

# Making Sense of Oil Prices

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# Agenda

- Introduction
- Importance Of Oil
- Historical Perspective
- Future/Implications



# Seeta Resources

- Accelerated Business Growth
- Swift Turnaround
- Oil & Gas Industry
- Engineering & Manufacturing
- Software & IT Services

# Business Growth

- Four Cs

- Customers
- Competition
- Company
- Climate

- Four Execution Levers

- Market Activity
- Market Share
- New Products
- Pricing

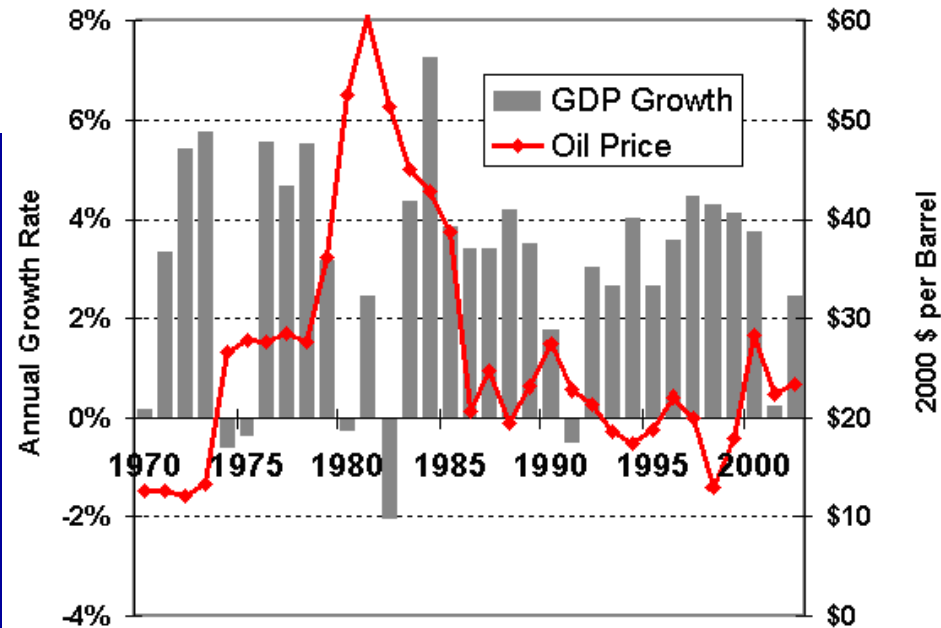
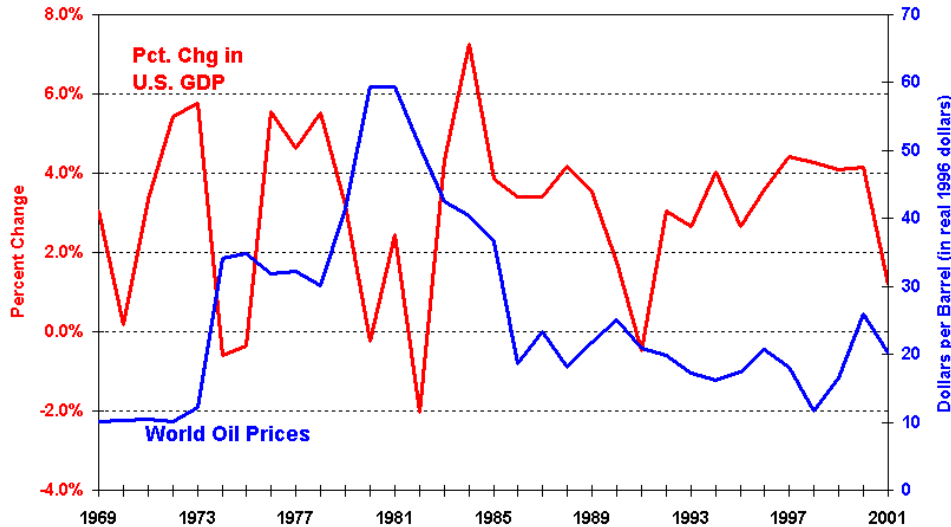


# Oil & Gas: Vital & Ubiquitous

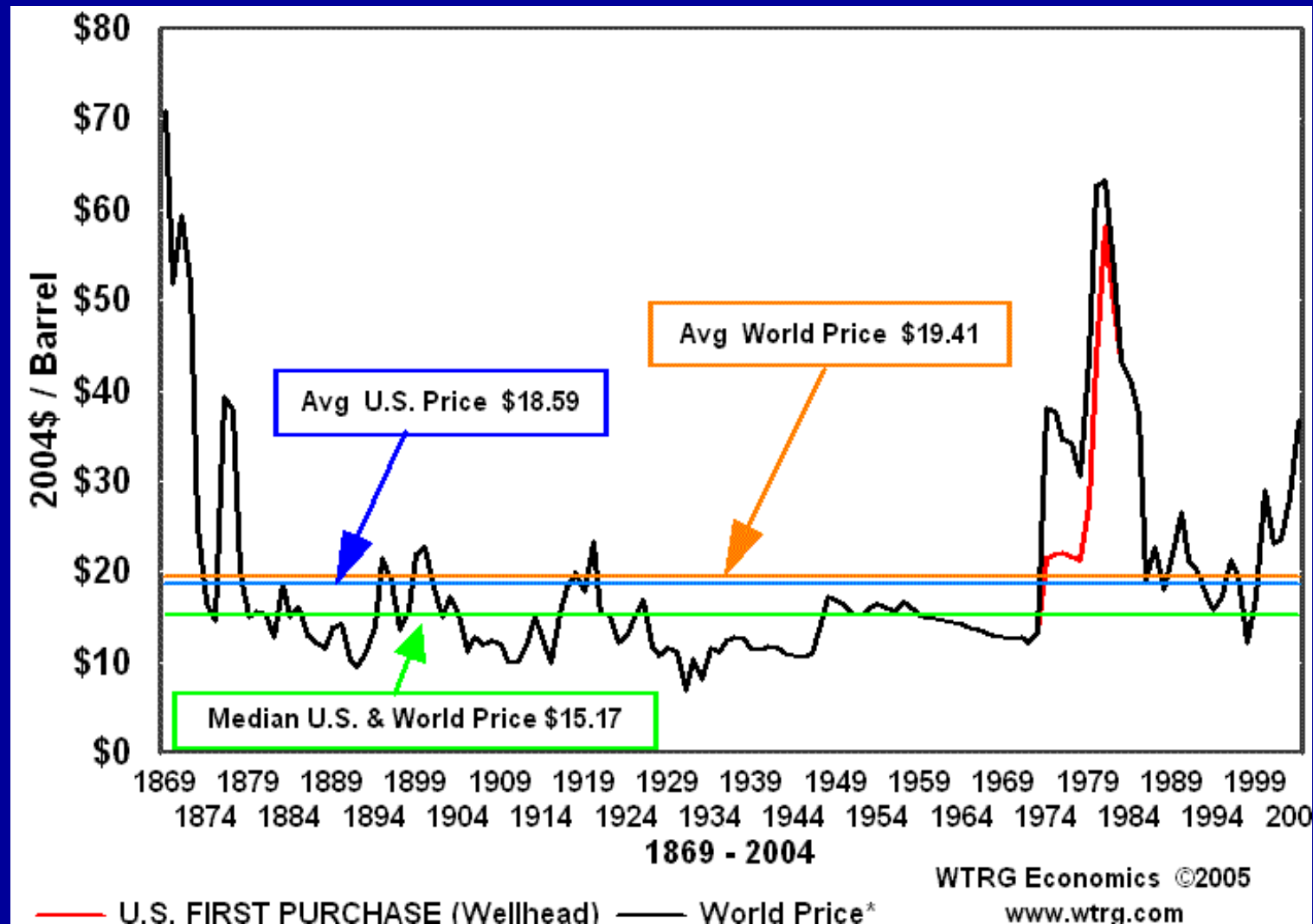
- Approximately 10 calories of fossil fuels are required to produce every 1 calorie of food eaten in the US
- Energy used in producing ten computers is enough to produce an automobile
- Modern homes, transportation, medicine, communications, water distribution, and defense are entirely powered by oil & gas
- Almost all work is done with energy driven by fuel, from oil and natural gas

# Growth Depends on Oil Prices

World Oil Prices and U.S. GDP: An Inverse Relationship



# Since 1869, Average Prices Have Been Less Than \$20/BBL



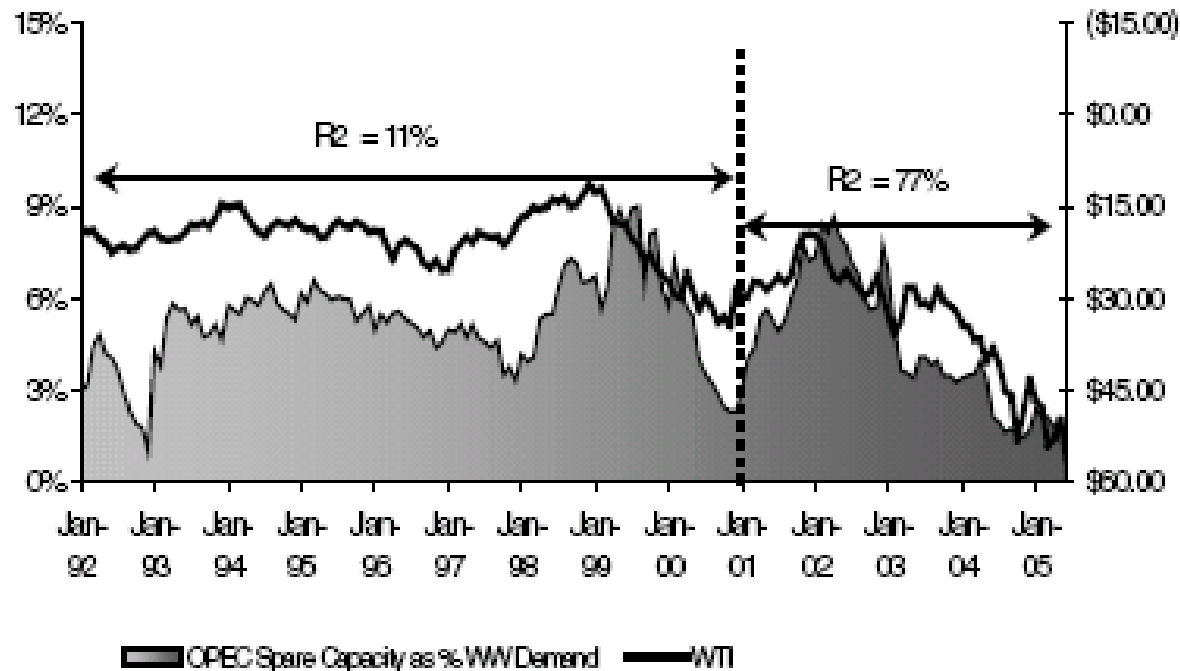
# Gasoline Pump Price: Annual Average 1919-2006



Short-Term Energy Outlook, October 2005, DOE/EIA



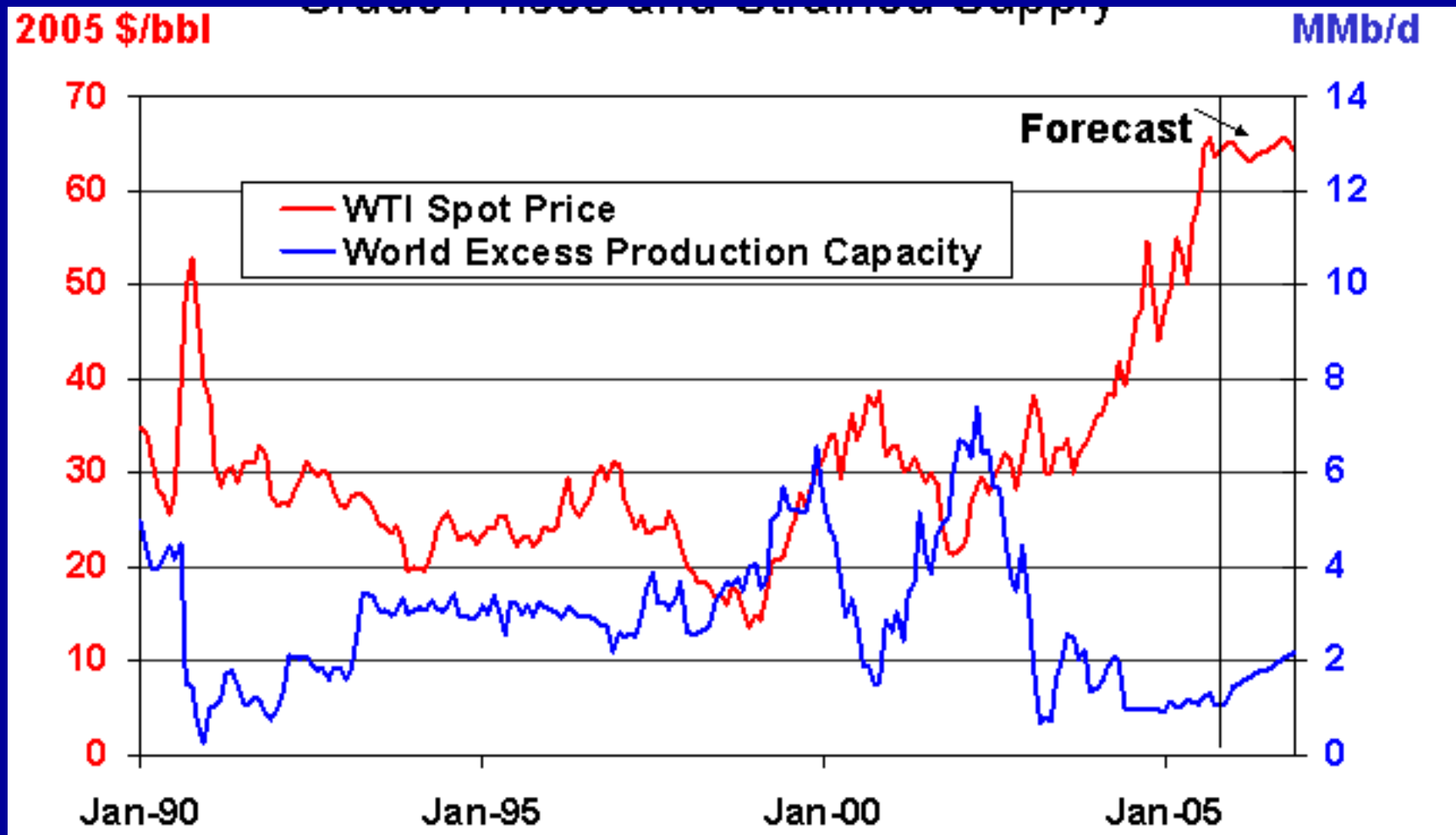
# What is Creating the Oil Price Spike? No Spare Capacity!



Source: IEA, Citigroup Investment Research; OPEC spare capacity as % Demand versus WTI Oil Price

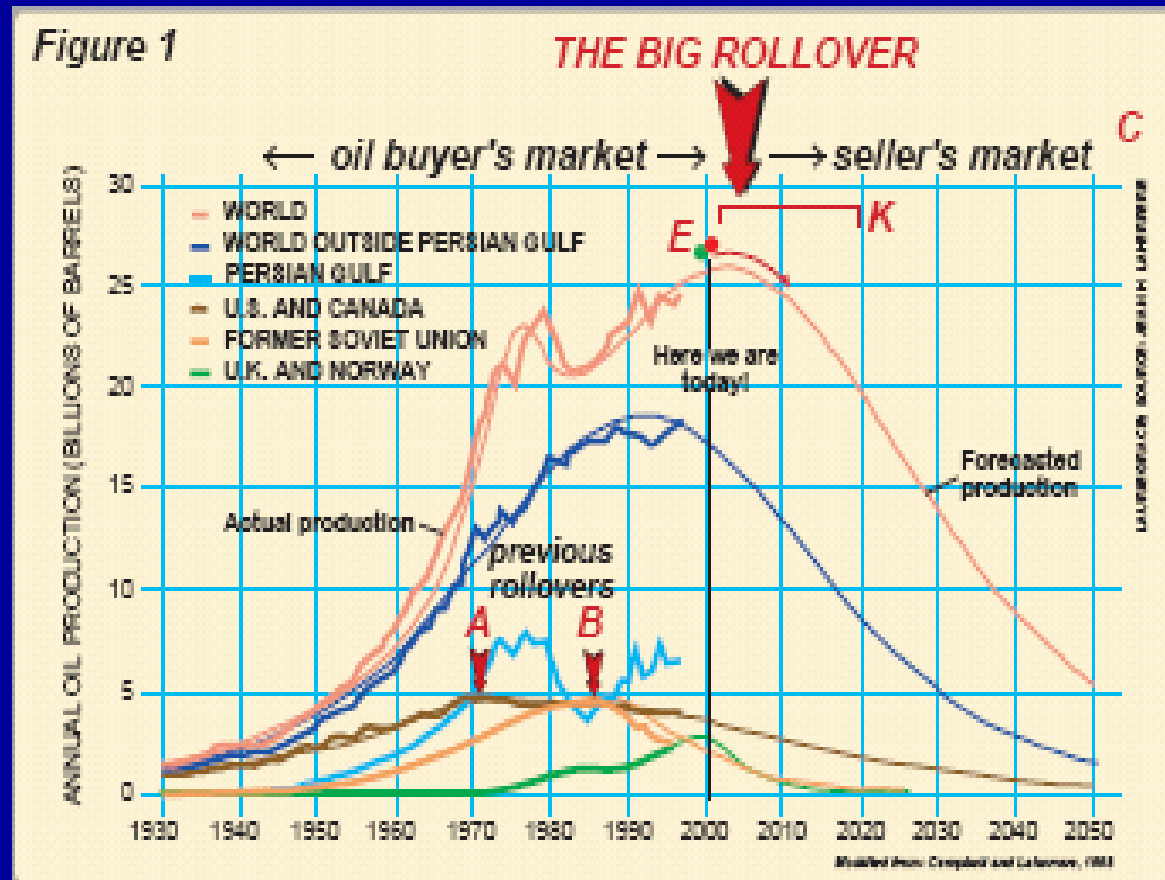
- In the 1970s a shortfall of 5% quadrupled oil prices
- 5% shortage in natural gas increased California gas prices by more than 400%

# Spare Capacity & Oil Prices



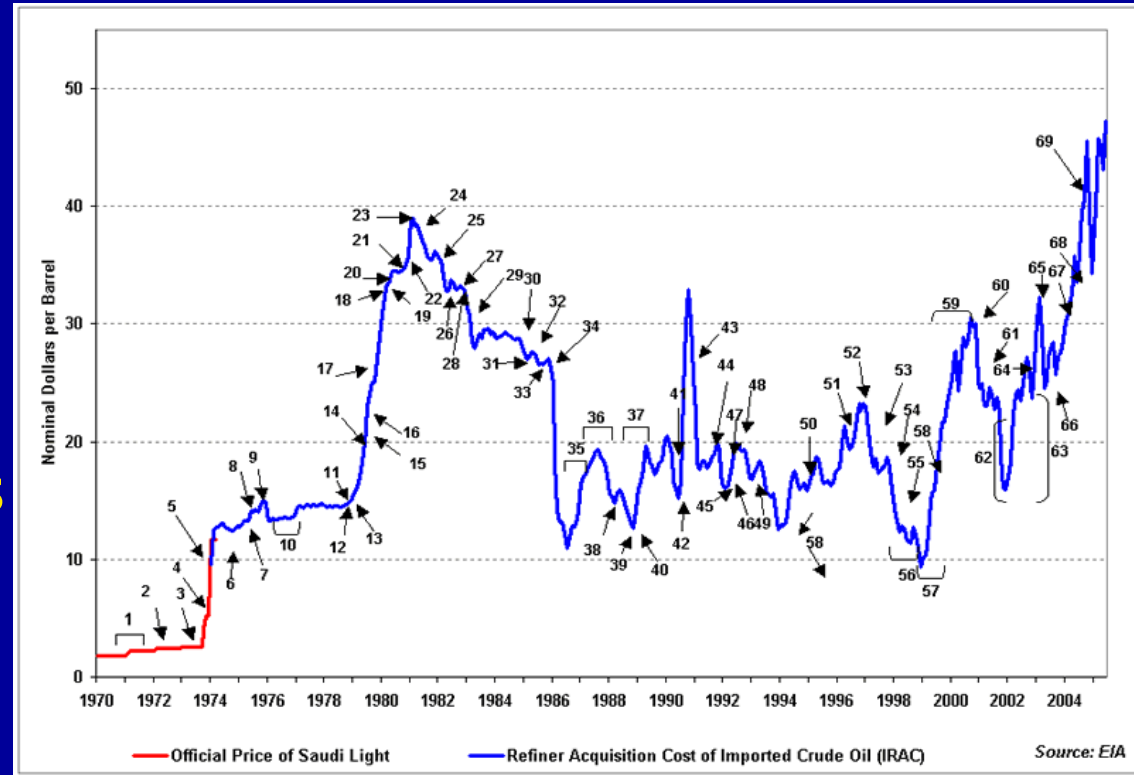
# The Specter of Peak Oil!

- M. King Hubbert, Shell Geologist, accurately predicted in 1956 that U.S. oil production would peak in about 1970 and decline thereafter
- We are consuming 6 barrels of oil for every 1 we find!
- We are close to a global peak – 2000 to 2020



# Skittish Commodity

- Peak Capacity
  - Oil and gas production
  - Processing oil & gas
  - Transportation, pipelines, tankers
  - Drilling rigs
  - Refinery capacity
  - People



# Katrina & Rita: The 9/11 Of The Oil & Gas Industry

## DOUBLE TROUBLE ON REFINERY ROW

Even before Katrina hit last month, tight oil supplies and growing global demand for fuel had Americans paying premium prices for regular gas. Preparing for Rita cost us an even larger chunk of our Gulf Coast capacity. A closer look at the toll of the two hurricanes.

### Refinement

Taken at their heights, Katrina and Rita shut down a combined 6 million barrels per day (bpd) of refinery capacity, or 35% of the U.S. total.

#### REFINERY KEY:

- ▲ Closed due to Rita
- ▲ Closed due to Katrina
- ▲ Closed but reopened after Katrina
- ▲ Never closed

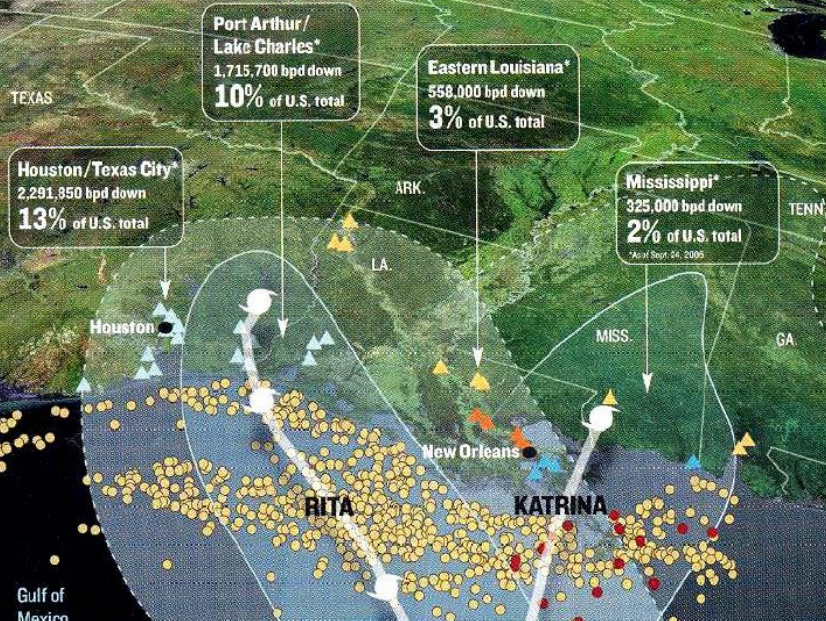
### Production

Rita halted 99% of all gulf production; Katrina damages shown on map.

#### OIL-RIG KEY:

- Evacuated
- Damaged\*

\*RITA'S RIG DAMAGE AS YET UNKNOWN. NOTE: OFFICIALS PLAN TO BEGIN BRINGING BACK REFINERIES CLOSED FOR RITA THIS WEEK.



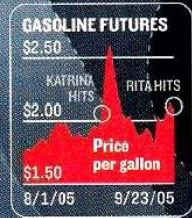
### Paying at the Pump

After Katrina, gas retail prices surged to \$3.50; the ravages of Rita could burden consumers further.

**23 million** barrels of oil are produced and refined in the U.S. daily

➔ **3.3 million** bpd of oil production and refinement halted for Katrina

➔ **5.4 million** bpd of oil production and refinement halted for Rita



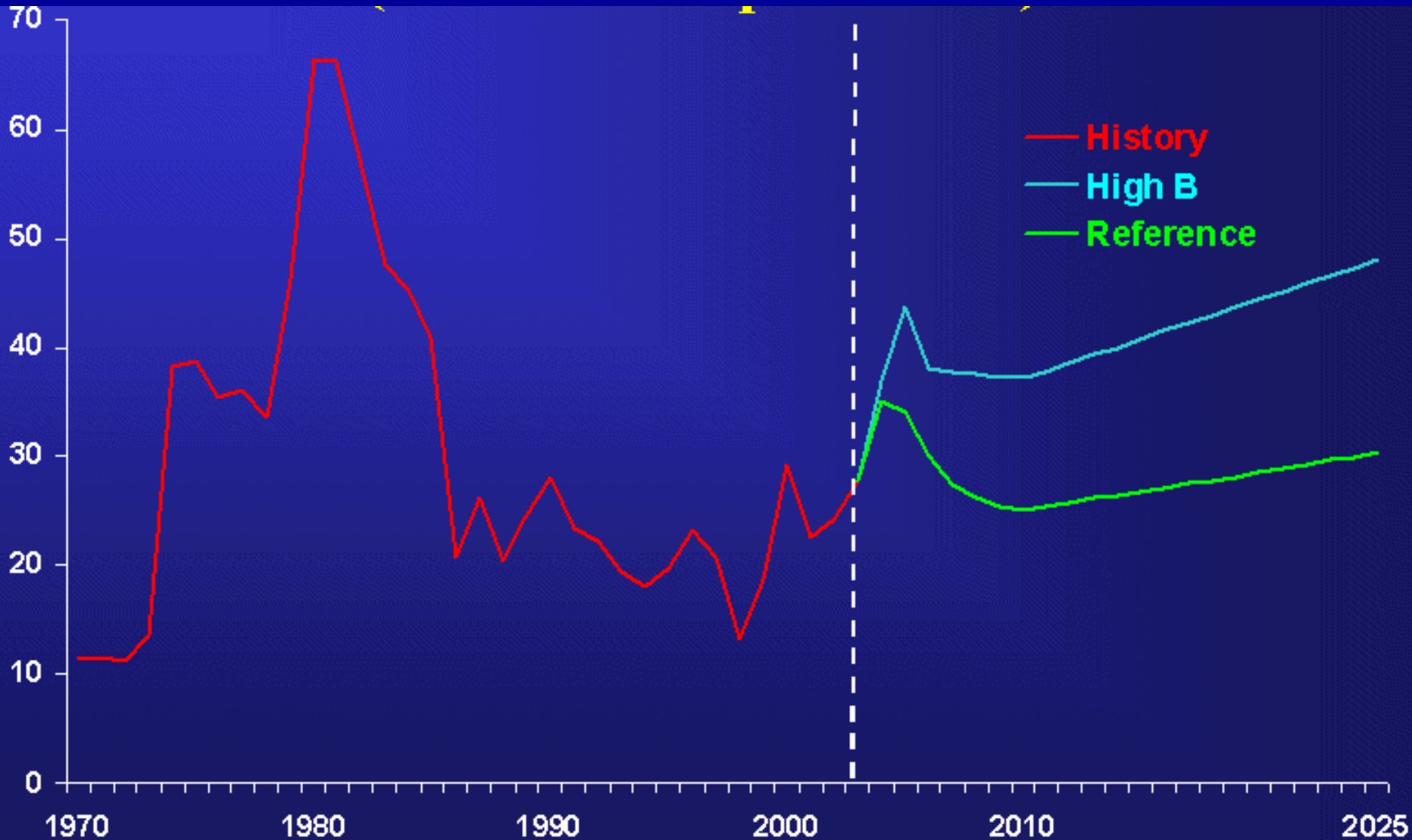
Newsweek, October 3, 2005

# Crude Oil Prices - Forecast



Short-Term Energy Outlook, October 2005 ,DOE/ EIA

# A Closer Look (2003\$)



# Impact of Higher Oil Prices

- Misconception: Higher oil prices caused double-digit inflation in the 1970s
- Reality: High oil prices didn't cause the 1970s' double-digit inflation; they simply made it slightly worse
- Inflation peaks: 12.3 percent for 1974; 13.3 percent for 1979
- Without energy effect: 11.7 percent (1974) and 11.1 percent (1979)



# Signs Of An Inflation Breakout?

- Right Ingredients:
  - A big jump in oil prices; an increase in the price of Gold; low unemployment rate (5.1 percent in September, despite Katrina) that could push up wages
- But:
  - Energy costs still make up a relatively small portion of the “average” U.S. household’s budget
  - American businesses and consumers are using that energy more efficiently than they did 30 years ago
- Dangers will emerge from elsewhere!

# It's a Global Economy, Stupid!

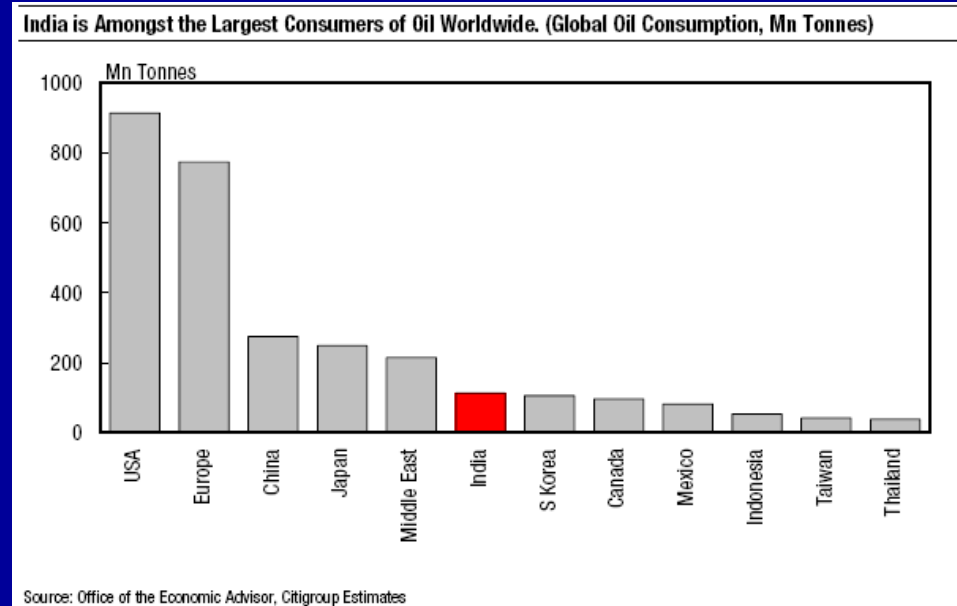
Table 16. Projected growth in world gross domestic product, oil consumption, and oil intensity in the AEO2005 reference case, 2003-2025

Country/region	Real GDP			Oil consumption			Oil intensity		
	Percent of world GDP		Annual growth, 2003-2025 (percent)	Percent of world oil use		Annual growth, 2003-2025 (percent)	Oil use (thousand Btu) per 1997 U.S. dollar of GDP		Annual growth, 2003-2025 (percent)
	2003	2025		2003	2025		2003	2025	
<b>Industrialized countries</b>									
United States	29.3	29.3	3.1	25.6	23.6	1.5	4.0	2.9	-1.5
Canada	2.3	2.2	2.7	2.7	2.3	1.2	5.3	3.8	-1.5
Mexico	1.4	1.7	4.1	2.5	2.9	2.5	8.3	5.9	-1.5
Western Europe	28.6	23.3	2.1	17.9	13.0	0.5	2.9	2.0	-1.7
Japan	13.4	9.9	1.7	7.0	4.8	0.2	2.4	1.7	-1.5
Australia/New Zealand	1.7	1.7	3.0	1.3	1.4	2.2	3.5	3.0	-0.7
<b>Total</b>	<b>76.8</b>	<b>68.2</b>	<b>2.5</b>	<b>57.0</b>	<b>48.1</b>	<b>1.1</b>	<b>3.4</b>	<b>2.5</b>	<b>-1.4</b>
<b>Former Soviet Union and Eastern Europe</b>									
Former Soviet Union	2.1	2.6	4.1	5.2	5.4	2.0	11.5	7.3	-2.0
Eastern Europe	1.2	1.5	4.0	1.8	1.7	1.8	6.7	4.2	-2.1
<b>Total</b>	<b>3.3</b>	<b>4.1</b>	<b>4.1</b>	<b>7.0</b>	<b>7.1</b>	<b>1.9</b>	<b>9.7</b>	<b>6.2</b>	<b>-2.0</b>
<b>Developing Countries</b>									
China	4.1	7.5	5.9	7.0	10.6	3.9	7.7	5.0	-1.9
India	1.7	2.7	5.2	2.8	4.4	4.1	7.4	5.9	-1.1
South Korea	1.8	2.3	4.2	2.7	2.4	1.4	6.9	3.8	-2.7
Other Asia	4.0	5.3	4.4	7.2	8.8	2.9	8.3	6.0	-1.5
Middle East	1.9	2.1	3.7	7.0	7.5	2.2	17.3	12.7	-1.4
Africa	2.0	2.4	4.1	3.4	3.9	2.5	7.9	5.7	-1.5
South/Central America	4.5	5.5	4.1	5.9	7.1	2.8	6.0	4.6	-1.2
<b>Total</b>	<b>19.9</b>	<b>27.8</b>	<b>4.7</b>	<b>36.0</b>	<b>44.8</b>	<b>2.9</b>	<b>8.3</b>	<b>5.7</b>	<b>-1.7</b>
<b>Total World</b>	<b>100.0</b>	<b>100.0</b>	<b>3.1</b>	<b>100.0</b>	<b>100.0</b>	<b>1.9</b>	<b>4.6</b>	<b>3.5</b>	<b>-1.2</b>

AEO2005 National Energy Modeling System, run AEO2005.D102004A. Other countries: Energy Information Administration, International Energy Outlook 2004, DOE/EIA-0484(2004) (Washington, DC, April 2004).

# Impact on the Indian Economy

- India imports over 70% of its crude oil requirements
- \$10/bbl increase in oil prices could shave off 0.4% from headline GDP growth
- Losses from oil companies could act as a drag on government finances
- Every \$1/bbl increase in oil prices will increase India's import bill by around \$700 Million
- Every \$1/bbl increase in oil prices and pressures of a coalition government, has the potential to raise inflation by 0.80%



**INDIA'S SHORT-TERM SAVIOR**  
**\$140 BILLION FOREX RESERVE**

# Implications

- A catalyst for inflation & recession
- Recent concepts – Globalization, JIT, Lean Manufacturing – under attack
- An oil & gas shortage of 10-15 percent can shatter the global economy
- War
- Unless...

# Ring Out The "Oil Age"

- Ring In The "Renewable Energy" Era, for Electricity
- Invest In Responsible/Efficient Use of Oil & Gas: Transportation, Petrochemicals & Heating
- Use Nuclear Power During Transition
  - Tar Sands and Oil Shales are too expensive and unfriendly/toxic to environment

# In the Meantime...

- Focus on conservation and efficiency
- Don't reinvent the wheel; emulate frugal energy consuming countries
- Entrepreneurial opportunities in alternative energy sources
- Positive for knowledge industry - need for improving productivity

THANK YOU!

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