"Current Political Situation in the Middle East and Oil Supply"

U.S. – Japan Joint Seminar

Prospects for the World Oil Market and Crude Oil Prices

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Reasons for looking at both the mid and long-term outlook

- Main factors (uncertainties) influencing supply and demand balance are not the same in the mid-term as in the long-term
- Mid-term (up to year 2015)
  - Demand side: Economic activity, Oil price
  - Supply side: Supply interruption and instability
- Long-term (up to year 2030)
  - Demand side: Oil saving policy in consuming countries, development of energy-conservation technology, supply constraints
  - Supply side: Upstream investment policy in producing countries, environmental regulation, development of E&P technology, non-conventional and renewable energy development

Conventional Views on Mid-term Outlook for Oil Market

- World oil demand will increase annually at 1.4-1.6 million B/D between 2005 and 2015
- Non-OPEC supply will increase annually at 0.7-0.9 B/D over the same period
- Call on OPEC crude will increase substantially to 34-36 million B/D in the year 2015

	2005	2015	Increment	Annual Change
Global Demand	83.6	99.3	15.7	1.6
Non-OPEC Supply	50.0	57.3	7.3	0.7
OPEC NGLs, etc.	4.3	6.3	2.0	0.2
Call on OPEC Crude + Stock Ch.	**29.3**	**35.7**		

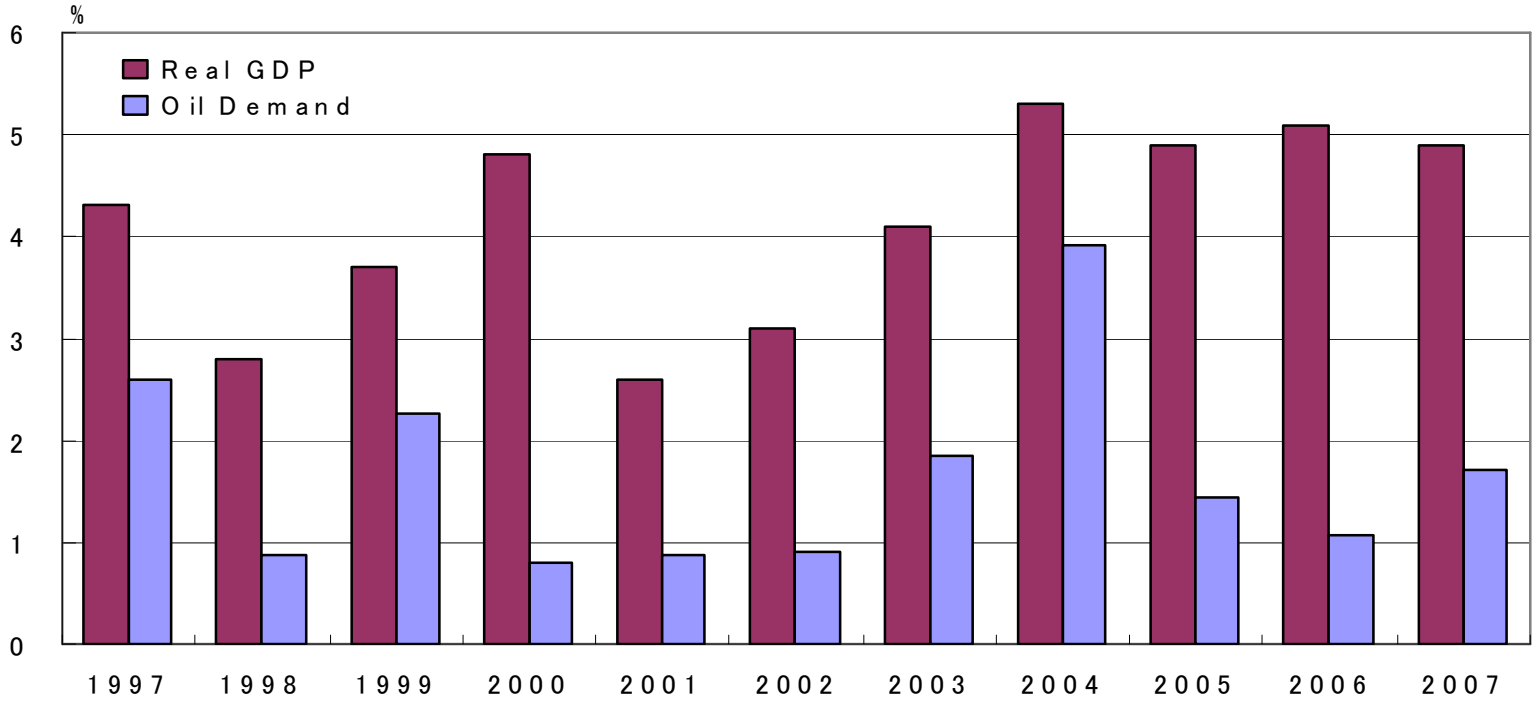
(Reference) IEA "World Energy Outlook 2006"

Uncertainties in the Mid-term

- Demand side fundamentals
  - US economy, China's economy etc.
- Supply side fundamentals
  - Deferred investment due to resource nationalism
  - Lack of staff and equipment, cost inflation
  - Vulnerability of the market to supply/demand fluctuations has increased with the drop in supply surplus/buffers
- Possibility of supply interruptions and instability in the major producing countries
- Financialization of the oil market

Global GDP vs. Oil Demand Growth

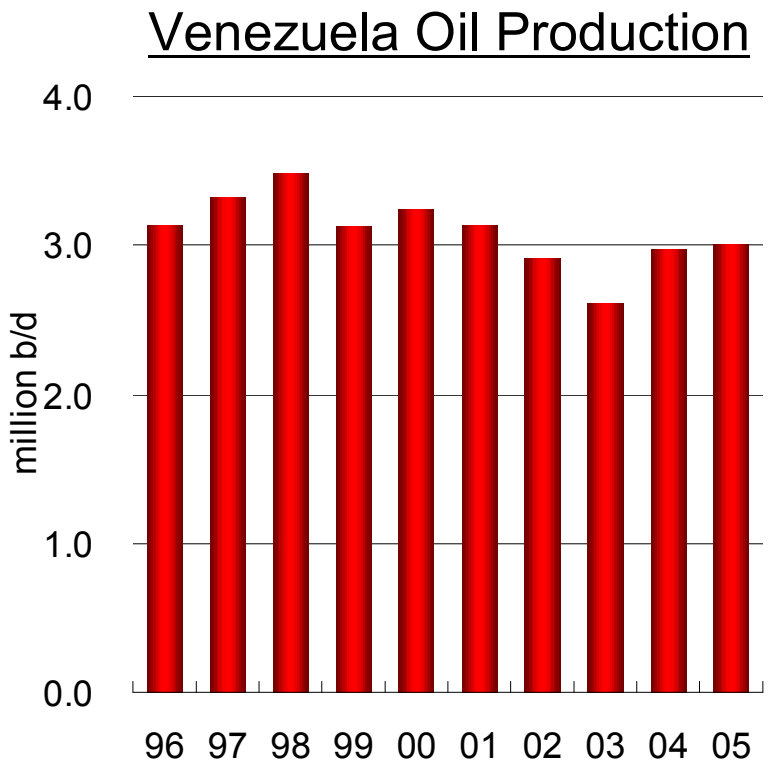
- Global Oil Demand grew by average 1.7% with Global GDP Growth of 4.1% over the period 1997-2006

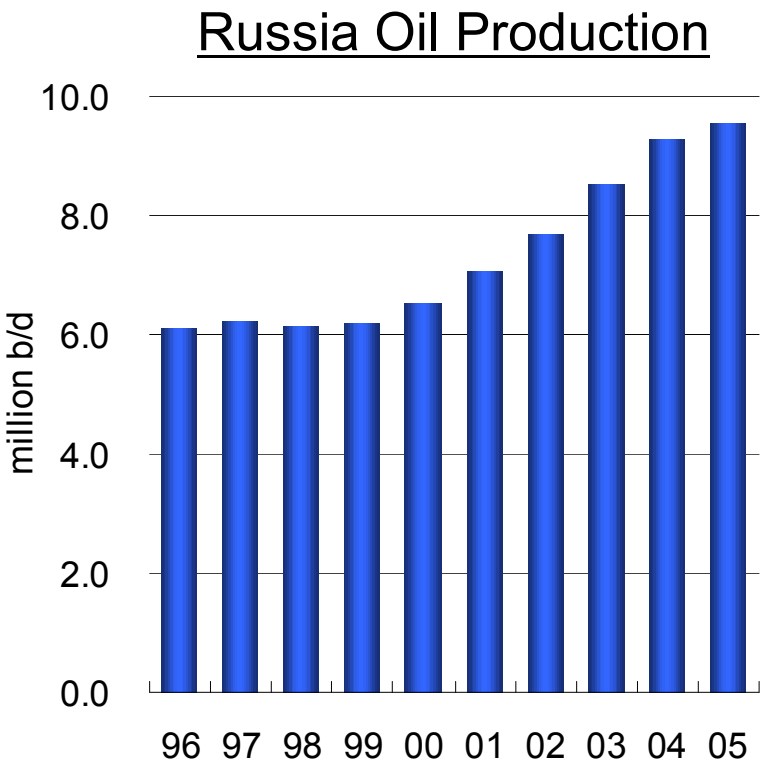


(Reference) IEA "Oil Market Report", IMF"World Economic Outlook"

Rise of Resource Nationalism

- Stagnant oil production due to delay in the importation of foreign technology





(Reference) BP Statistical Review of World Energy June 2006

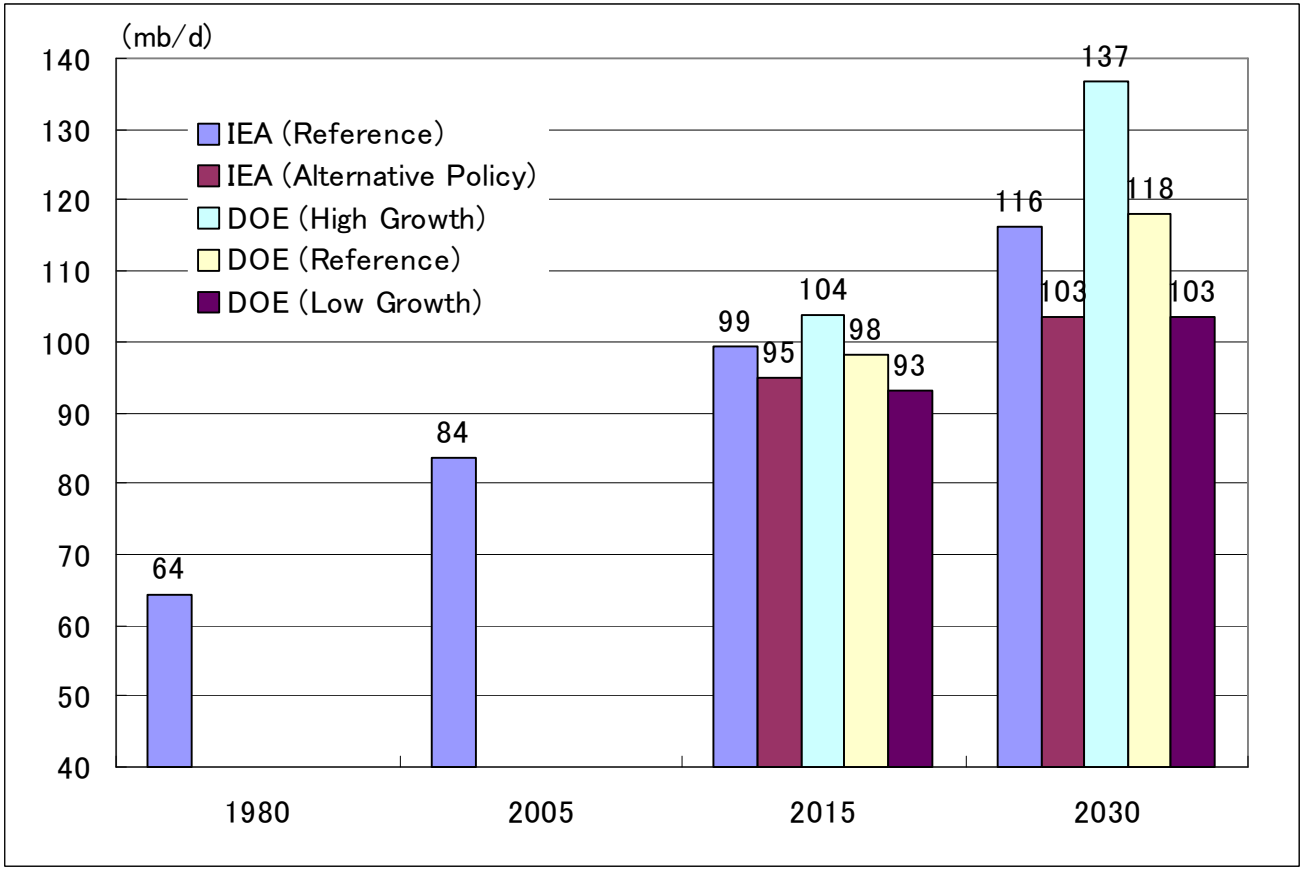
Prospects toward the year 2015

- Conventional Views
  - World oil demand will steadily increase
  - Non OPEC production will increase mainly in the FSU and demand for OPEC crude will increase
  - Spare capacity will increase
- Supply/demand balance will slowly improve. But vulnerability of the supply system will remain and support the current price level.
  - Crude oil prices will fluctuate violently between $40-80 range in the cases of tempering demand growth or major supply disruption.

Conventional Views on Long-term Outlook for Oil Market

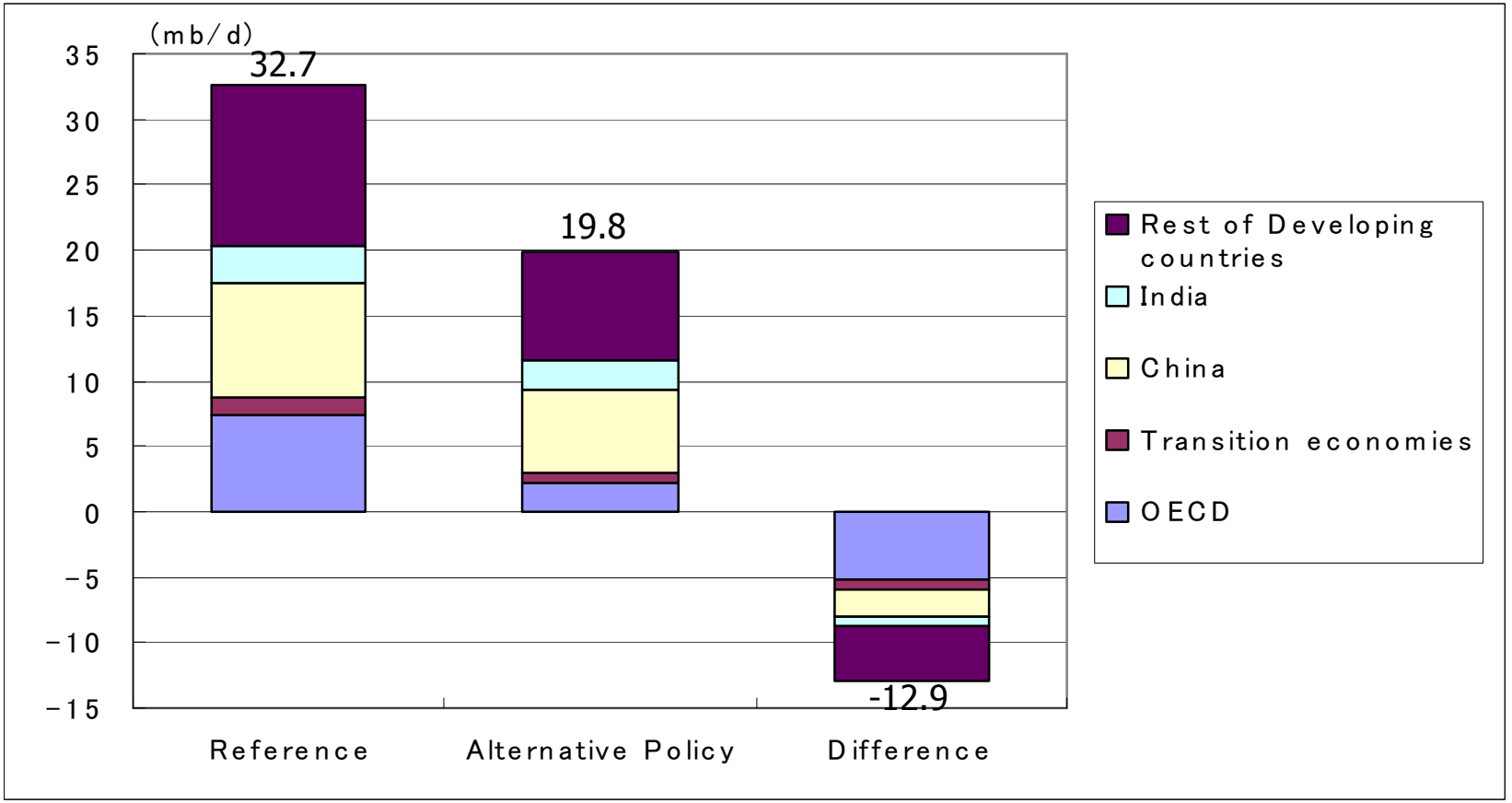
- World oil demand will increase to reach 115-120 million B/D in the year 2030
- OPEC oil supply will increase substantially to 50-60 million B/D in the year 2030
- Uncertainties in such views
  - Whether world oil demand will increase at such a substantial pace in the coming 25 years
  - Whether world oil supply can increase sufficiently to meet such strong demand growth
    - Capacity additions could be smaller on account of political unrest, restrictions on foreign investment in resource rich countries

Comparison of Outlook for World Oil Demand



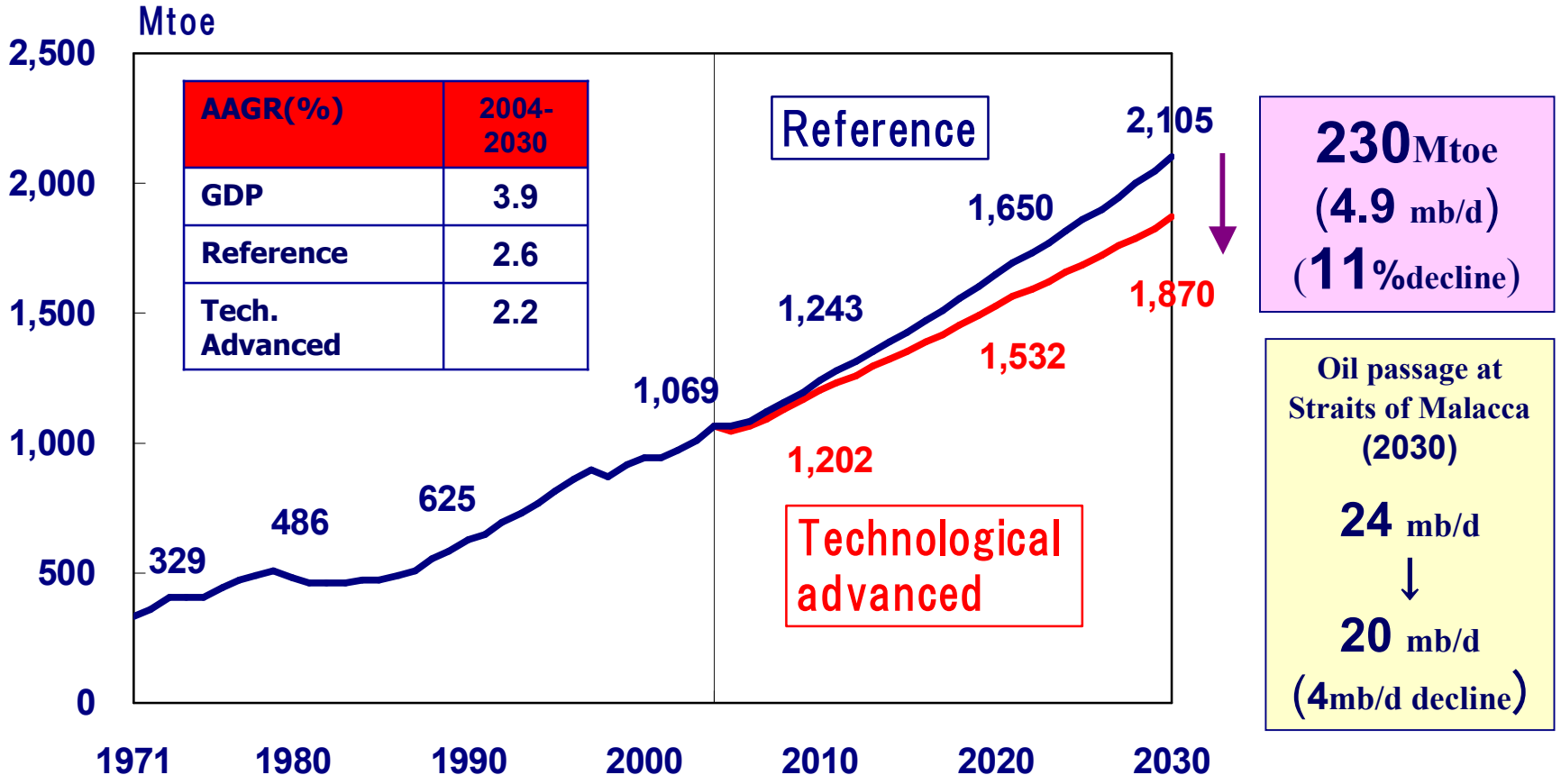
(Reference) IEA "World Energy Outlook 2006", DOE/EIA "International Energy Outlook 2006"

Impact of Alternative Policy on Increase in Oil Demand (2005-30)



(Reference) IEA "World Energy Outlook 2006"

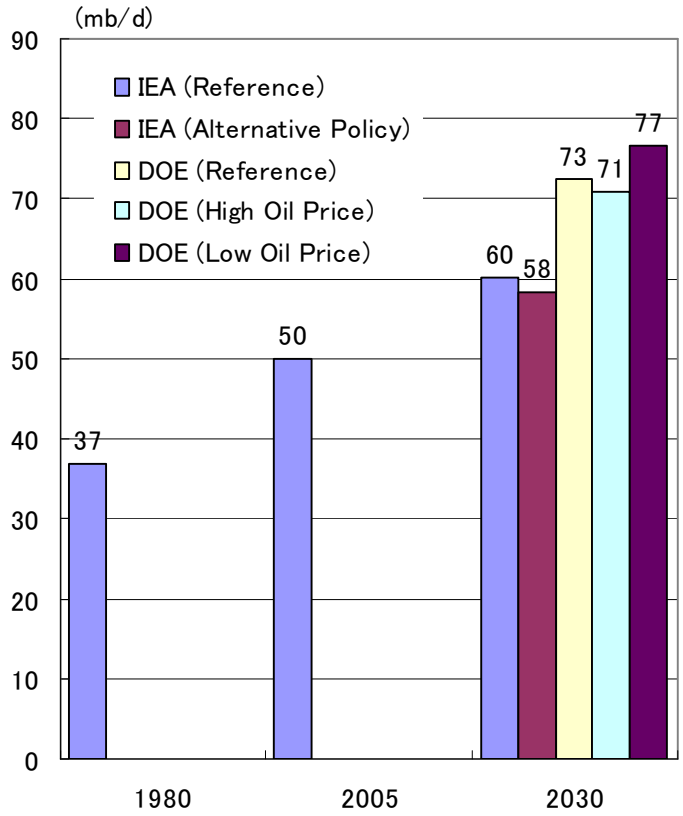
Change in Oil Demand by Technological Development (Asia)



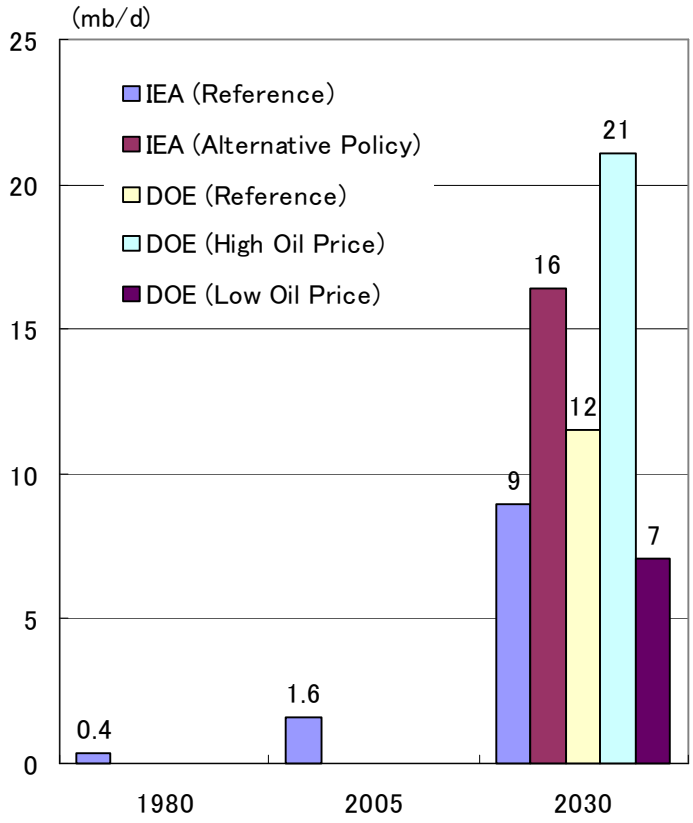
(Reference) Ito and Morita "Asia/World Energy Outlook 2006," IEEJ, Sep. 2006

Comparison of Outlook for World Oil Supply

Non OPEC Oil Production

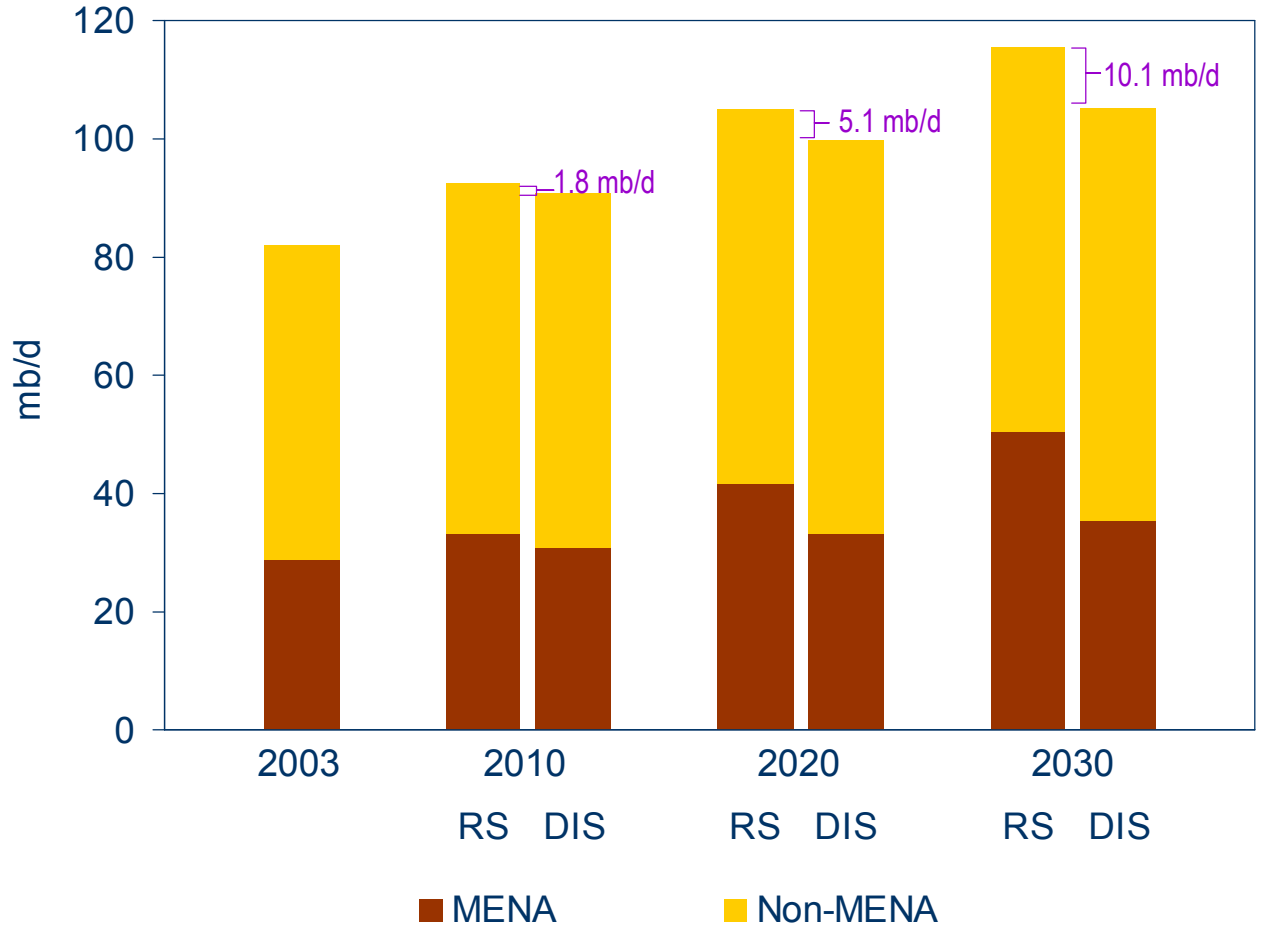


Non Conventional Oil Production



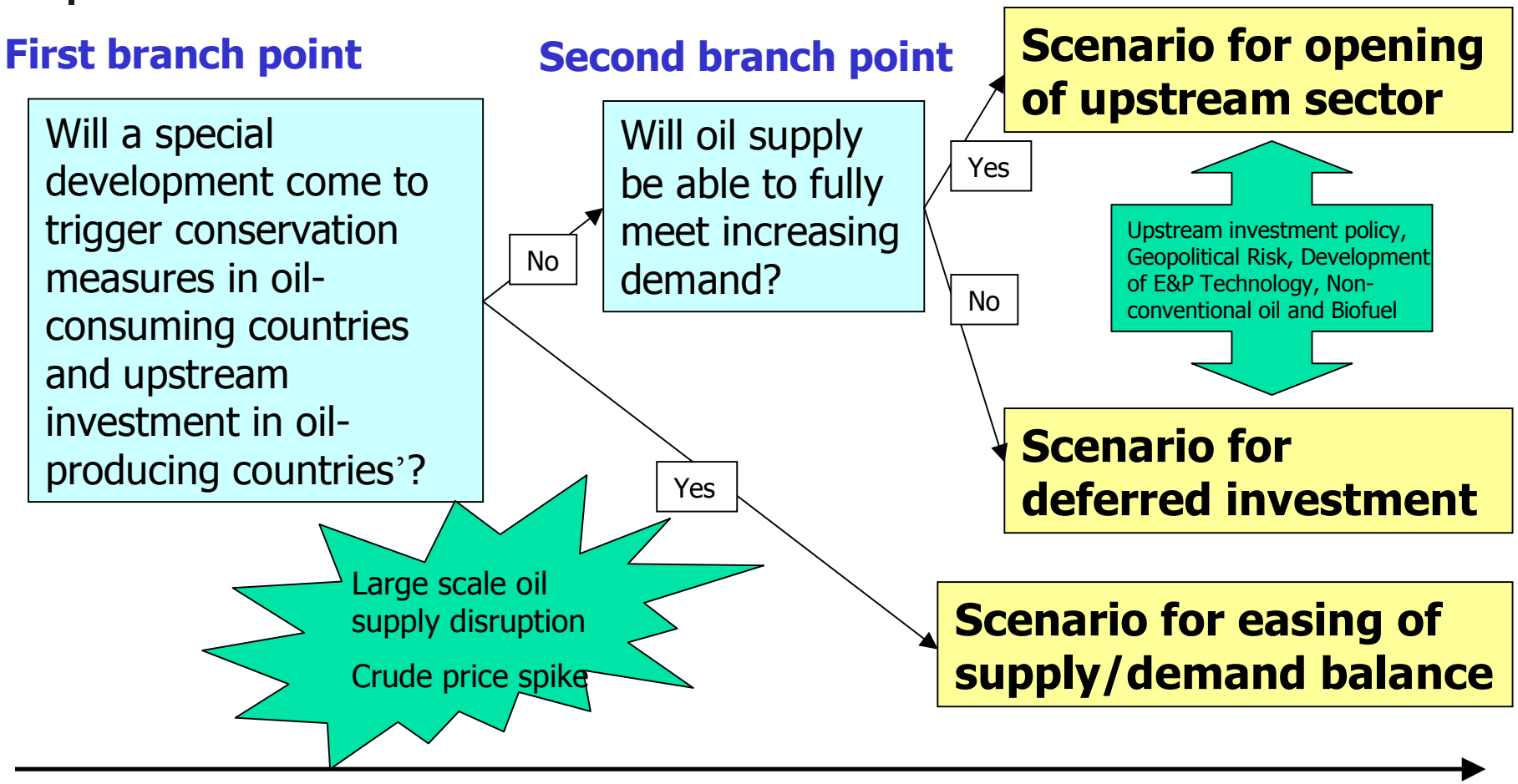
(Reference) IEA "World Energy Outlook 2006", DOE/EIA "International Energy Outlook 2006"

Change in Global Oil Production by Deferred Investment



(Reference) IEA "World Energy Outlook 2005"

Concept of Scenarios for Long-term Prospects



Scenarios for Long-term World Oil Market Prospects

- Scenario for opening of upstream sector
  - Large oil producing countries will compete for opening up of the upstream sector and introduce foreign investment. Technological advancement will contribute much to supply expansion. Oil supply will expand to meet demand growth.
- Scenario for deferred investment
  - Supply constraints by lower investment will emerge around 2015 to boost crude oil prices. Demand growth will slacken on supply constraints and price hike.
- Scenario for easing of supply/demand balance
  - Oil consuming countries take strong conservation measures. Higher crude prices will stimulate expansion of investment. The supply/demand balances will ease over the long term to result in lower crude oil prices.

Long-term Prospects to 2030

- As result of the Scenarios
  - In the case that supply is sufficient to meet the increase in demand, oil demand will grow to 120 million B/D with a crude price of $50-60/B in year 2005 dollars.
  - In the case of insufficient additional investment, the oil supply/demand picture will reach on equilibrium of about 100 million B/D with high crude prices at around $70/B.
  - In the case of repressed demand and alleviation of oil supply capacity, the supply/demand picture will reach 100 million B/D with stable oil prices of between $40-50/B.

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