

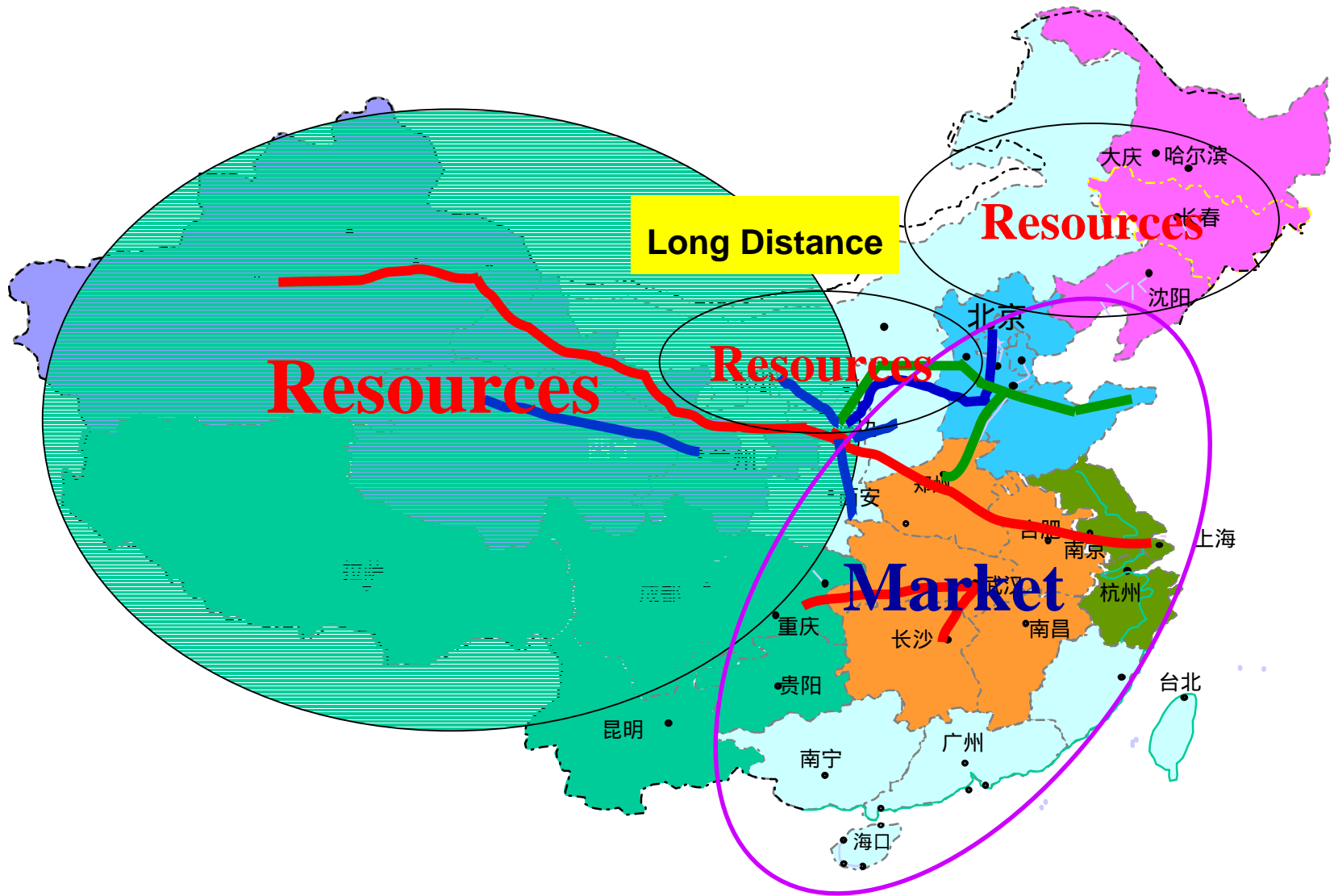
**Asian Energy Security Workshop May 13-16, Beijing China**

# **Understanding Emergency Oil Storage in China**

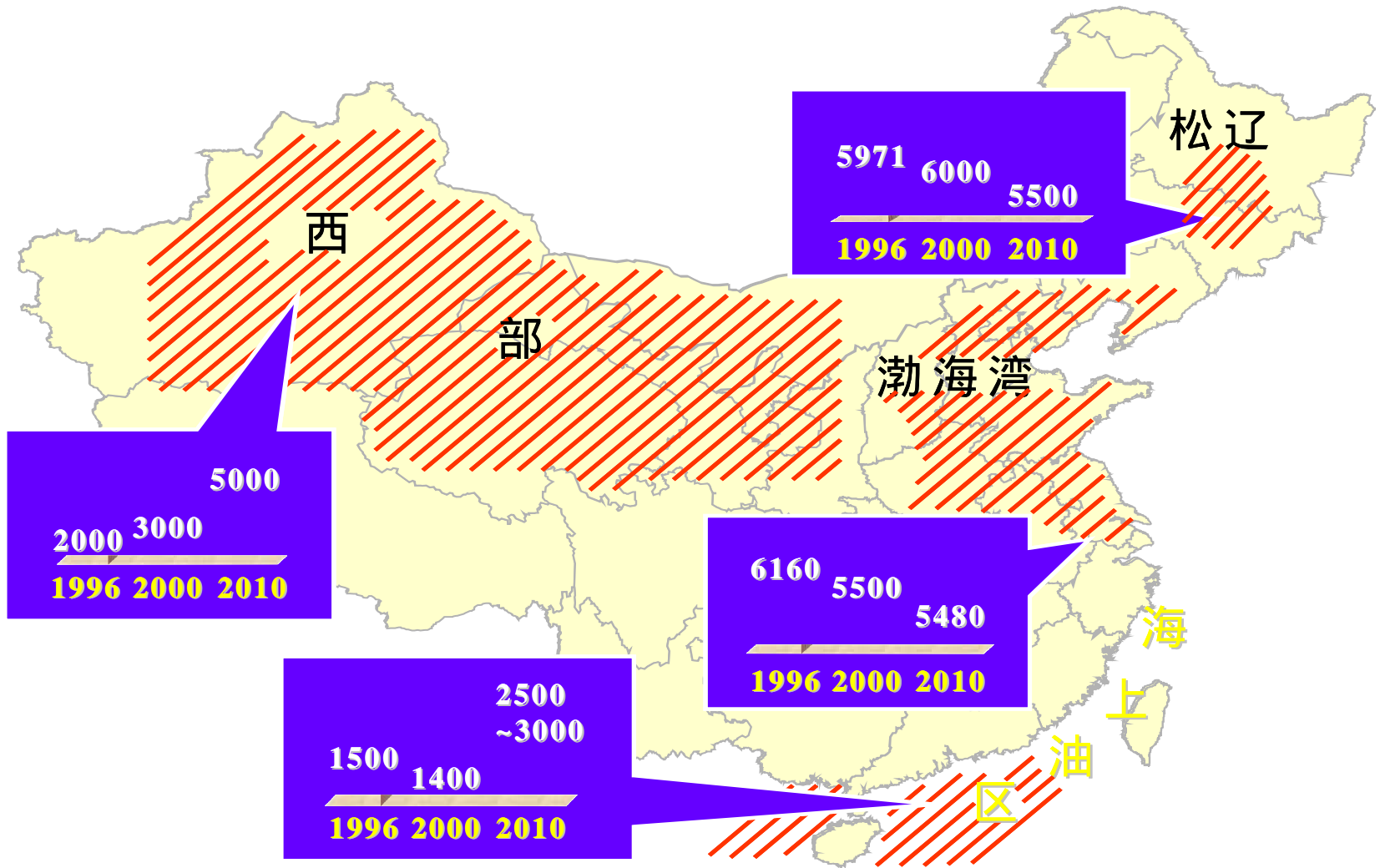
**Yufeng YANG**

**Energy Research Institute of  
National Development & Reform Commission**

# China's Energy Market Situations



# China's Oil Resources and Market

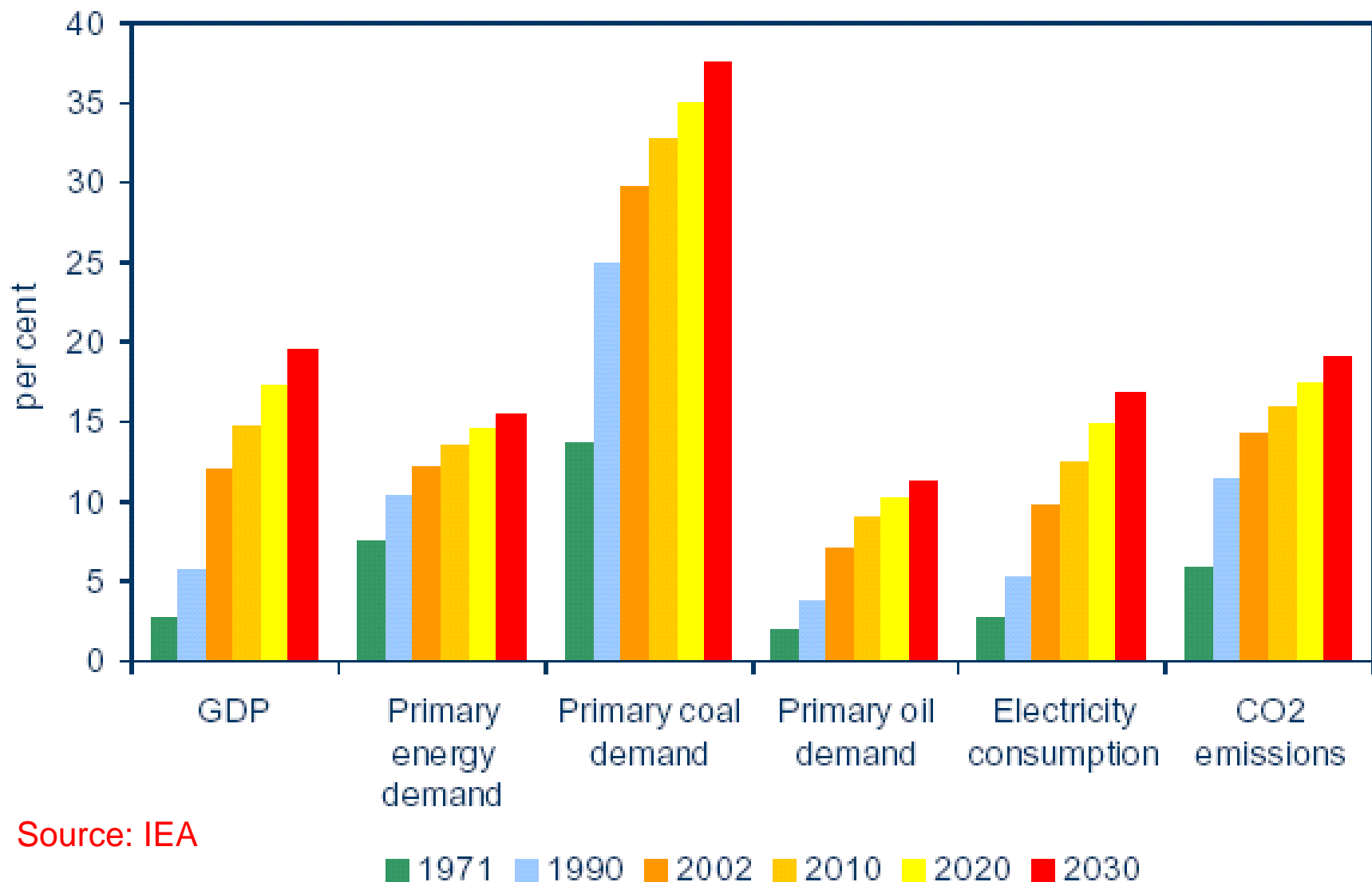


# China's Energy Demand Outlook in the Future

	Primary Energy	Coal	Oil	Natural Gas	Primary Electricity	Nuclear P
	Mtce	Mt	Mt	m3	Mtce	Twh
<b>2000</b>	1303	1206	224.4	245	88.2	16.7
<b>2010</b>						
<b>ERI</b>	1860~2130	1205~1425	322~377	800~1000	63~80	48~102
<b>IEA</b>	1860	1320	336	610	80	90
<b>EIA</b>	1985	1630	340	790	230	75
<b>2020</b>						
<b>ERI</b>	2470~3280	2050~2900	450~610	1600~2000	110~145	110~260
<b>IEA</b>	2440	1660	455	1090	130	163
<b>EIA</b>	3040	2350	525	1810	370	130

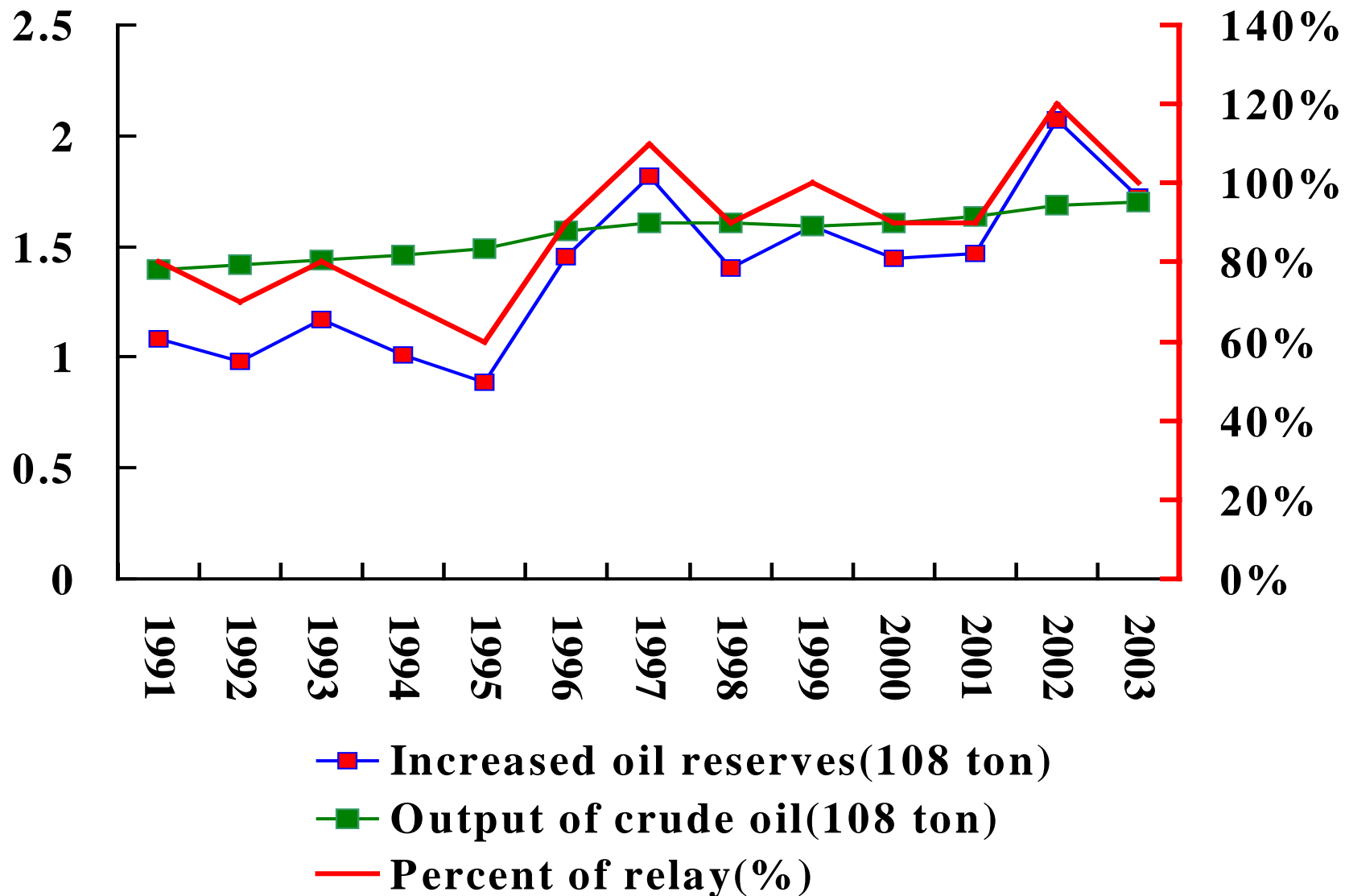
Source: ERI

# China's Share in the Global Economy and Energy Markets

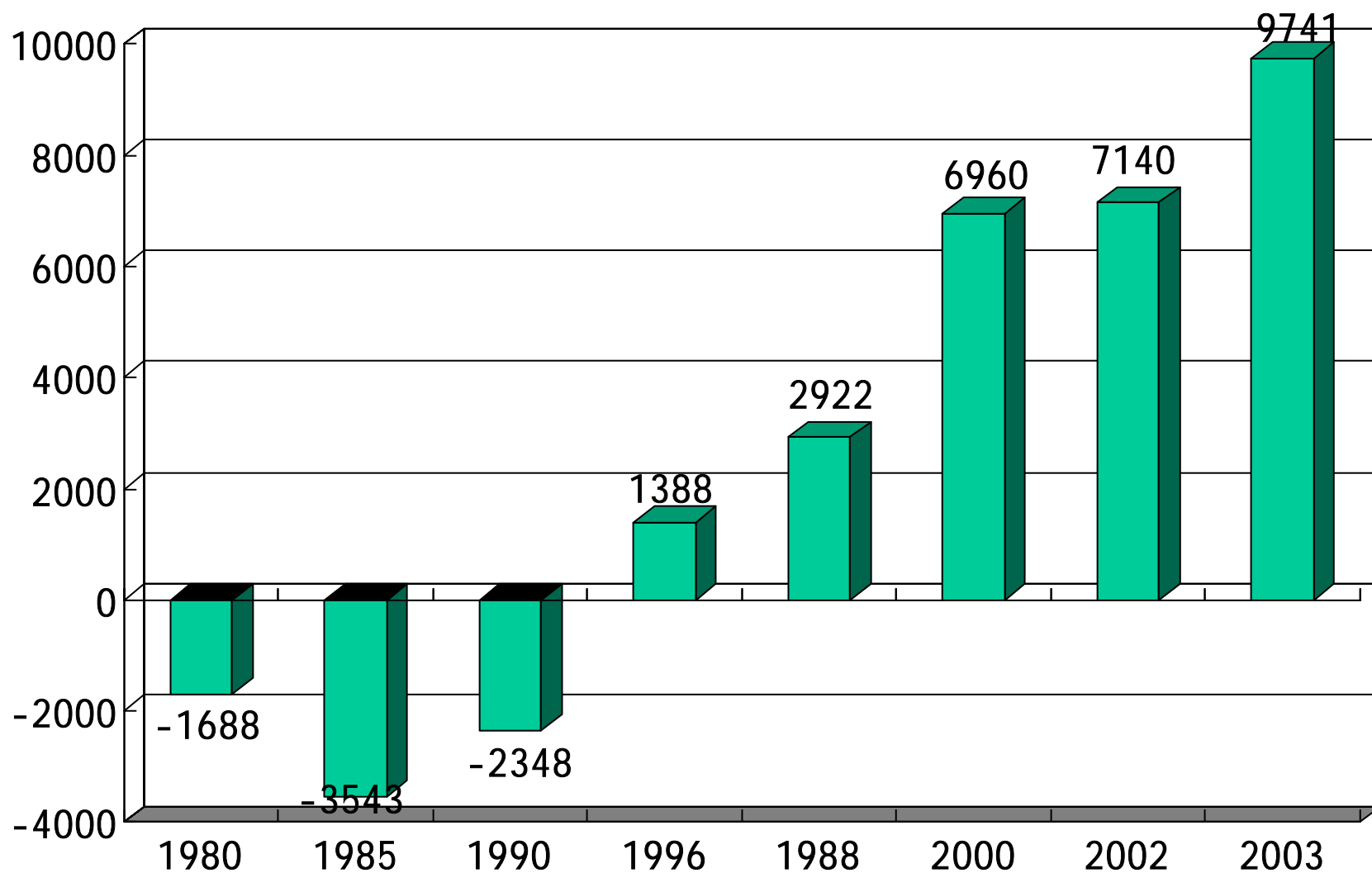


Source: IEA

# China's Oil Reserves and Output



# China's Oil Net-Import from 1985-2003 (unit: 10<sup>4</sup> ton)



# Global Oil Security Situations Recent Years



Source: IEA



# World Oil Market that China is facing



# Oil Price is impacting the World Economy

- Every 10\$/B increasing will result in :
  - ◆ IMF: Global 0.6% ; EIA: Global 0.5% ;
  - ◆ IMF: China 0.8% ;
- History Records ;

Oil Price ( \$/B )					Impacton Developed Countries	
	Before Raising Price	Before Raising Price	Difference	+%	Billion \$	GDP%
1973-1974	3.3	11.6	8.3	252	-8.8	-2.6
1978-1980	12.9	35.9	23.1	179	-23.2	-3.7
1989-1990	17.9	28.3	10.4	58	-3.8	-0.2
1999-2000	18.0	28.2	10.3	57	-9.6	-0.4
2003-2004	28.9	37.3	8.4	29	-10.7	-0.3

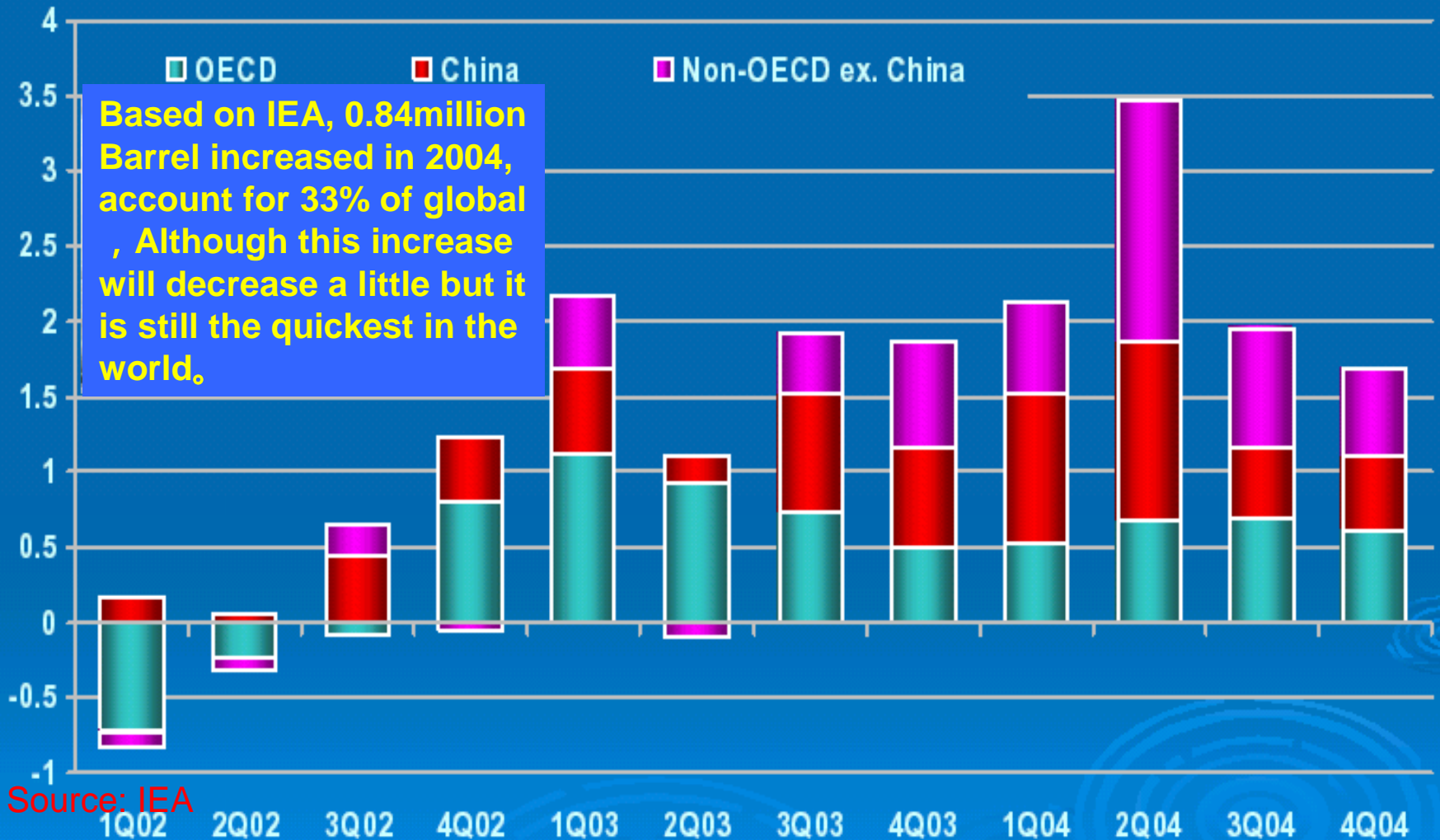
# Oil Price is impacting China's Economy

Every 10\$/B increasing will result in :

	<b>Mton</b>	<b>Billion \$</b>	<b>GDP%</b>
<b>Import Crude Oil</b>	<b>61</b>	<b>4.5</b>	<b>0.6%</b>
<b>Import Product Oil</b>	<b>20</b>	<b>1.5</b>	<b>0.2%</b>
<b>Import Chemical Product</b>	<b>25</b>	<b>1.8</b>	<b>0.3%</b>
<b>Total</b>		<b>7.8</b>	<b>1.1%</b>

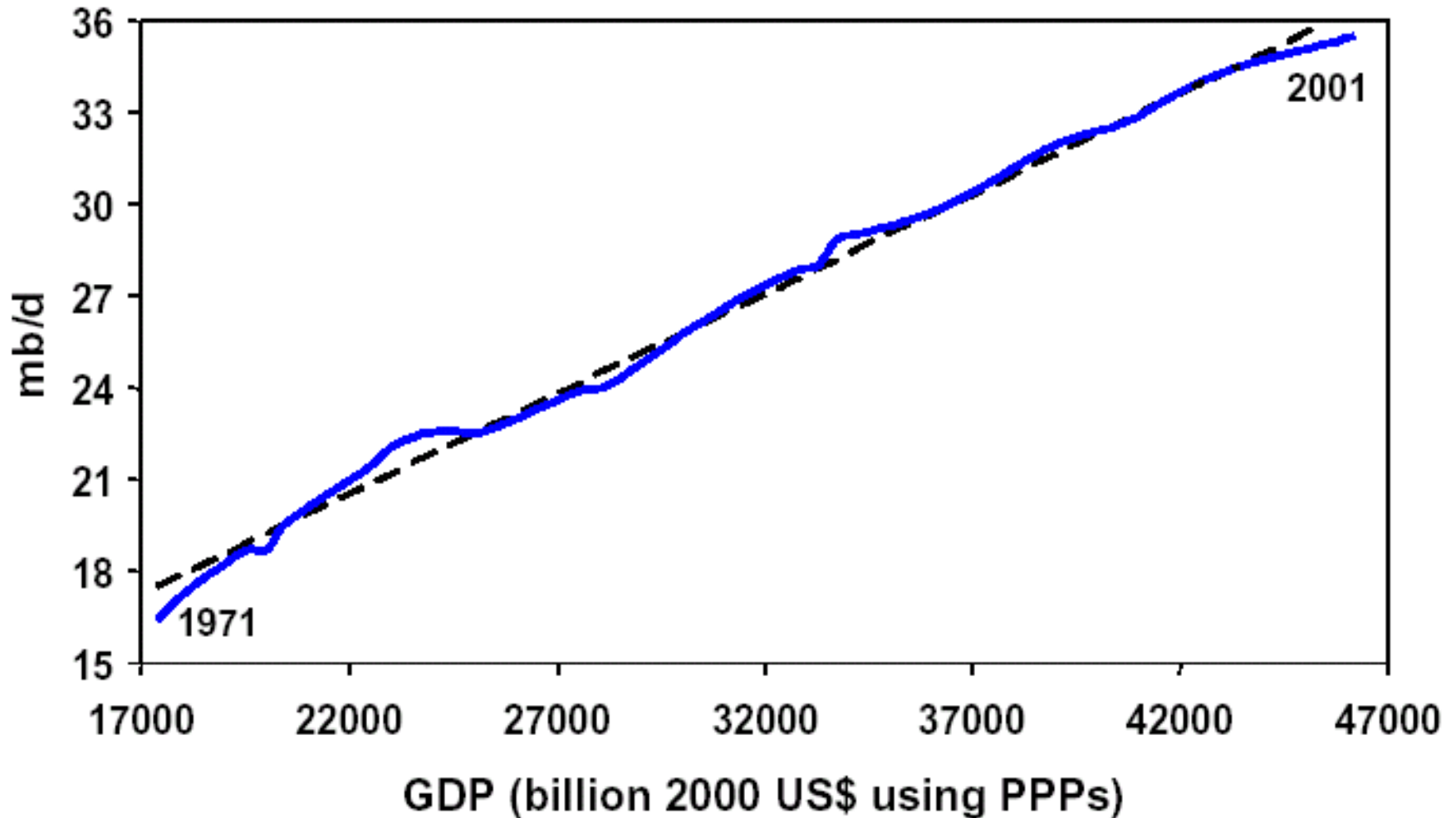
According to Data of half year in 2004

# Great Attention from Global



Source: IEA

# High-Correlation between Oil Consumption in Transport and GDP



# Contributions to Domestic and International

- To improve the ability for coping with possible oil supply disruptions both for domestic and for international
- To improve adjustment ability for oil supply;
- To improve flexibility of oil supply;
- To restrain oil price to rise sharply;
- To join in international market and cooperation;

# Modes of Emergency Oil Storage in China

- Government
- Enterprise
- Possible Private Organization or Entity;

**Direct Investment or leasehold relation**

# How to Consider the Scales of Emergency Oil Storage in China

- Based on IEA experiences(90)



# **How to Consider the Distribution of Emergency Oil Storage in China**

- **Close to the Import Dock**
- **Close to the Refining or Petrochemical Base**
- **Convenient and Flexible Transportation  
Conditions**
- **Good Geological Conditions**
- **Considering Overall Planning**

# Presently Proofed Oil Stock Projects

- 2003-2007 will be constructed
- 10 ~ 12 million ton
- Locations
  - ◆ Aoshan
  - ◆ Zhenhai
  - ◆ Huanggang
  - ◆ Xingang

# Constructing



# Constructed Tanks



# Constructed Tanks





The petrochemical jetty is situated on the south bank of Yae River's mouth with two berths. The draft of the jetty frontage 5 meters, which can accommodate 500-35,000 DWT petrochemical vessel. The jetty has advanced loading and unloading equipment among which there are 6 loading arms imported from Germany. The biggest diameter of the pipeline is 300mm and the pumping rates up to 1000cbm per hour, the loading speed up to 900cbm per hour. The annual throughput of the jetty exceeds 1,600,000 metric tons.

