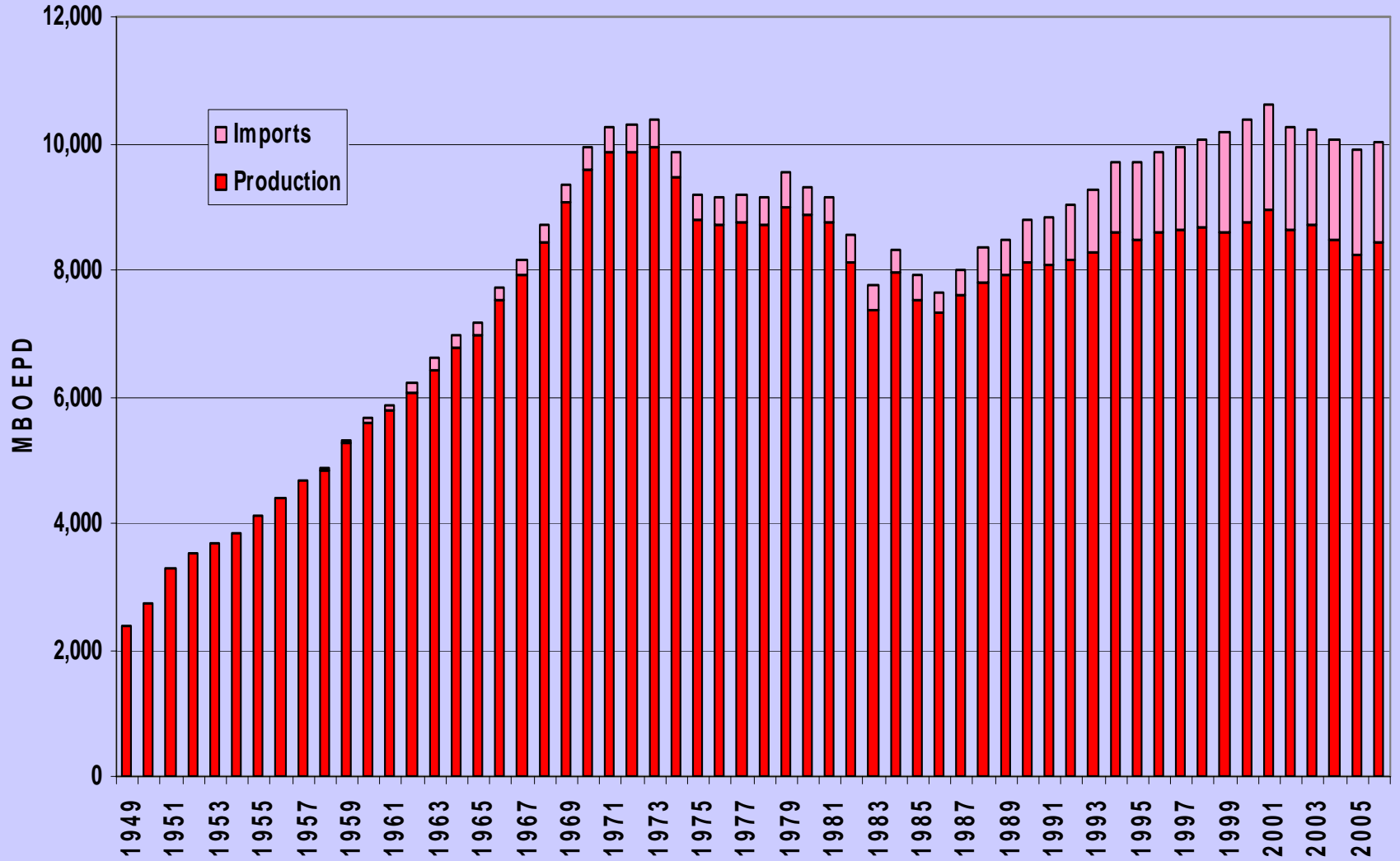
Oklahoma Natural Gas Production

(From IHS Energy - Gas Wells Only)

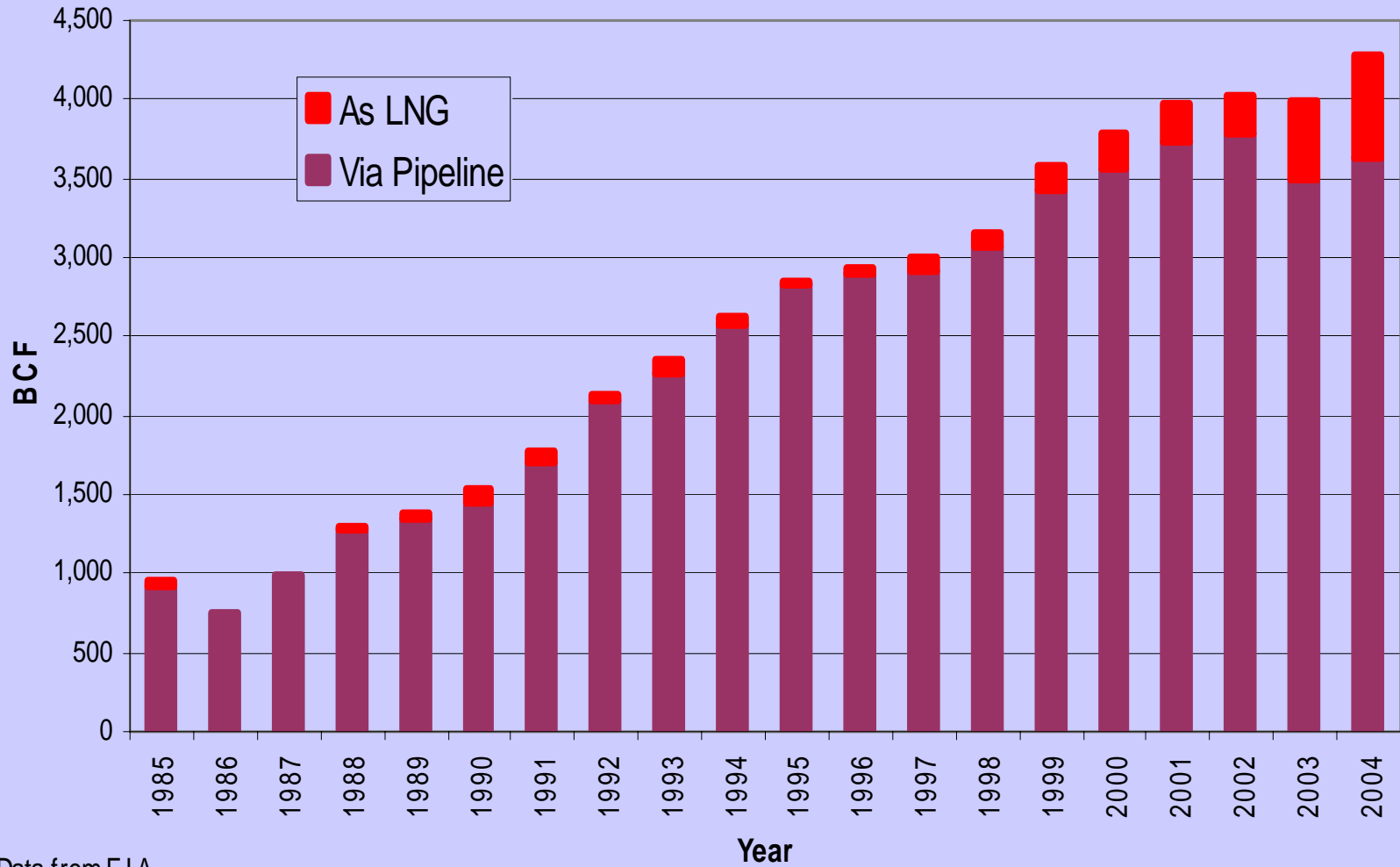


U.S. Natural Gas Production - Imports

(Data From E.I.A.)

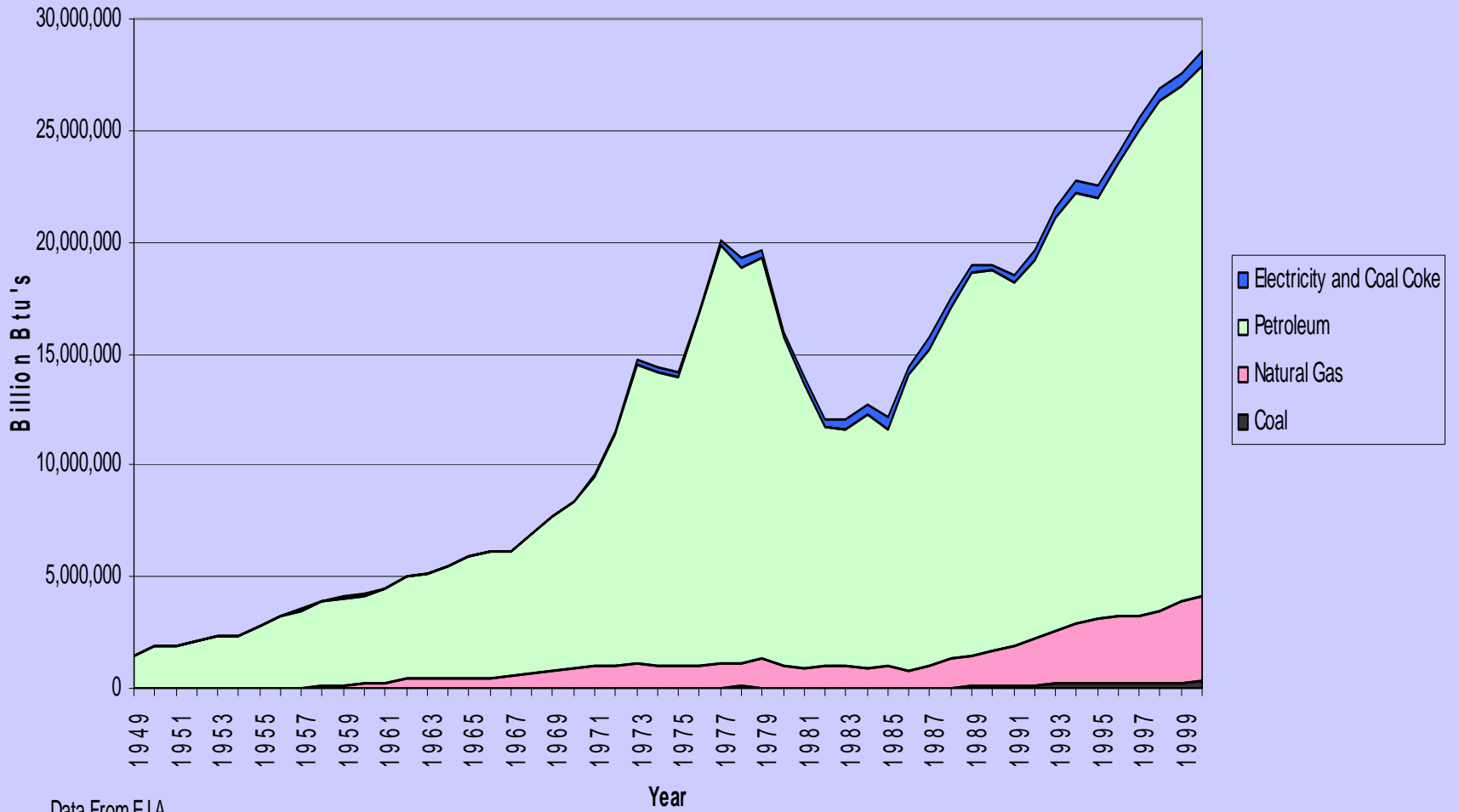


U.S. Natural Gas Imports



Data from E.I.A.

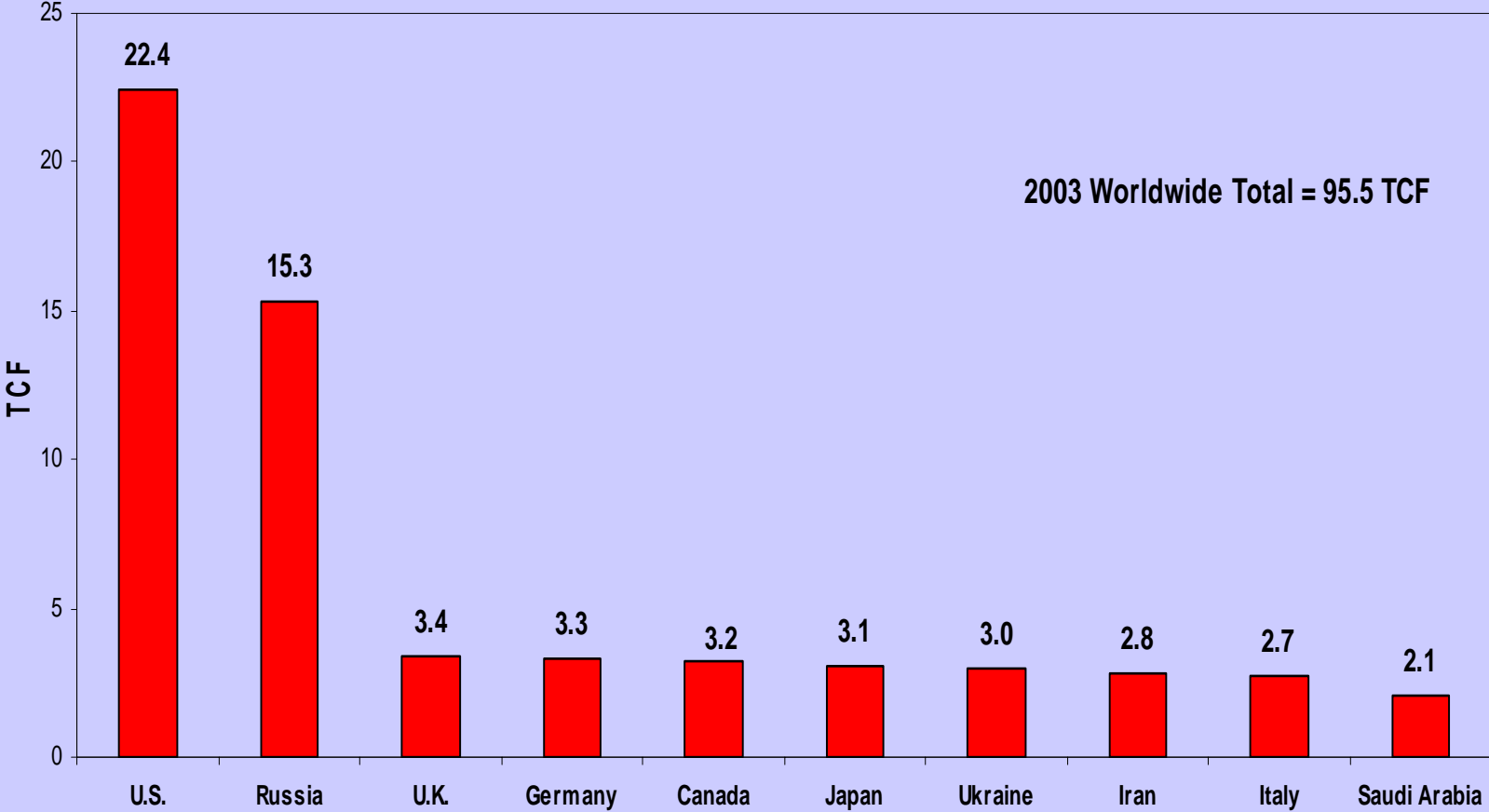
United States Energy Imports



Data From E.I.A.

Major Natural Gas Consuming Nations

(> 2 TCF)

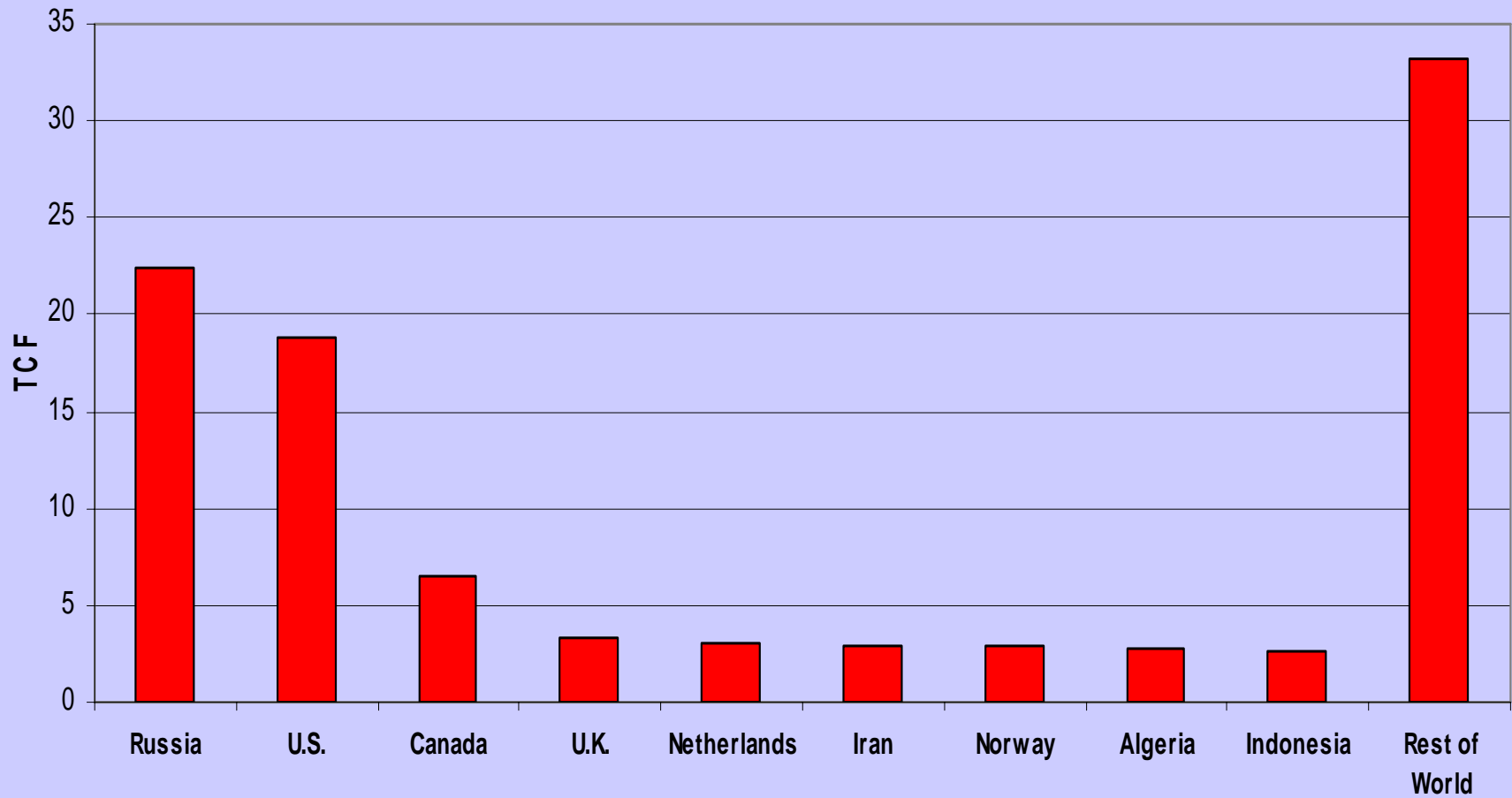


Data From E.I.A.

Major* Gas Producing Countries

(2004 Data from E.I.A.)

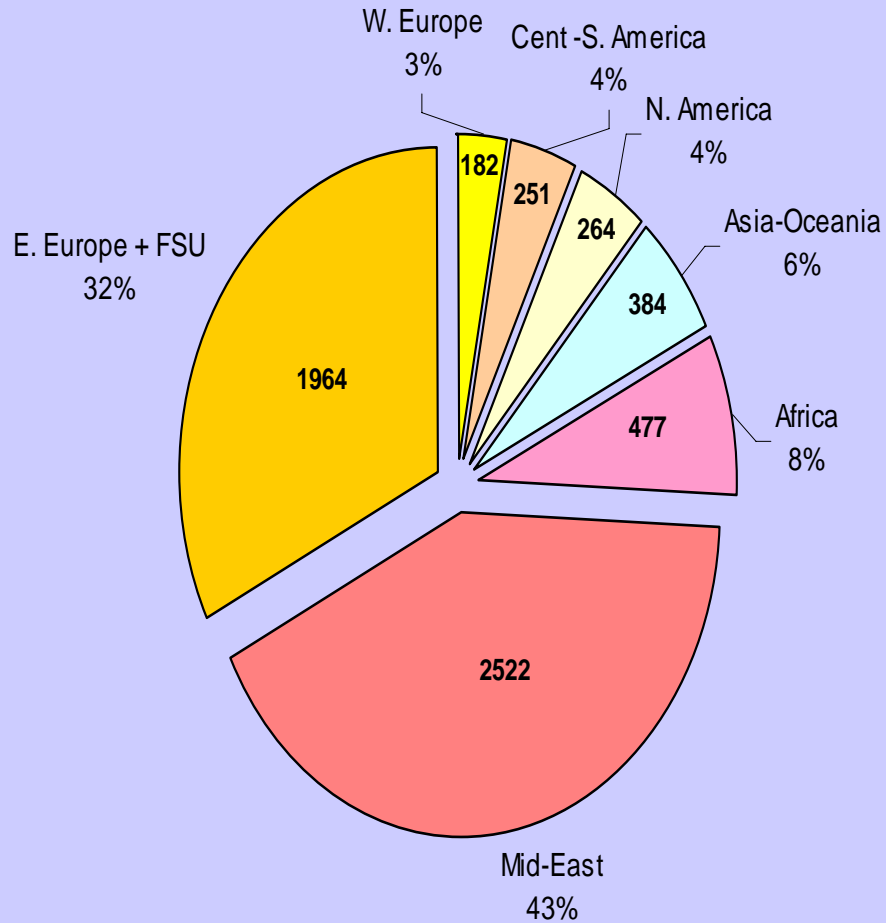
Global Consumption: 98.62 TCF



* -> 2.5 TCF

Proved World Natural Gas Reserves

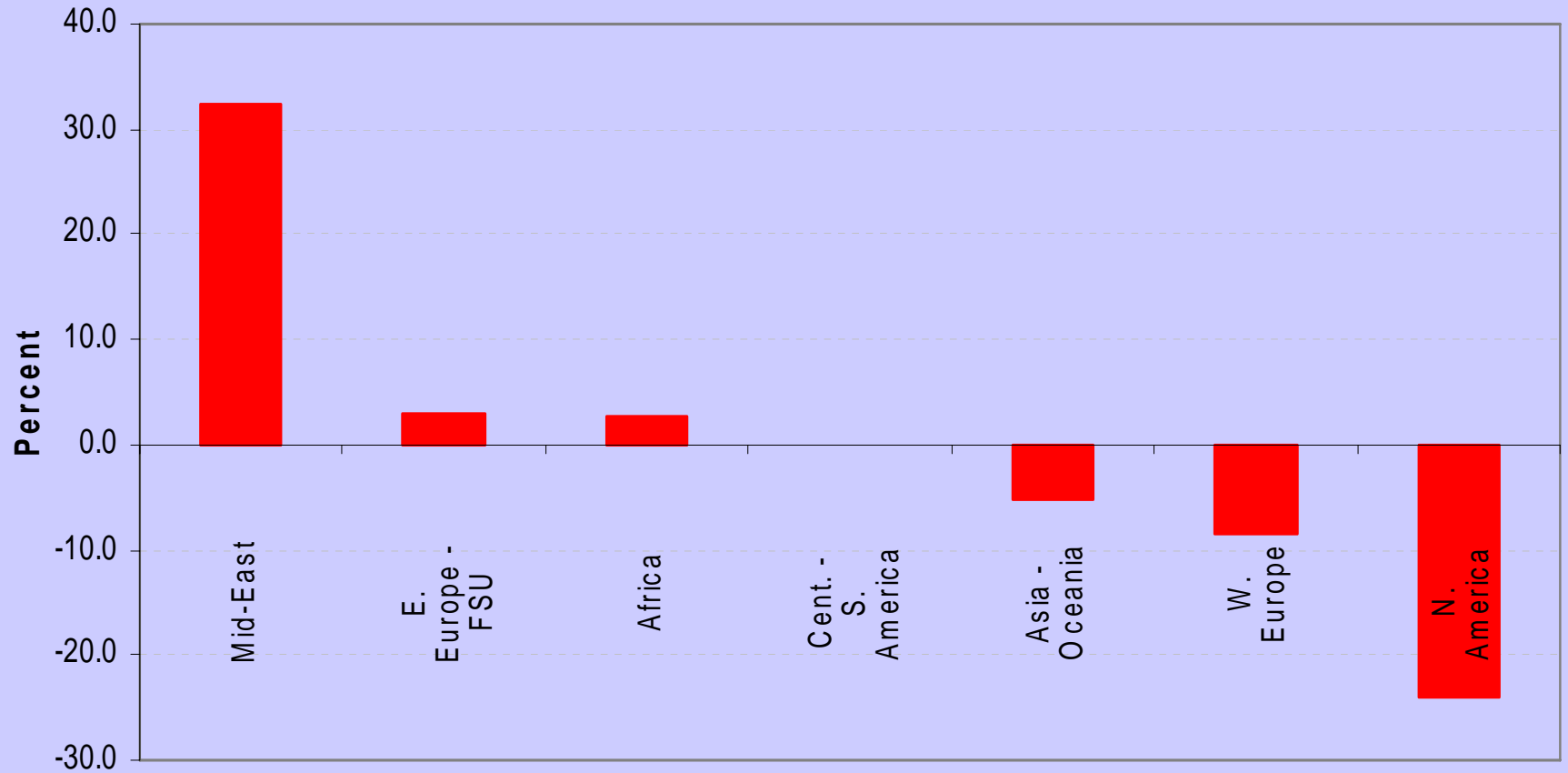
(Data from Oil and Gas Journal)



Total = 6040 TCF
Estimate for Jan. 1, 2005

Gas Reserves Percentage Less Production Percentage By World Region

(1-1-2005 Reserves - 2003 Production)



Data From E.I.A.

L.N.G.



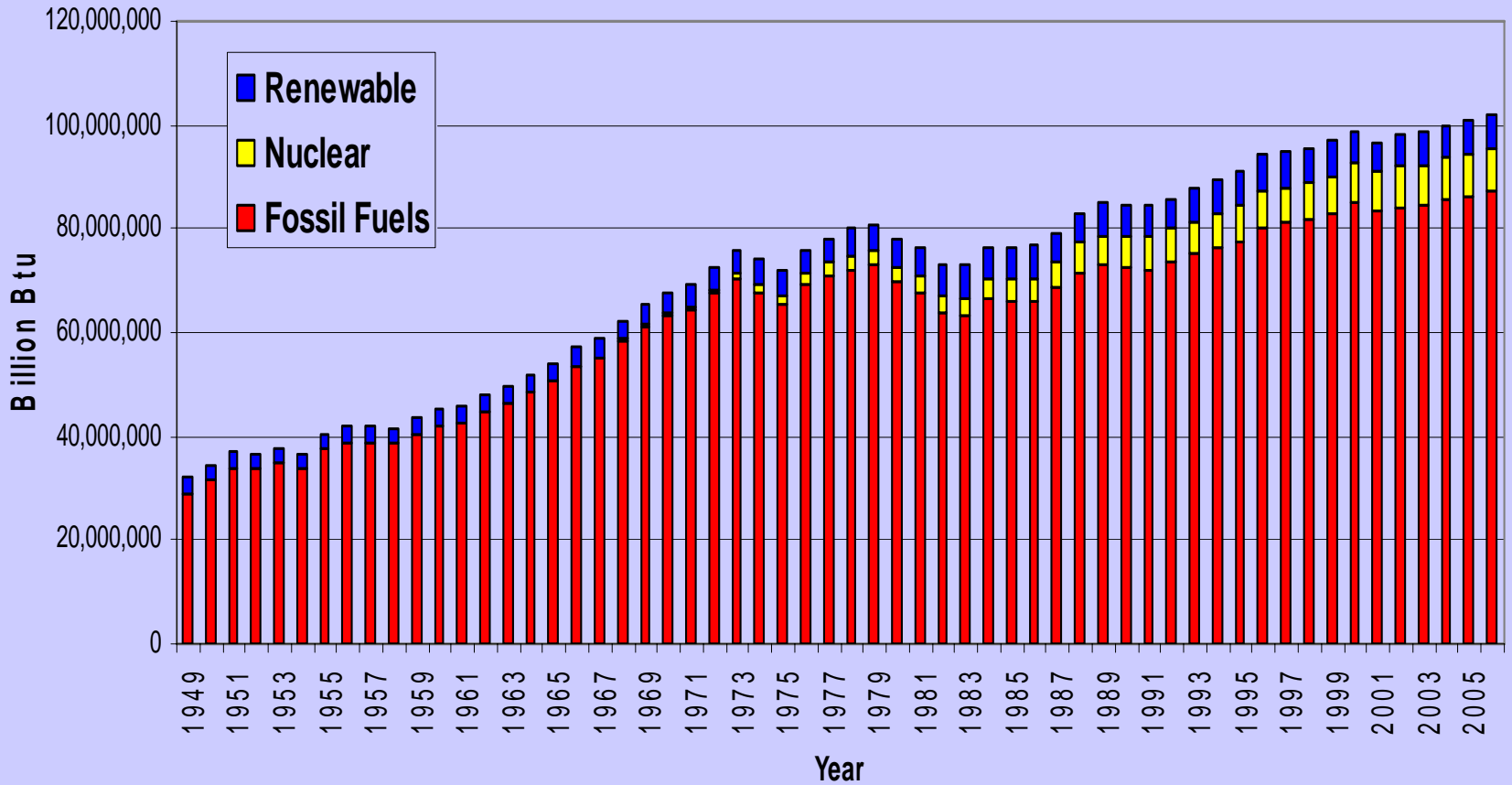
Bontang LNG Facility (East Kalimantan, Indonesia)

The Energy Future



U.S. Energy Consumption

(Data From E.I.A.)



Into the Future



Fossil-Fuels

- **Coal**
- **Oil**
 - **Tar Sands**
 - **Oil Shales**
 - **Enhanced Recovery**
- **Natural Gas**
 - **Gas Shales**
 - **Tight Gas (Sandstones)**
 - **CBM (Coalbed Methane)**
 - **LNG (Liquefied Natural Gas)**
 - **GTL (Gas To Liquids)**
 - **Hydrates**
- **Technology**
 - **Horizontal / Deep Water Drilling**
 - **Improved Seismic Imaging**
 - **Enhanced Recovery Techniques**

Non-Fossil Fuels

- **Wood, Etc**
- **Nuclear**
- **Hydroelectricity**
- **Biofuels**
- **Solar**
- **Wind**
- **Future Technologies**

Conclusions

- **Oil**
 - **Global Supply and Demand**
 - **Political Volatility and Price Implications**
 - **Economic Implications**

- **Natural Gas**
 - **Primary Oil Substitute**
 - **LNG Infrastructure**
 - **Long-Term Prices**

- **Be Careful What You Wish For.....**

Acknowledgements

IHS Energy Group

**U.S. Department of Energy
(E.I.A.)**

**Oklahoma Corporation
Commission**

**Oklahoma Tax
Commission**

**International Oil Scouts
Association**

Oil and Gas Journal

