

# A Study on LNG Supply and Demand Estimate in Asia Pacific Region

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# Context

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**Fragility of energy demand and supply structure of our county**

**Quantitative  
stable supply**

**Divesification and  
decentralization of  
resources**

**Decrease of  
price**

**Attention at natural gas**

**Stable supply of natural gas**

- Quantitive demand and supply prediction
- Construction of energy cooperative sysytem

**Spread enlargement of natural gas**

- Service of supply infrastructure
- Development of utilization technology, CO<sub>2</sub> reduction

**Table 1 The LNG supply and demand prospect in the Asia Pacific region announced by the government**

(unit: 10 thousand ton/year)

		2002year	2010year	2015year
demand	high demand case	7,787	12,400	16,300
	low demand case	7,787	10,000	12,000
supply	existing projects	8,370	8,370	7,450
	projects under construction	※	3,544	3,544
	planned projects	※	10,765	10,765
	total	8,370	22,679	21,759

(source: the 5th supply and demand sectional meeting data, March 2004)

**Table 2 LNG importing enterprises and number of LNG projects**

country	enterprises	numbers of existing LNG projects	numbers of new entry LNG projects
Japan	electric co.(6)	32	6
	gas co.(8)	25	5
	others(2)	2	0
sub total		59	11
Korea	KOGAS	9	3
Taiwan	CPC	3	1
India	Petronet etc.	1	3
China	CNOOC etc.	2	2
US West Coast	Sempra etc.	0	3
Phillipine	—	0	1
total		74	24

**Table 3 LNG demand estimate method in Asia Pacific region  
by the calculation of individual project**

<b>(1)estimate year</b>		2010, 2015
<b>(2)import country</b>	<b>existing country</b>	Japan, Korea, Taiwan,India
	<b>new entry county</b>	China,US West Coast, Philiphne
<b>(3)LNG demand estimate measurment</b>		previous contract amount+contract extended amount+new contract amount
<b>(4)new project</b>	<b>inclusion matters</b>	・sales and purchase contracted confirmed
		・resources,exporting partoner,year to start confirmed
	<b>actual project</b>	India ( Dahle,Coach)
		China (NWS extenrd,Tangguh,Iran,Gorgon)
US West Coast (Sakhalin II ,Tangguh)		
		Phillipine (NWS)

**Table 4 LNG supply and demand prospect in Asia Pacific region**  
(unit : 10 thousand ton/year)

year		2004	2005	2010	2015
existing contracts	Japan	5,801	5,821	5,528	3,159
	Korear	1,936	1,936	1,456	1,186
	Taiwan	566	566	566	184
	India	500	500	500	500
	China	0	0	0	0
	US West Coast	0	0	0	0
	Philippine	0	0	0	0
	sub total	8,803	8,823	8,050	5,029
extened contracts	Japan	0	0	856	3,226
	Korear	0	0	480	550
	Taiwan	0	0	0	225
	India	0	0	0	0
	China	0	0	0	0
	US West Coast	0	0	0	0
	Philippine	0	0	0	0
	sub total	0	0	1,336	4,001
new contracts	Japan	0	0	63	63
	Korear	0	0	285	285
	Taiwan	0	0	300	300
	India	0	0	1,500	1,500
	China	0	0	1,380	1,630
	US West Coast	0	0	960	960
	Philippine	0	0	100	150
	sub total	0	0	4,588	4,888
<b>total</b>		<b>8,803</b>	<b>8,823</b>	<b>13,974</b>	<b>13,918</b>

# The government vs Individual Prospect

(unit : ten thousand ton)

		government	individual
2010year	high demand case	12,400	13,974
	low demand case	10,000	
2015year	high demand case	16,300	13,918
	low demand case	12,000	

**The LNG supply and demand forecast can be viewed relatively optimistic in 2010 and 2015**

# Current Chinese Gas Problems

- First two LNG contracts were signed on very favorable terms: low base prices plus ceiling prices not linked to oil, plus upstream equity shares
- Rise in oil prices plus tight Asia –Pacific market means that:
  - LNG suppliers will no longer offer these terms to Chinese importers
  - Without these price terms, gas cannot compete in Chinese power sector
  - China is already being outbid by Japanese suppliers for new LNG

**Might China be forced towards pipeline gas because of LNG market competition?**

# Russian Gas Export to Korea

- ❏ Most attractive pipeline suppliers are from Sakhalin and could contribute to a North Korean energy solution;
- ❏ Kovykta pipeline suppliers are possible but expensive and will depend on Chinese willingness and timing;
- ❏ LNG from Sakhalin (and other sources) will be competitive with -and lower cost than- pipeline gas

**Uncertainties about privatization, restructuring/deregulation and Korean Peninsula politics are obstacles to rapid decision-making**

# Russian Gas Export to Japan

- Sakhalin II partners have sold LNG to gas and electricity utilities
- Gazprom has joined the project as shareholder

**BUT:**

- No resolution of Russo-Japanese political problems (Peace Treaty, territories)
- Uncertainty about utility liberalization
- Electric utilities prefer nuclear/coal to gas

**No immediate change of pipeline gas to Japan despite proximity to Sakhalin**

# Serious political and Security Problems in North East Asia in the mid 2000s

- ❏ China-Japan friction: partly over a disputed gas field and oil pipeline from Russia
- ❏ China-Korea friction: partly over Korean Peninsula problem
- ❏ Korean-Peninsula problem: likely to be resolved without natural gas pipeline solution

**Russian pipeline gas and LNG has a huge future in East Asia but not for the next decade at least. Development needs cooperation, not competition and conflict**