

Update on Energy Sector Activities and Plans in China

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4th Workshop of East Asia Energy Future, 4-7 Nov, 2003
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Where China Is

Year 2002	Total	Per Capita
GDP(current price)	US\$ 1223billion	US\$ 952
GDP(PPP base, 1995 price)	US\$ 4818billion(2000)	
Energy consumption	1036 Mtoe	0.81 toe
Civil vehicle population	20.5 million	16 per thousand person
Private car	6.24 million	5 per thousand person

- Total amount -- huge
- Average of per capita – small
- Growing – fast

Source: China Statistical Abstract 2003, IEEJ 2003

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Primary Energy Consumption

2001	ktoe	%
Total	790,018	100
Indigenous production	763,120	96.6
Net import	26,898	3.4
Coal	515,473	65.2
Oil	219,295	27.8
Gas	25,413	3.2
Others	29,837	3.8

Source: Energy Data and Modelling Center, IEEJ (see <http://www.icej.or.jp/apec/database/selecttable.html>)

Final Energy Consumption

2001	ktoe	%
Total	568,961	100
Industry	305,408	53.7
Transport	61,015	10.7
Others	202,538	35.6
Coal	237,619	41.8
Oil	186,286	32.7
Gas	27,285	4.8
Electricity & others	117,772	20.7

Source: Energy Data and Modelling Center, IEEJ (see <http://www.iecej.or.jp/apec/database/selecttable.html>)

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2002 Power Industry

Generation	GW	Share (%)	GR (%)	TWh	Share (%)	GR (%)
Total	353	100	4.3	1640	100	10.5
Hydro	84.55	24	1.9	271	16.5	3.8
Thermal	264.2	75	4.4	1342	81.8	11.4
Nuclear	3.7	1	76.2	25	1.5	42.9
Transmission	km	GR(%)	Conversion		GVA	GR(%)
35kV above	806500	3.2	35kV above		1194	6.8
500kV	34939	11	500kV		132.8	13.2
330kV	9723	5.9	330kV		17.2	12.6
220kV	141889	4.4	220kV		362.8	6.6

Source: China resource conservation and environmental protection network (<http://www.drccu.gov.cn>)

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2002 Power Industry Investment

	Billion Yuan	Share (%)
Total	184	100
New Power Plant	48	26
Power Grid Construction	39	21
Power Plant Upgrade	6	3
City Distributed Networks	13	7
Rural Distributed Networks	73	40
Others	5	3

Source: China resource conservation and environmental protection network (<http://www.drccu.gov.cn>)

2002 Electricity Consumption

	TWh	GR(%)	Share(%)
Total	1620	10.3	100
Primary Industry	59	3	3.64
Secondary Industry	1183	11.2	73.02
Tertiary Industry	180	10	11.11
Residential Sector	198	7.7	12.22
Urban	114	6.9	7.04
Rural	84	8.7	5.19

Source: China resource conservation and environmental protection network (<http://www.drccu.gov.cn>)

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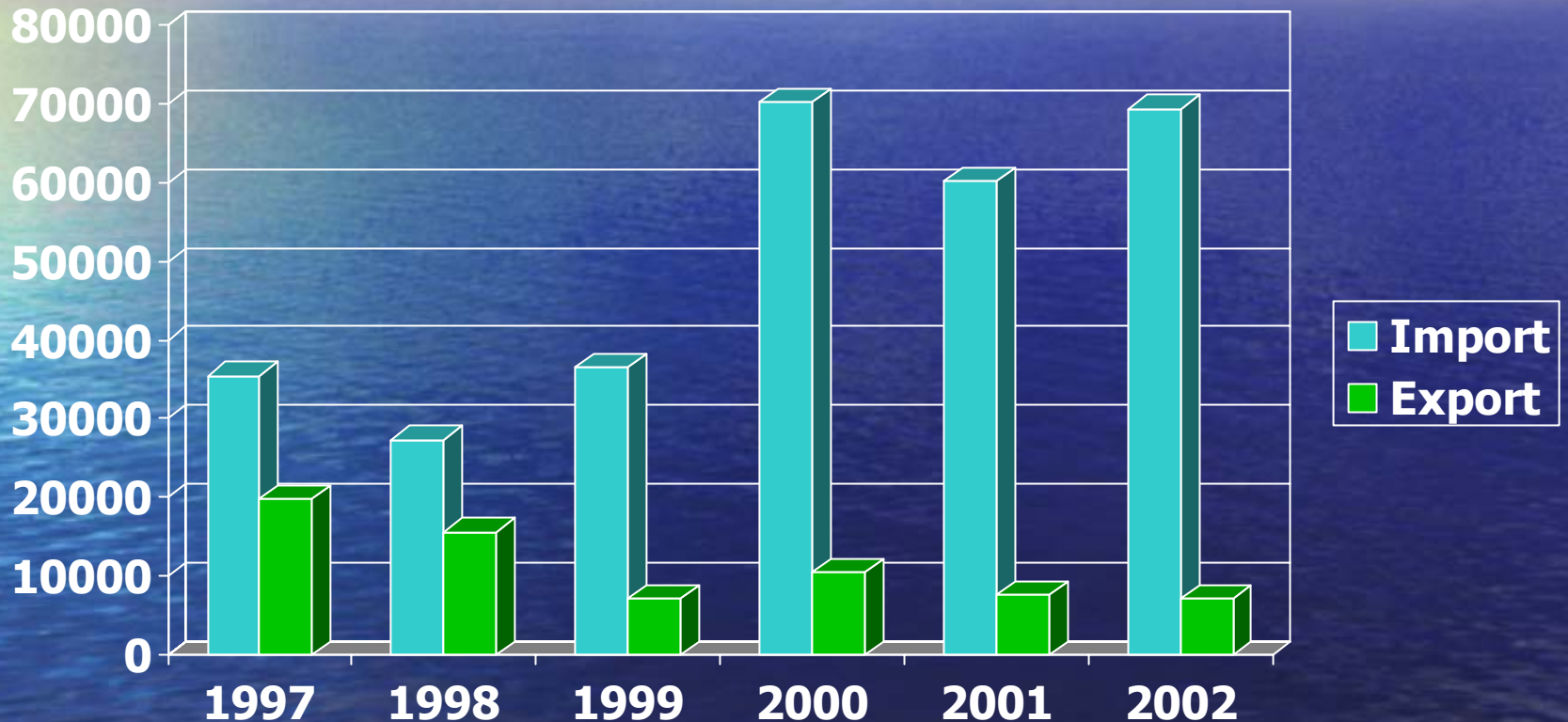
Recent Changes in the Energy Sector

- Power shortage
- Further coal pricing reform
- Import LNG project
- Electricity generating from Three Gorges
- Restructuring the electric power industry
- Set up Energy Bureau, National Development and Reform Commission

National Concerns

- Oil security
- Environmental protection

Growing Crude Oil Import



Source: International Oil Economy Vol. 11 No.3 2003

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China's Position at Crude Oil Market

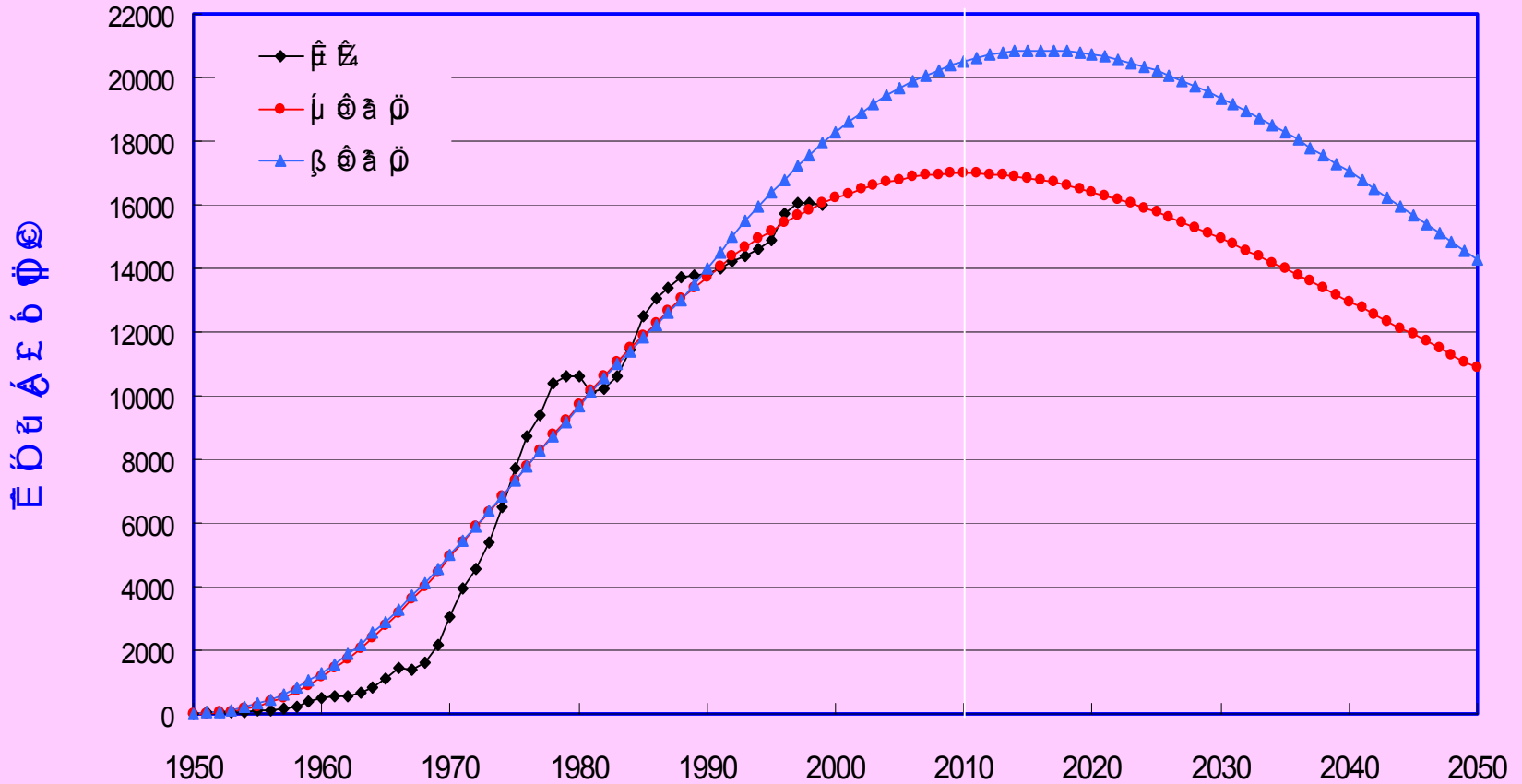
Source/Destination		2002	Share (%)
Total import		69407.7	100
APEC member economy	Asia-pacific region	11778.6	17.0
	Others	3029.6	4.4
Other Asia-pacific countries		71.2	0.1
Others		61896.8	89.2
Total export		7208.1	100
APEC member economy	Asia-pacific region	5393.4	74.8
	Others	831.5	11.5
Other Asia-pacific countries		472.2	6.6
Others		511.0	7.1

- Import from non-APEC member economies and non other Asia Pacific countries, while export mainly to these countries
- China's crude oil import and export only accounted for 4.1 percent and 0.4 percent in the total world trade in 2002.

Oil Import Diversification

Year	1996	1997	1998	1999	2000	2001
Middle East	0.529	0.473	0.610	0.462	0.536	0.562
Africa	0.085	0.167	0.080	0.198	0.241	0.225
Asia-Pacific Area	0.363	0.265	0.200	0.187	0.151	0.144
Europe and Others	0.023	0.095	0.110	0.154	0.072	0.069
Total	1	1	1	1	1	1

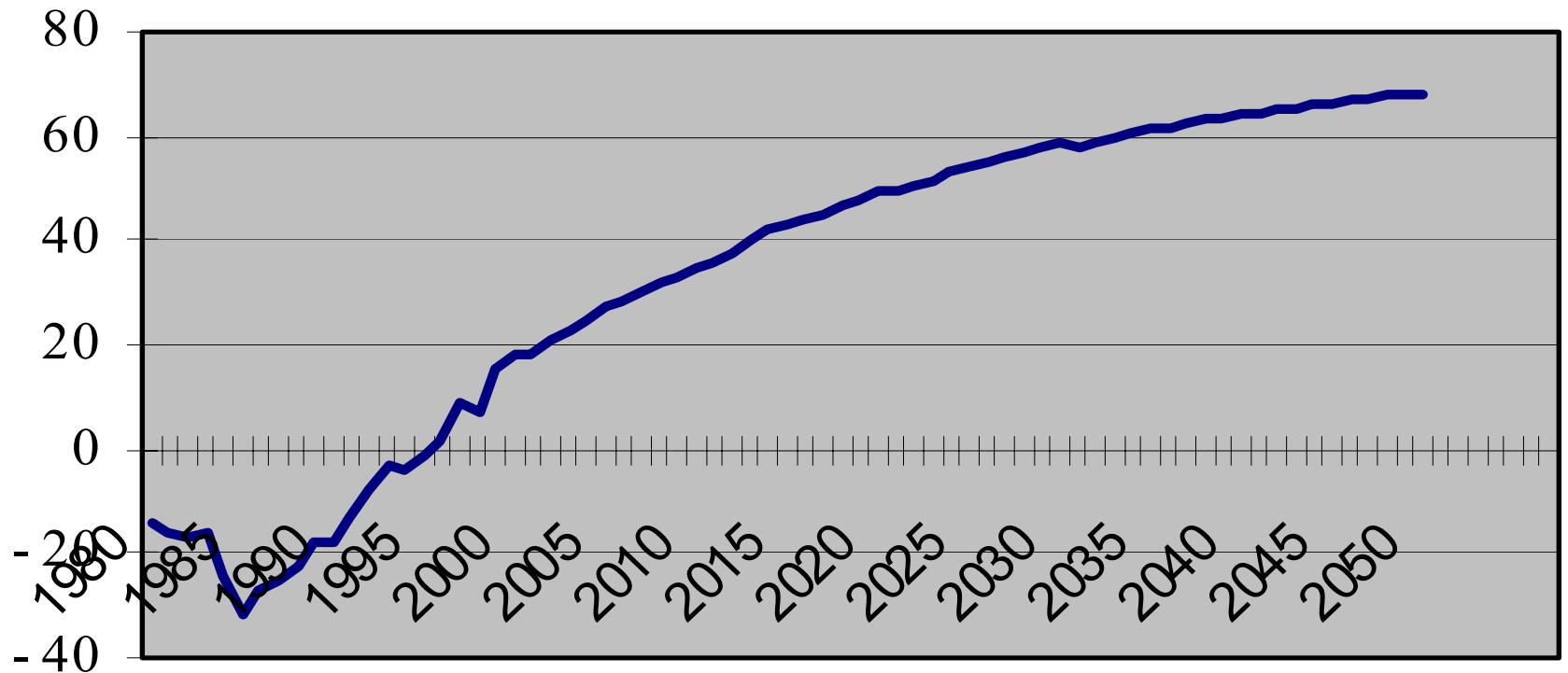
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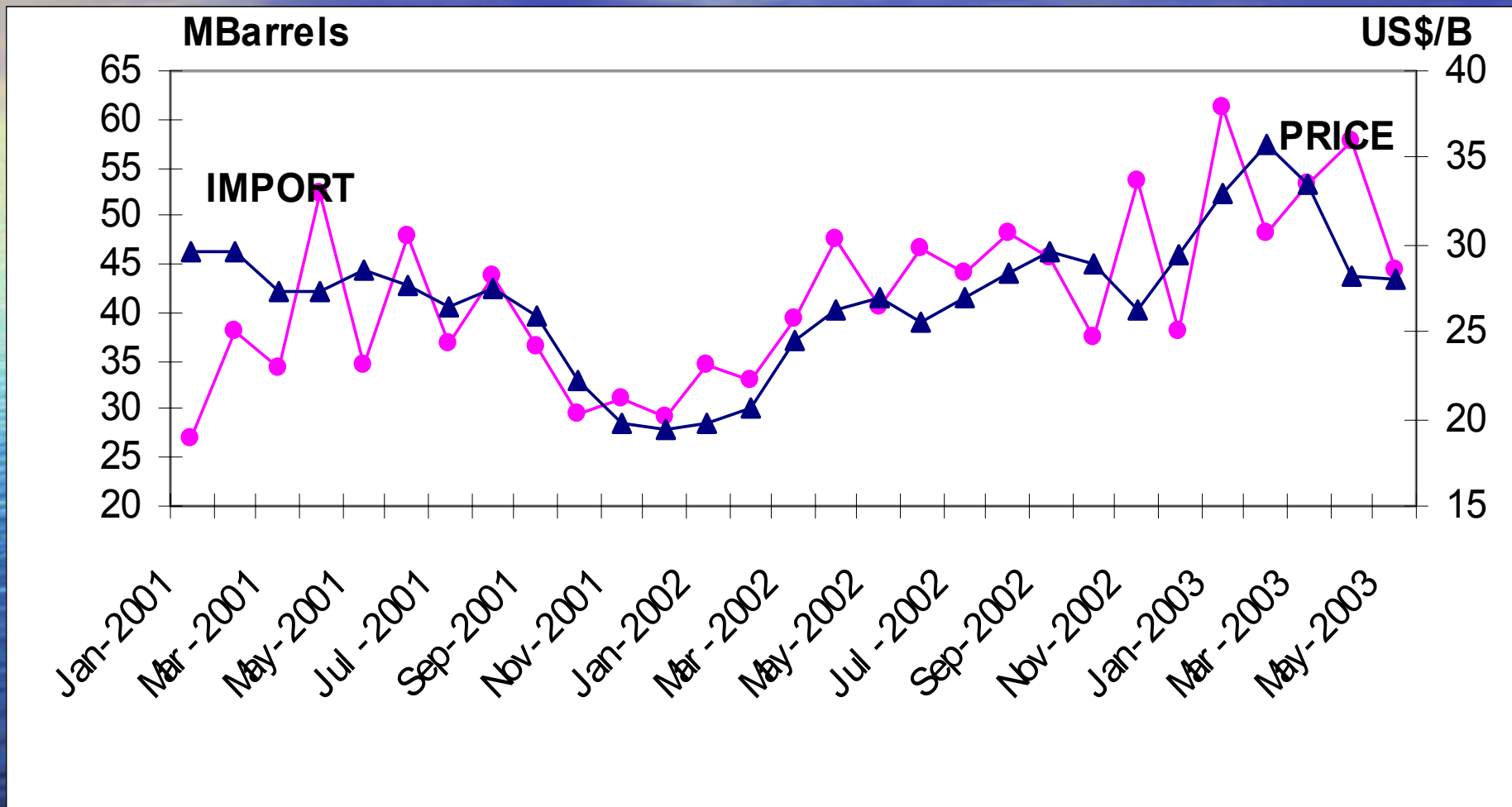
Be More and More Reliant on Importing Oil

Oil Import Dependency (%)

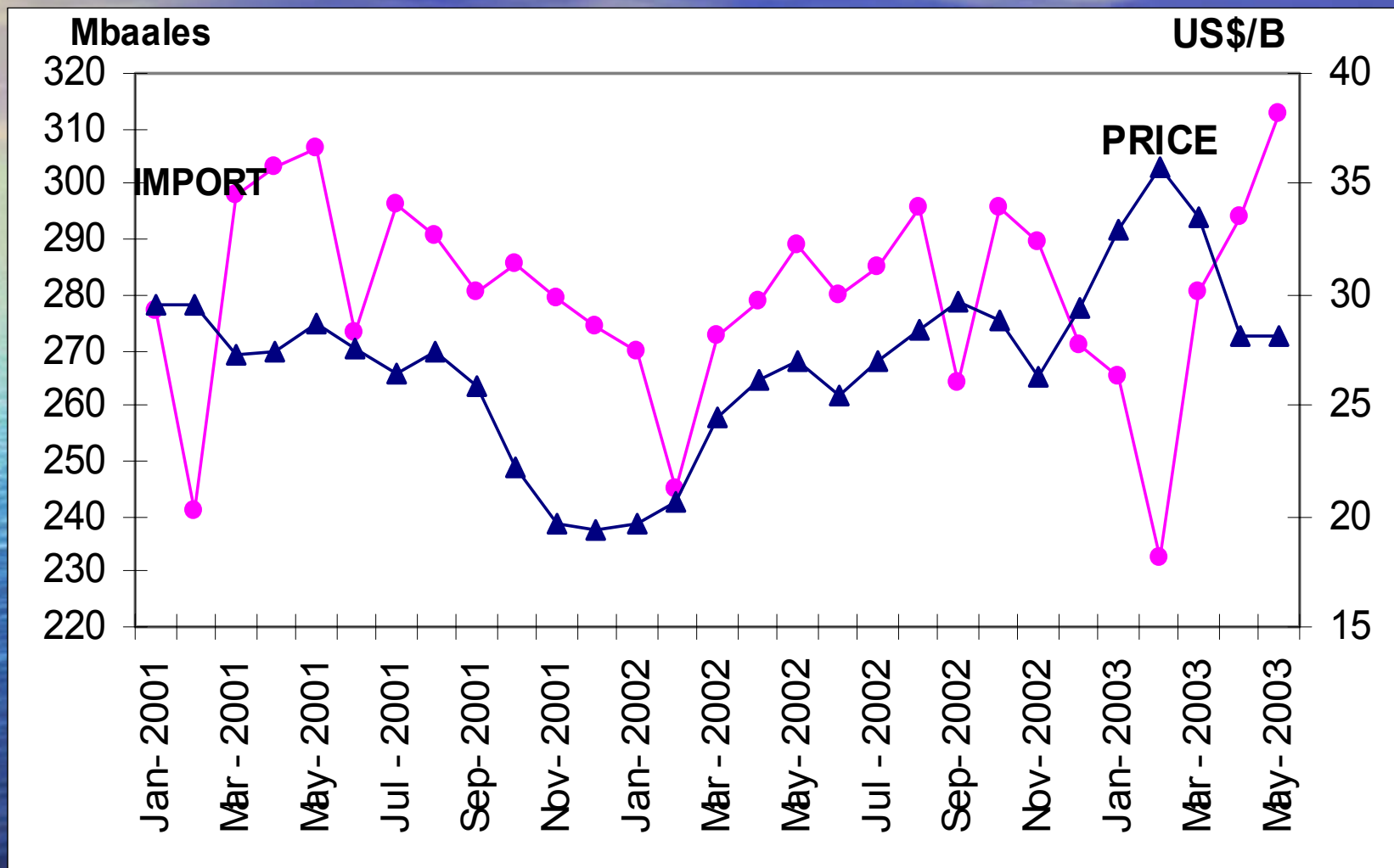


Institutional Failure at Oil Market

Oil Price and Oil Import in China



Oil Price and Oil Import in USA



New Emission Fee Regulation Effectuated in July 2003

Item	Old Version	New Version
Charge to	The part of SO ₂ emission which exceed national standards	All SO ₂ emitted
Paid by the entries which located at	Two-controlling regions	National-wide
Fee rate	0.2 yuan/kg-SO ₂	0.63 yuan/kg-SO ₂

Regional Cooperation

- Focus on bilateral cooperation
- Energy information sharing