

# The Impact of Super High Price on Northeast Asian Oil Equation and a Korea's Strategy

Presented by Dr. Joonbeom Lee  
Head of Research Team  
Korea National Oil Corporation  
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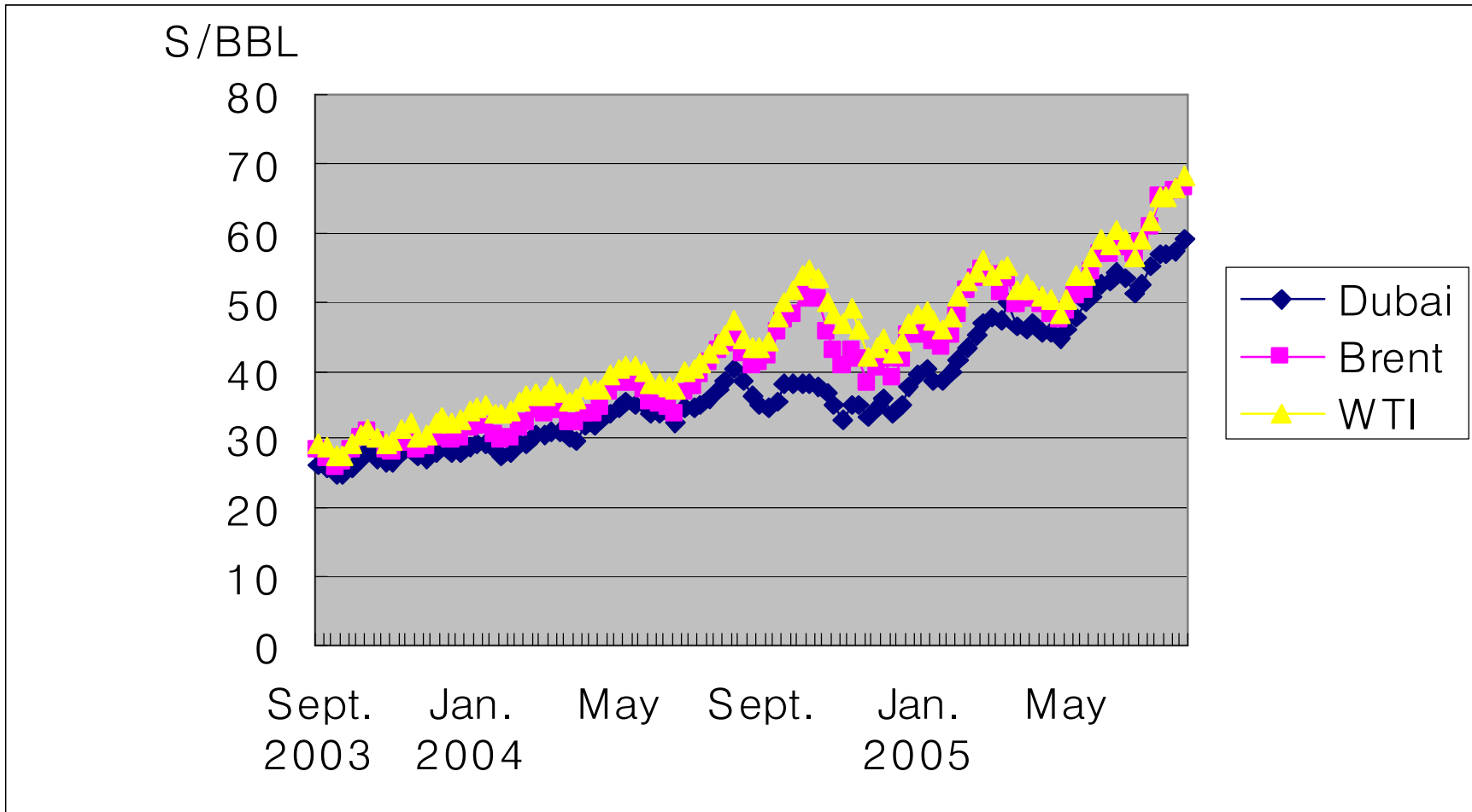


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# ◆ Weekly Oil Price Changes for Last 2 Yrs



# ◆ Price Forecast in the Last Year

	2003 AVG	2004 Forecast as of June 2004				
		1/4	2/4	3/4	4/4	AVG
Dubai	26.78	29.53	34.93	42.90	42.25	37.40
Brent	28.79	31.69	37.18	44.75	44.00	39.40
WTI	31.08	35.32	40.00	47.00	46.00	42.08



# ◆ Price Forecast of This Year

	2004 AVG	2005 as of August				
		1/4	2/4	3/4	4/4	AVG
Dubai	33.69	40.93	47.98	57.00	64.00	69.25
Brent	38.26	47.65	51.63	64.00	71.00	75.25
WTI	41.49	49.88	53.08	65.00	72.00	76.75

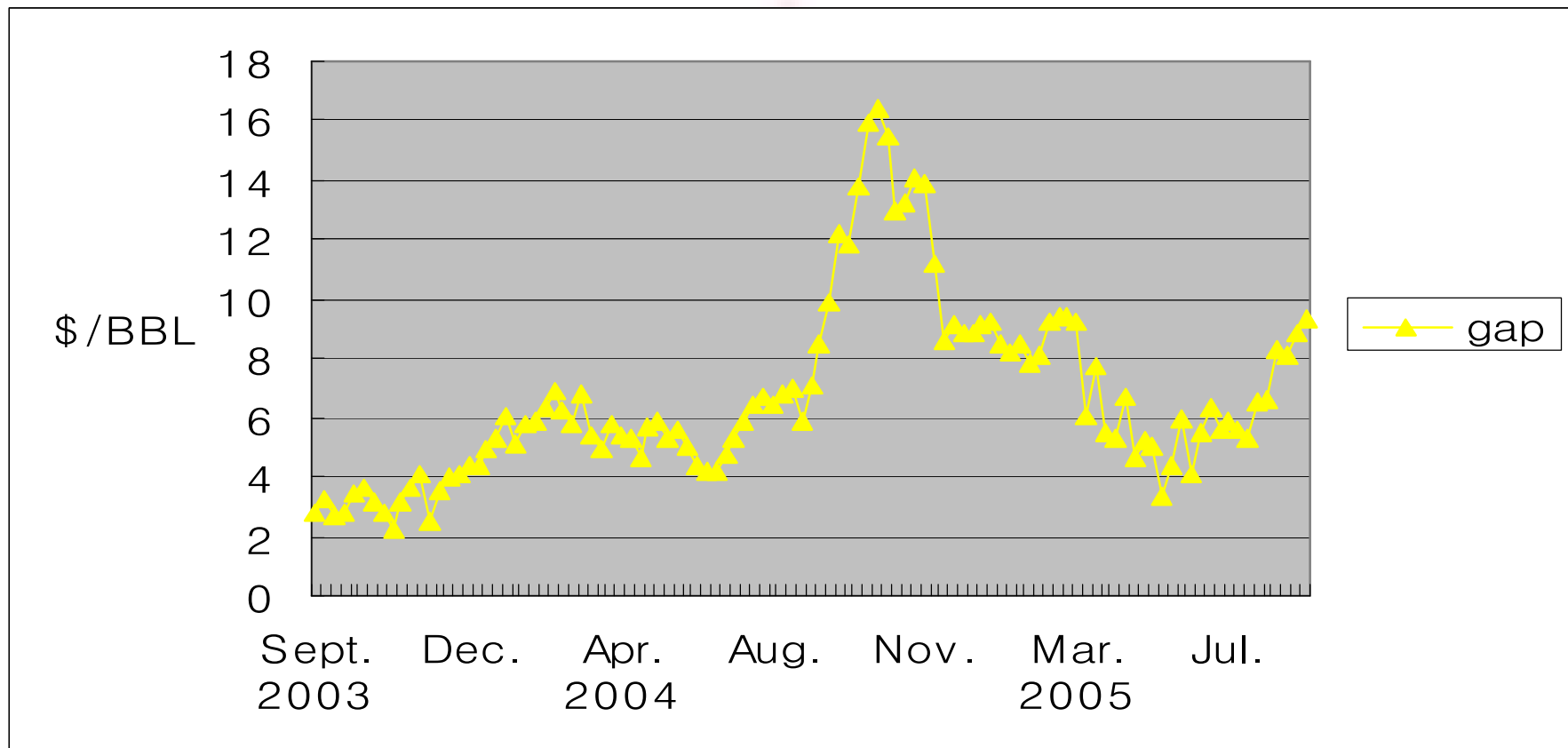


# ◆ Characteristics of the Oil Price Change

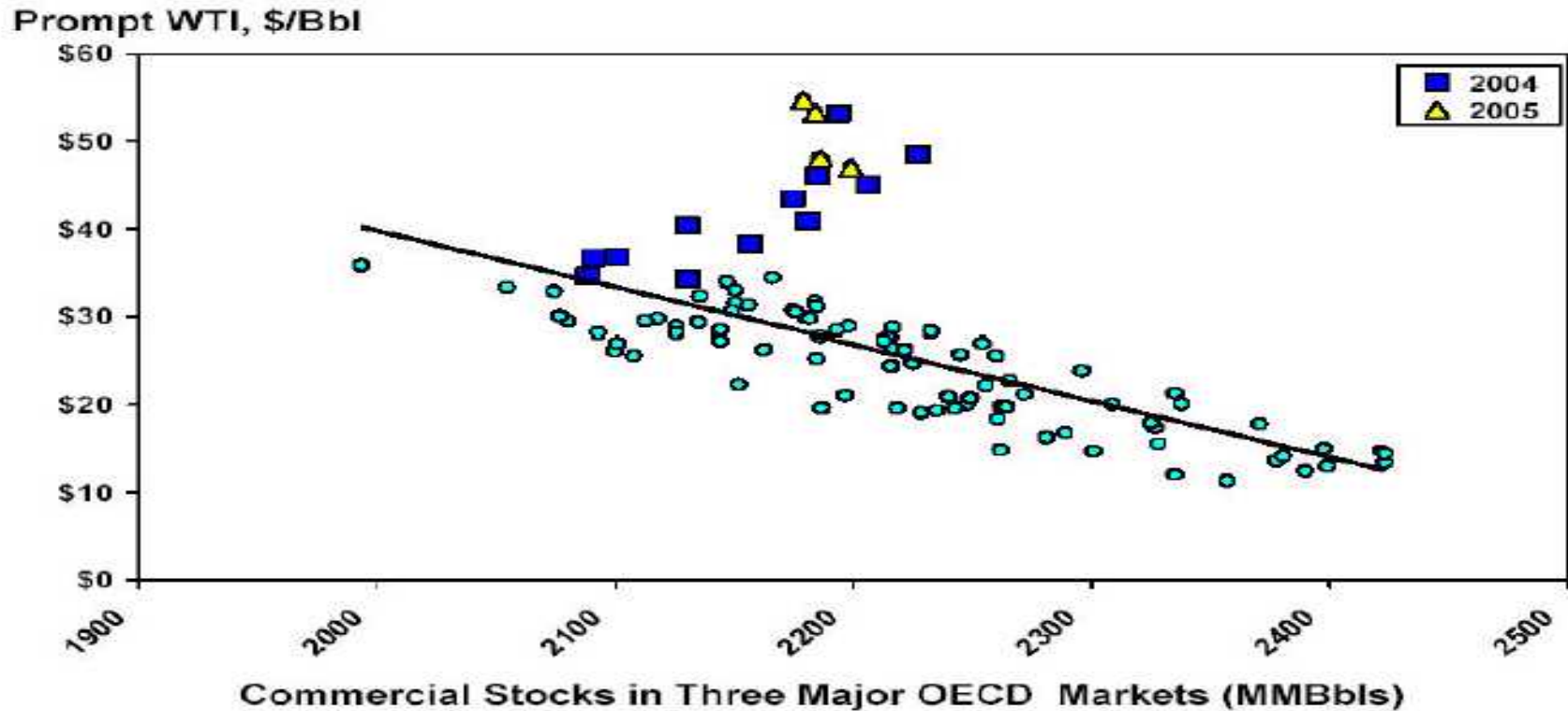
- (1) The continuous and linear increase since December 2003, when oil price based upon OPEC basket passed \$28/bbl which is the ceiling of OPEC's Oil Price Band Mechanism in the previous two years
- (2) The steady and long-term increase by more than double over the last two years, comparing to the last two oil price shocks such as 1973 oil supply disruption which increased the price just 6 months by 180 % and 1979 Iranian Islamic Revolution which pushed the price by 160% over the 17 months
- (3) The losing consistency of the key variables for explaining the oil price changes of the two years

# ◆ Unusual Features (1) ; Price Gap between Sweet and Sour crudes

## Spread between WTI/DUBAI



# ◆ Unusual Features (2) ; the role of oil inventory

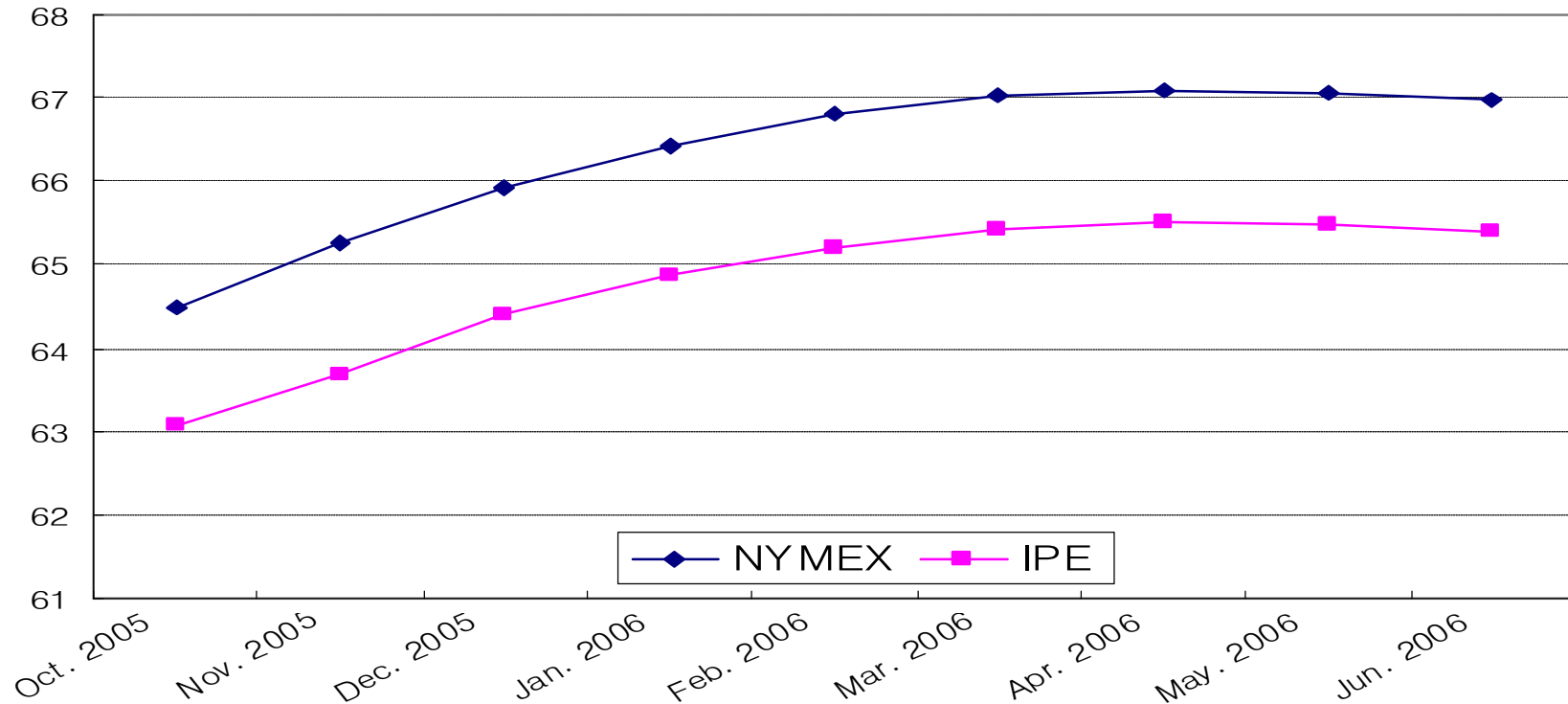


PIRA, Aug. 2005





# ◆ Unusual Feature (3) ; more contangoes



(Source) Reuters Sept. 8, 2005



## ◆ Possibilities of Structural Changes

- (1) The conventional explanatory variables such as inventory, weather, economic growth lost its power for explaining and forecasting oil price changes over the last two years.
- (2) Unusual features such as the widening gap between sweet and sour crude oil, much steeper of contango with its more frequent happenings, and unclear influence of oil stock on price are more common.
- (3) The characteristics of the recent price changes leads to a possibility of structural changes in oil industry as well as increasing uncertainty for oil price formation
- (4) This perspective is reinforced by adding new factors such as lack of OPEC excess production capacity and political instability in producing countries, which were rarely mention in the past.

# ◆ Impact of Super High Oil Price on Korean Economy

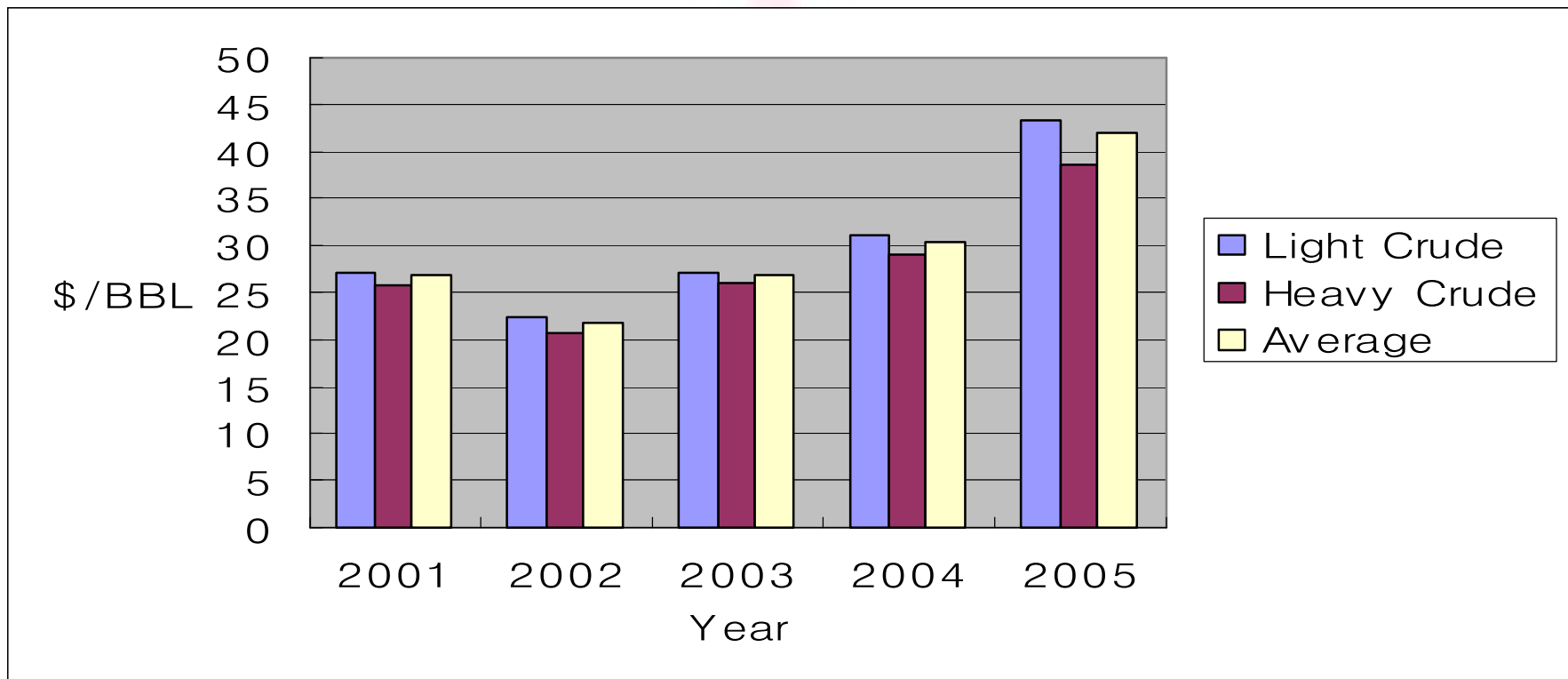
- In terms of real price, today's world oil price is just 77% of 1980 price and domestic product price like gasoline price is 63% of 1980 price.
- The expenditure of household on fuel declined from

## Changes in Oil Energy Supply Structure

	1979	2002
Oil in Total Energy Consumption	63%	49%
Oil in Power Generation	80%	7%



# ◆ The Impacts on Oil Equation in Northeast Asia (1); Korea's Increasing Import Price



(Source) KNOC



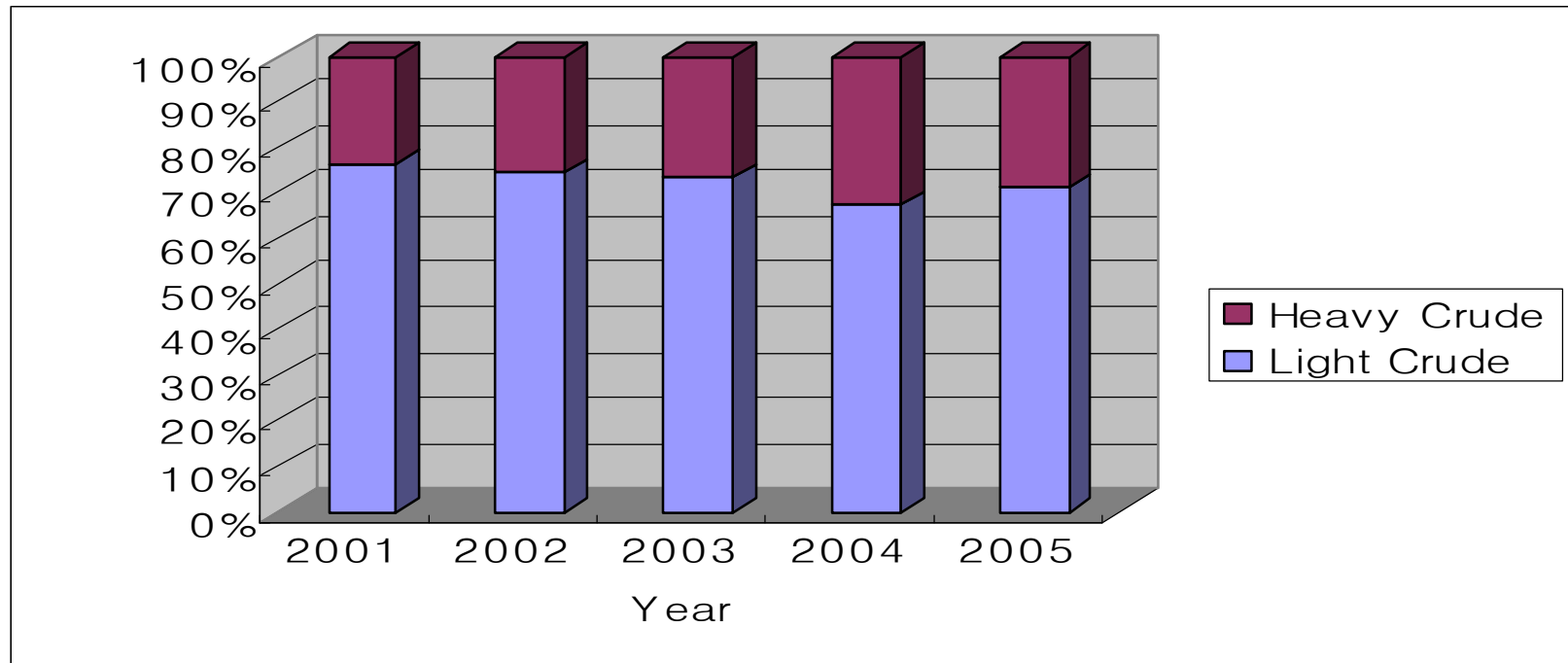
# ◆ The Impacts on Oil Equation in Northeast Asia (2); East Asia Premium

## A/L fob Price

	Europe	USA	Asia	Asia- Europe	Asia-USA
2001	20.81	18.27	23.10	2.28	4.83
2002	23.72	24.42	24.30	0.58	-0.13
2003	24.99	25.73	27.71	2.73	1.99
2004	33.13	35.04	34.56	1.44	-0.48
2005	45.88	44.63	44.16	-1.72	-0.47

(Source) PIW, 2005 price includes upto May

# ◆ The Impacts on Oil Equation in Northeast Asia (3); Light Crude Oil Import of Korea



(Source) KNOC



# ◆ The Impacts on Oil Equation in Northeast Asia (4); Light Products Export of Korea

	2000	2001	2002	2003	2004	2005
Volume (,000BBL)	131,418	124,613	101,965	87,499	94,055	53,089
Unit Price (\$/BBL)	33.24	28.1	27.78	33.41	47.22	59.51

Light products include gasoline, kerosene and diesel and 2005 includes the data upto July.

(Source) KNOC



## ◆ Response to High Oil Price; in the Past

- (1) The Three Stage Response Mechanism based upon oil price was prepared when oil price was quite stable and low
- (2) The 1<sup>st</sup> stage in which oil price remains below \$32/BBL includes voluntary conservation and reinforcement of oil market monitoring activities
- (3) The 2<sup>nd</sup> stage of which oil price is between \$32/BBL to \$35/BBL activates compulsory conservation measures such as driving ban on every ten day
- (4) The last stage, when oil price is above \$35/BBL, releases strategic oil reserves in collaboration with IEA and imposes oil price ceiling.



## ◆ Response to High Oil Price; Today

- (1) The Government policy puts more emphasis on market based, long term measures to cope with today's high oil price.
- (2) Large energy consumers such as restaurants, convenient stores and department stores are encouraged to make more conservation and drivers are asked to participate voluntarily in driving ban
- (3) For long term goals, improvement in energy efficiency of automobiles, buildings and manufacturing is underway to achieve a low energy intensified economy.
- (4) For expanding energy supply, KNOC and other Korean E&P companies will increase its production from 50 thousands b/d to 235 thousands b/d in 2008 and study development of methane hydrate in East Sea.
- (5) International cooperation is also emphasized among consuming economies and between consuming and producing economies.

## ◆ Response to High Oil Price; Release of SPR

- (1) Hurricane Katrina seriously damaged oil production and supply system in Gulf of Mexico, USA and seemed to accelerate oil price increase
- (2) IEA decided to release 2 million b/d of oil and Korea joined the decision by drawdown 98 thousand b/d, the fourth largest contribution to the decision along with Japan in Asia
- (3) Korea's first release under the IEA cooperative framework since its membership

	SK	GS	S-Oil	Hyundai	Total
Crude	70	70	70	40	250
Products(gas&diesel)	15	5	2.5	17.5	40
Total	85	75	72.5	57.5	290

## ◆ Conclusion

- (1) Continuous and steady increase in oil price
- (2) Unusual features of oil price changes over the last two years
- (3) Limited impact of super high oil price on Korean economy upto now
- (4) Different approach to high oil price from the past
- (5) IEA's collective response to Hurricane Katrina

