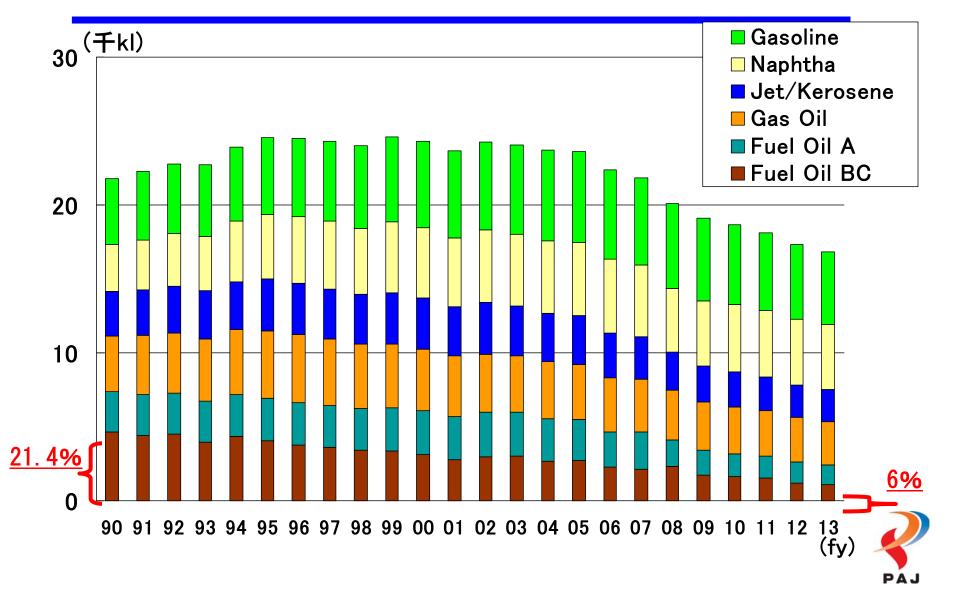
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# Mid-term Oil Demand Outlook in Japan

Nobuo Hata
Managing Director,
Petroleum Association of Japan



# 1. Demand Trend and Outlook



# 2. Framework of Outlook

#### **Economic Framework**

(%)

Growth rate	fy2008	fy2009	fy2010	fy2011	fy2012	fy2013
GDP	▲0.8	0.0	1.5	1.4	1.4	1.4
IIP	<b>▲</b> 5.5	<b>4.8</b>	4.9	1.2	1.2	1.2

#### Production in major industries

(10,000t)

	fy2008	fy2009	fy2010	fy2011	fy2012	fy2013
Crude steel	10,550	10,137	10,235	10,345	10,443	10,553
Paper	2,885	2,829	2,807	2,789	2,767	2,749
Cement	6,130	5,800	5,741	5,683	5,625	5,574
Ethylene	652	679	704	687	676	672

 $<sup>\</sup>times$ exchange rate ( $\frac{4}{\$}$ ): fy2008  $\times$ 101.7, fy2009 onward  $\times$ 96.9

\*\*GDP outlook is based on government economic outlook (cabinet approval in Jan 2009). Council on Economic and Fiscal Policy (Jan 2009)

<sup>\*\*</sup>Crude oil price(\$/B): fy2008 \$94.3, fy2009 \$58.4, fy2010 onward \$58.8

# 3. Gasoline

#### 1. Demand Outlook

(1,000kl)

fy2008	fy2009	fy2010	fy2011	fy2012	fy2013
57,473	55,949	54,090	52,466	50,561	48,862
▲2.7%	▲2.7%	▲3.3%	▲3.0%	▲3.6%	▲3.4%

#### 2. Current situation

- Aging population, fewer children, population decline and young people prefer not driving cars
- Decline of driving mileage by increase of aged and female drivers
- Improvement of fuel efficiency

### 3. Affecting factors in future

PAJ

Increase of hybrid-car and electric vehicle

# 4. Naphtha

#### 1. Demand Outlook

(1,000kl)

fy2008	fy2009	fy2010	fy2011	fy2012	fy2013
42,873	44,006	45,431	44,668	44,174	43,957
▲11.7%	2.6%	3.2%	▲1.7%	▲1.1%	▲0.5%

#### 2. Current situation

- Decline of domestic demand of petrochemical products by recession
- Production of ethylene, BTX recover in the latter half of 2009

#### 3. Affecting factors in future

 Newly-build or addition of ethylene-production capacity in Asia and Middle East



# 5. Jet Fuel

#### 1. Demand Outlook

(1,000kl)

fy2008	fy2009	fy2010	fy2011	fy2012	fy2013
5,676	5,684	5,680	5,709	5,769	5,861
<b>▲</b> 4.1%	0.1%	▲0.1%	0.5%	1.1%	1.6%

#### 2. Current situation

- Improvement in fuel efficiency of civil aviation
- Rationalization of airline routes due to recession
- 3. Affecting factors in future
- Expansion of Tokyo International Airport (Haneda)



# 6. Kerosene

#### 1. Demand Outlook

(1,000kl)

fy2008	fy2009	fy2010	fy2011	fy2012	fy2013
20,250	18,901	17,923	17,120	16,375	15,848
▲10.7%	▲6.7%	▲5.2%	<b>▲</b> 4.5%	<b>▲</b> 4.4%	▲3.2%

#### 2. Current situation

- Shift of heating fuels to electricity or town gas
- Decline of industry use by recession
- Mild winter

#### 3. Affecting factors in future

Competition in home heating fuel market



# 7. Gas Oil

#### 1. Demand outlook

(1,000kI)

fy2008	fy2009	fy2010	fy2011	fy2012	fy2013
33,722	32,593	31,634	30,880	30,156	29,532
▲5.2%	▲3.3%	▲2.9%	▲2.4%	▲2.3%	▲2.1%

#### 2. Current situation

- Decline continues since fy1996
- Reduction of transportation demand by recession
- Declining of a number of trucks by rationalizing the distribution

#### 3. Affecting factors in future

Further rationalization of the distribution



# 8. Fuel Oil A

#### 1. Demand Outlook

(1,000kl)

fy2008	fy2009	fy2010	fy2011	fy2012	fy2013
17,891	16,673	15,689	14,840	14,050	13,361
<b>▲</b> 16.3%	▲6.8%	▲5.9%	<b>▲</b> 5.4%	▲5.3%	<b>▲</b> 4.9%

#### 2. Current situation

- Mining and Manufacturing: declining production by recession
- Agriculture and fishery: declining working population
- Fuel change from environmental consideration and energy conservation measures
- 3. Affecting factors in future
- Progress of fuel shift to town gas



# 9. Fuel Oil BC (for general use)

#### 1. Demand Outlook

(1,000kl)

fy2008	fy2009	fy2010	fy2011	fy2012	fy2013
10,334	8,356	7,542	6,882	6,304	5,820
▲6.8%	<b>▲</b> 19.1%	<b>▲</b> 9.7%	▲8.8%	▲8.4%	<b>▲</b> 7.7%

#### 2. Current situation

- Declining production activities by recession
- Fuel change from environmental consideration
- 3. Affecting factors in future
- Progress of fuel shift to town gas



# 10. Fuel Oil C (for electric power)

#### 1. Demand Outlook

(1,000kl)

	fy2008	fy2009	fy2010	fy2011	fy2012	fy2013
	12,823	8,964	8,575	8,402	5,801	4,964
	▲10.1%	▲30.1%	<b>▲</b> 4.3%	▲2.0%	▲31.0%	<b>▲</b> 14.4%
Electricity demand	▲3.3	<b>▲</b> 1.5	0.6	1.1	0.3	0.6

- 2. Current situation
- Declining power demand by recession
- 3. Affecting factors in future
- Further increase in LNG and nuclear power generation



# 11. Supply Scenarios in 2013

#### case 1 Throughput based on gasoline and naphtha yield

Throughput is 192,247 thousand kl Utilization rate is 68.6%

#### case2 Throughput based on 4 middle distillate yield

Throughput is 143,241 thousand kl Utilization rate is 51.1%

#### case3: Throughput based on volume of import and export

Throughput is 178,711 thousand kl Utilization rate is 63.8%

\*The utilization rate is calculated based on the crude distillation capacity as of Apr.2009 (4,895B/D)



# 12. Mid/Long-term Issues

## **Price**

- Crude oil price
- Tax system

## **Export**

Demand in Asia

## **Environment**

- Global warming issues
- Energy conservation

## **Social**

- Change of social structure
- Change of industrial structure



# Thank you for your attention.

