

8 September 1997

## HIGHLIGHTS

- A tenuous balance between demand and supply will characterise third-quarter oil markets, with supply augmented in mid-August by the return of 1.6 mb/d of Iraqi exports. Significant upside and downside risks exist for both supply and demand, but supply uncertainties seem to be lower. An anticipated large stockbuild for the quarter is not yet evident.
- Global oil demand in the second quarter has been revised downwards to 72.5 mb/d due to weak Other Asian demand and a significant revision of US demand figures for June. Nevertheless, global demand increased strongly in the quarter, by 2.6 mb/d, reflecting buoyant North American growth, robust European heating oil deliveries and a turnaround in FSU apparent demand.
- OECD industry stocks unexpectedly decreased slightly in July, despite an apparent excess of supply over demand. Oil-in-transit may have risen sharply during July. US gasoline stocks fell to a record low in August.
- The potentially bearish impact of the resumption of Iraqi crude exports on prices for Atlantic Basin benchmark crudes Brent and WTI was largely balanced by surging gasoline prices on both sides of the Atlantic and by strong refiner demand for crude.
- Average refining margins increased appreciably in August in both the US and Europe, but declined further in Singapore. In July, aggregate crude throughputs in OECD countries were 800 kb/d or 2.5% higher than a year earlier, averaging just under 34 mb/d, the highest level of the decade. US throughputs remained above 15 mb/d for the third month in succession.
- The peak in the forthcoming refinery turnaround season is expected in September East of Suez, in October in Europe and in November in the US. European and US maintenance is expected to match last year's levels.

## CONTENTS

HIGHLIGHTS .....	1
TENUOUS BALANCE .....	3
DEMAND .....	4
Summary .....	4
OECD .....	6
Demand in July .....	6
Demand in 2Q97 .....	10
Demand in 3Q97 .....	12
Demand in 1997 and 1998 .....	14
Non-OECD .....	14
Former Soviet Union .....	14
Mexican Demand in July .....	15
Indian Demand in June .....	15
Chinese Trade .....	16
Non-OECD Demand in 1997 and 1998 .....	16
Global Demand in 1997 and 1998 .....	17
SUPPLY .....	18
Summary .....	18
Overview of Supply Developments and Revisions .....	19
The Upstream Environment: Offshore Delays .....	20
OECD .....	20
North America .....	20
North Sea .....	22
Pacific .....	23
OPEC .....	24
Former Soviet Union (FSU) .....	25
Production .....	25
Net Exports .....	26
Other Non-OPEC .....	26
Latin America .....	26
Asia .....	27
OECD STOCKS .....	29
Industry Stock Changes in June .....	29
Preliminary Stock Levels at the End of June .....	29
Regional Stock Developments .....	30
OIL PRICES AND REFINERY ACTIVITY .....	35
Summary .....	35
Spot Crude Oil Prices .....	36
CIF Crude Import Costs .....	38
Spot Product Prices in August .....	38
End-User Product Prices .....	41
Refining Margins in August .....	42
Refinery Crude Throughputs in July .....	42
Refinery Maintenance Shutdowns .....	43
Downstream Industry Developments .....	44
TABLES .....	46
OIL MARKET REPORT CONTACTS	

## TENUOUS BALANCE

Oil markets in August were tenuously balanced, as relatively strong demand and some sporadic supply limitations allowed markets to digest the mid-month return of Iraqi exports. Market direction for the remainder of the year is clouded by the unresolved nature of the Iraqi rollover and the relative impact of counter-trends within world oil supply and demand, as discussed in the relevant sections following. Adding to the confusion, OECD inventory levels in July decreased unexpectedly, but there is evidence from tanker data that oil-in-transit surged and held relatively steady in August supported by over 1.6 mb/d of Iraqi exports that began on 14 August primarily to the US Gulf Coast and the Mediterranean. Maintenance activities in the North Sea, continued disruptions of Colombian supplies and delays in the onset of significant Azerbaijani supplies are reducing the projection of 3Q97 supplies. The anticipated "call on OPEC crude plus stock change" for 3Q97 is now seen matching 2Q97 at 25.6 mb/d, an upward revision of 0.1 mb/d from last month's Report. Projected seasonal growth of nearly 3 mb/d in world oil demand in 4Q97 versus 3Q97 is expected to exceed non-OPEC supply growth by 1.3 mb/d, raising the "call" to 26.9 mb/d.

### 1997 World Oil Balances

(million barrels per day)

	Levels				Period-to-Period Changes			
	1Q97	2Q97	3Q97	4Q97	1Q97	2Q97	3Q97	4Q97
World Demand	73.84	72.52	72.91	75.90	0.15	-1.32	0.39	2.99
Non-OPEC Supply	44.30	44.12	44.42	46.10	0.06	-0.18	0.30	1.67
OPEC NGLs	2.73	2.81	2.88	2.94	0.06	0.09	0.07	0.06
"Call on OPEC Crude + Stk Chg"	<b>26.81</b>	<b>25.59</b>	<b>25.61</b>	<b>26.86</b>	<b>0.04</b>	<b>-1.23</b>	<b>0.02</b>	<b>1.25</b>
OPEC Crude	26.84	26.81			0.58	-0.03		
Stk Chg & Misc. to Balance	<b>0.03</b>	<b>1.22</b>			<b>0.54</b>	<b>1.20</b>		

With OPEC production in August estimated at 27.3 mb/d, substantial stockbuilding is likely in the last two months of this quarter and no stockdraw would be necessary to meet daily demand in 4Q97, assuming the continuation of Iraqi exports and that other OPEC producers at least maintain current output levels. However, the overall level of world inventories is well below what had been anticipated just two months ago (see "Where Will Additional Stockbuilds Go?" in the Report dated 8 July 1997) and prices have shown considerable resilience over the last few months, following the substantial correction in the first four months of the year. In line with the discussion in last month's Report, the key issues in the market over the remainder of the year continue to be course of Iraqi exports and the degree of inventory building.

A smooth transfer to the next 90-day "oil-for-food" period would imply a reduction in the level of Iraqi exports if no carryover or repositioning of the current summer period start date is allowed by the UN from the current shortened export period. At current rates and prices, Iraq would only realise \$600 million by 6 September, leaving about \$400 million on the table at the end of the present 90-day period. Competing proposals would allow either a repositioning of the start date of the current period to 15 August, which would mean an even larger reduction output over the next two months, or to allow production levels sufficient to capture the \$400 million shortfall during the second 90-day period (up to 6 December), which would increase output. Without changes in the current structure of the "oil-for-food" agreement and at comparable price levels, Iraqi exports in 4Q97 would only have to be 1 mb/d to reach the \$1 billion revenue target, compared with 1.6 mb/d currently being exported.

The projected supply-demand balances now imply that inventory levels may not reach pre-1996 levels for comparable months until the end of 4Q97, giving the market some breathing space to digest an expected increase in non-OPEC supply. New field start-ups in the North Sea, Brazil, Colombia and the US Gulf of Mexico and the end of summer maintenance had looked threatening to the market balance earlier in the year, before the Iraqi hiatus and a number of unexpected supply-constraining events.

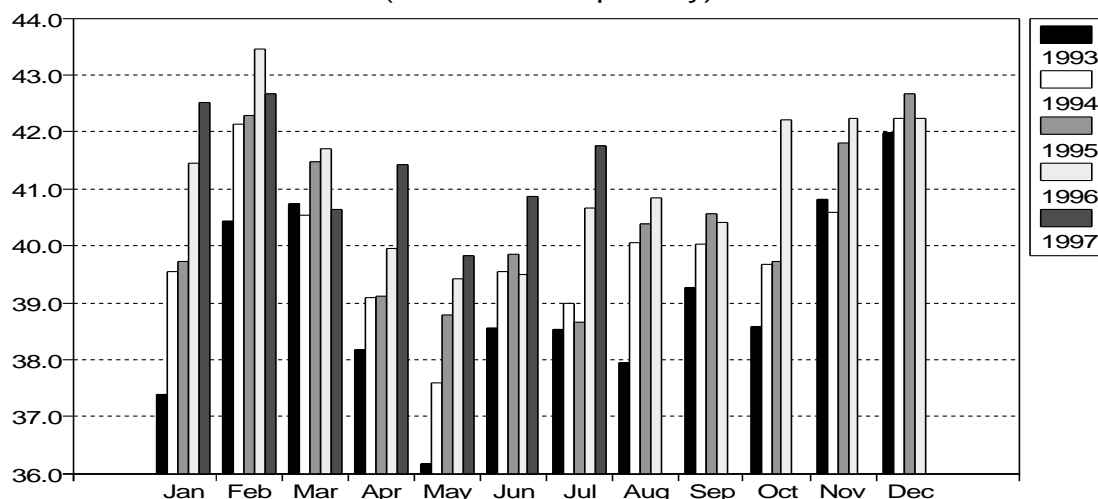
The timing of new field start-ups remains a major uncertainty, as does the impact of economic difficulties in some of the previously high oil demand growth developing countries. The underlying positive impact of new technology on existing and prospective oil supply appears to be a more durable aspect of the oil market background, combined with the ongoing strengths of the US economy, but the relative impacts on the overall balance is not at all clear.

## DEMAND

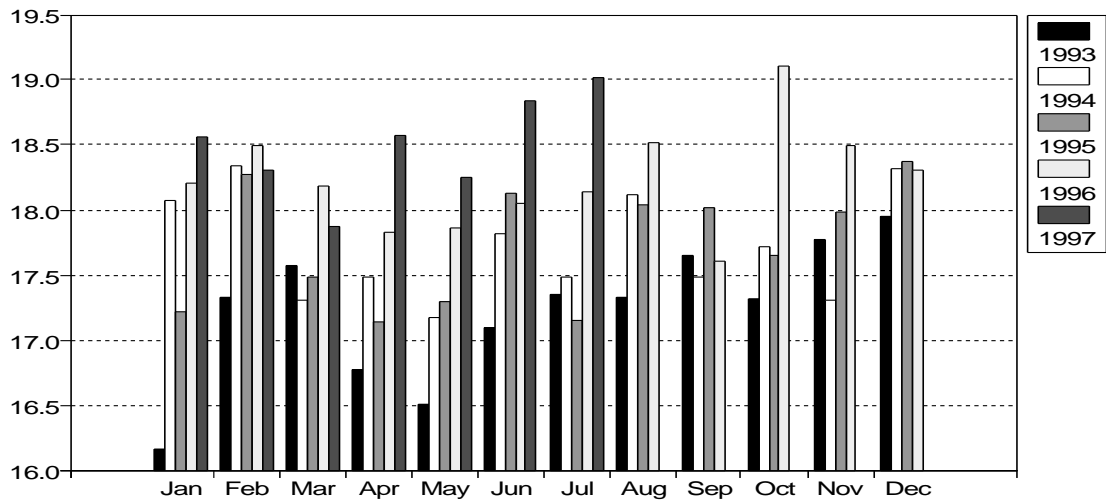
### Summary

- **July** US oil deliveries increased by 4.2%, with demand increasing for all major products except residual fuel oil. Conversely, demand fell by 0.7% in the four largest European oil-consuming countries, due to the dampening effect of a 5.1% decrease in UK deliveries caused by weak fuel oil deliveries and pre-buying in June ahead of 2 July tax increases. Japanese oil deliveries also decreased by 0.7%, with demand declining for most products except LPG and residual fuel oil. In contrast to recent months, deliveries of crude and oil products to the Japanese power generation sector increased, by 5.7%.
- OECD demand in **2Q97** has been adjusted downwards by 0.1 mb/d from last month's Report, largely reflecting a 271 kb/d revision to US demand in June. US demand is now estimated to have increased by 2.8% compared with 4.3% originally reported, with an upward revision to gasoline demand more than offset by downward adjustments to most other products. OECD demand in 2Q97 is now estimated to have increased by 1.1 mb/d (2.7%) to 40.7 mb/d. An analysis of G7 country product demand shows a decline in residual fuel oil and LPG deliveries and strong growth in naphtha and heating oil demand. Gasoline and diesel deliveries increased strongly compared to recent history, with a 2.1% increase in US gasoline deliveries representing one-fifth of total incremental G7 demand.
- The projection of OECD demand in **3Q97** remains at 41.4 mb/d, an annual increase of 1.9% or 0.8 mb/d. Stronger-than-anticipated demand in July in Canada, France and Germany was offset by US demand growth which was less than previously estimated from partial data for the month. US residual fuel oil deliveries have continued to decline despite warmer weather than last year in July. It is probable that increased fuel oil use by utilities, due to increased air-conditioning-related electricity demand, was met largely through a stock drawdown.
- The projected increase in OECD demand for oil in **1997** remains at 41.7 mb/d, an annual increase of 0.6 mb/d or 1.3%, with the downward revision to demand in 2Q97 counterbalanced by a minor upward revision to North America demand in 3Q97, reflecting strong Canadian deliveries in July. Projected OECD demand in **1998** remains at 42.2 mb/d, an annual increase of 0.5 mb/d or 1.1%. Although growth rates in 1998 are unchanged, the modification to demand in 2Q97 has resulted in a small revision to the projected demand levels in 2Q98.
- **Non-OECD** demand in 1997 is projected to increase by 4.2% or 1.3 mb/d to 32.1 mb/d. Minor downward revisions to Asian demand in 2Q97 due to weak Thai deliveries and indications of slower growth in other countries in Southeast Asia have been offset by an upward adjustment to FSU apparent demand in 3Q97. Although non-OECD demand growth in 1998 remains unchanged at 4.3%, due to a minor revision to 1997 demand (and rounding) demand levels in 1998 have been revised downwards by 0.1 mb/d to 33.4 mb/d. **Global demand** in 1997 of 73.8 mb/d represents an annual increase of 1.8 mb/d or 2.6%. Global demand in 1998 is expected to increase at a similar rate, to 75.6 mb/d.

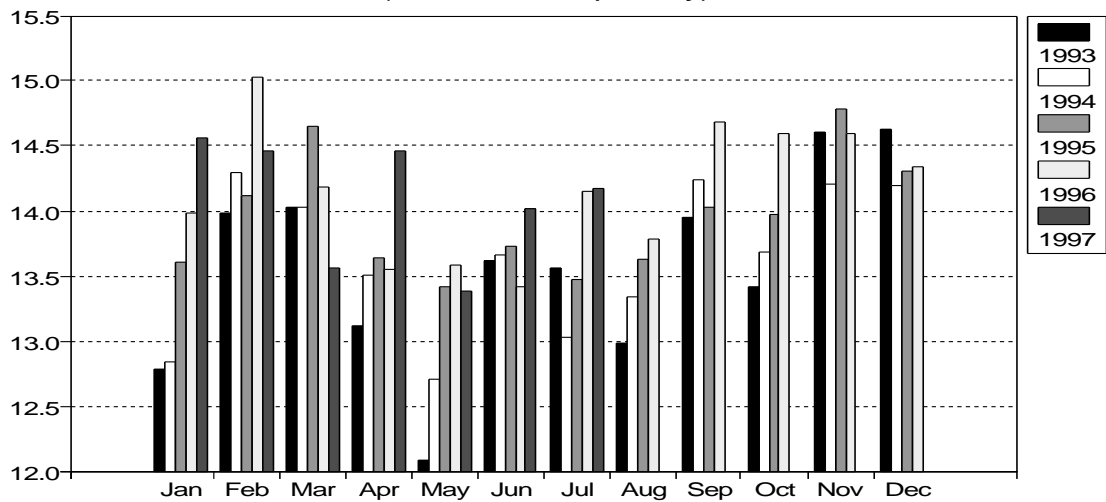
**OECD Oil Demand 1993-1997**  
(million barrels per day)



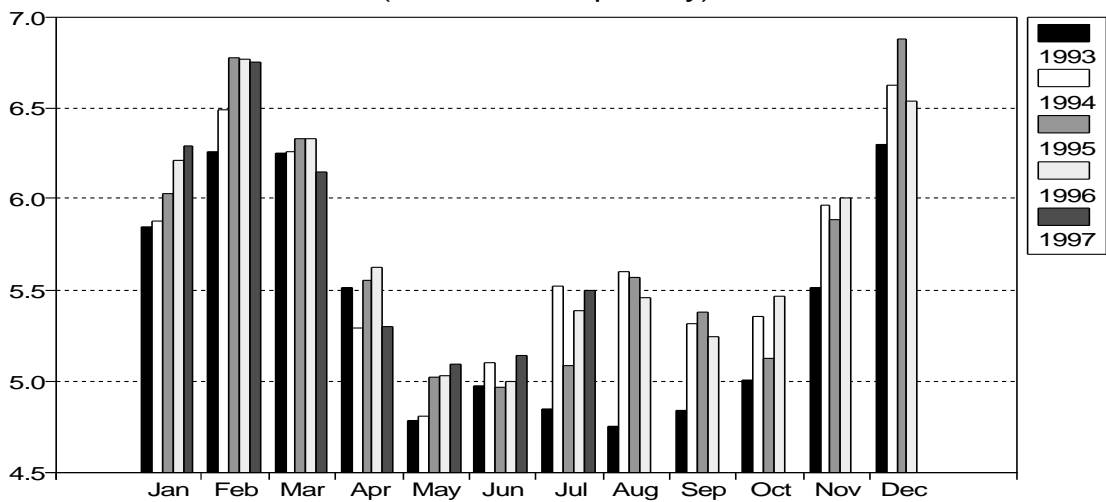
### US Oil Demand 1993-1997 (million barrels per day)



### European Oil Demand 1993-1997 (million barrels per day)



### Japanese Oil Demand 1993-1997 (million barrels per day)



**OECD<sup>1</sup>***Demand in July*

The table below provides preliminary estimates for inland deliveries for the seven largest OECD countries in July. Table 3 at the back of the Report gives demand in June for the same countries while Table 2 shows total OECD oil demand in May on a regional basis.

**Preliminary Inland Deliveries - July 1997<sup>1</sup>**

	Gasoline		Jet/Kerosene		Diesel		Other Gasoil		Residual Fuel Oil		Total Products <sup>2</sup>	
	mb/d	% change	mb/d	% change	mb/d	% change	mb/d	% change	mb/d	% change	mb/d	% change
US <sup>3</sup>	8.53	+4.8	1.62	+2.8	2.19	+4.2	1.11	+17.9	0.88	-2.5	18.90	+4.2
Canada	0.68	+3.5	0.12	+1.7	0.39	+9.7	0.03	-6.1	0.11	+14.4	1.64	+5.9
Japan	0.96	+0.0	0.30	-1.0	0.80	-3.3	0.41	-2.1	0.70	+4.6	4.99	-0.7
France	0.39	-0.6	0.12	-0.2	0.55	+3.5	0.37	+17.4	0.05	-3.3	1.96	+2.6
Germany	0.70	-3.2	0.15	+3.1	0.57	+2.9	0.77	+5.5	0.09	-26.5	2.81	+0.5
Italy	0.45	+1.2	0.07	+6.6	0.35	+2.2	0.10	-0.5	0.41	-10.5	1.77	-1.9
UK	0.52	-1.9	0.24	+2.1	0.30	-1.8	0.14	-4.3	0.05	-55.1	1.54	-5.1
<i>European Four</i>	2.06	-1.5	0.58	+2.4	1.76	+2.1	1.39	+6.8	0.60	-18.8	8.07	-0.7
<b>Total</b>	<b>12.23</b>	<b>+3.2</b>	<b>2.62</b>	<b>+2.2</b>	<b>5.14</b>	<b>+2.6</b>	<b>2.94</b>	<b>+9.1</b>	<b>2.29</b>	<b>-4.8</b>	<b>33.60</b>	<b>+2.3</b>

Sources: US EIA, Japan MITI, France CPDP, Germany MWV, UK PIA, Italy Ministry of Industry, Canada Statistics Canada

<sup>1</sup> Excludes refinery fuel and bunkers (except US)

<sup>2</sup> Includes other products not shown and direct use of crude oil

<sup>3</sup> Fifty states only. Diesel is estimated from preliminary indications of low sulphur gasoil deliveries

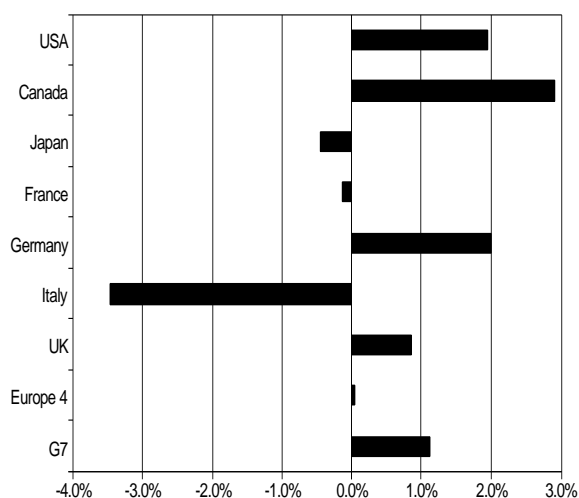
Percentage change is calculated versus July 1996

**Moving Annual Average Change in Oil Demand**

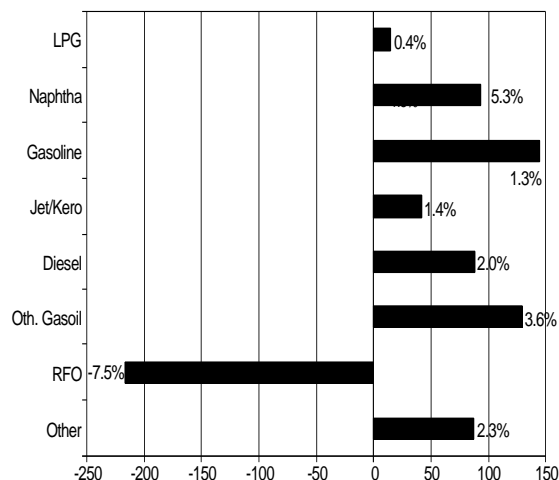
(12-Month Moving Average to July 97)

	LPG	Naphtha	Gasoline	Jet/Kero	Diesel	Other Gasoil	RFO	Other	Total	kb/d
USA <sup>1</sup>	0.8%	23.6%	1.4%	2.4%	3.8%	1.5%	-5.2%	3.9%	2.0%	353
Canada	-0.9%	11.9%	1.6%	7.9%	1.2%	5.2%	4.5%	3.8%	2.9%	55
Japan	1.2%	4.6%	2.7%	-3.4%	0.5%	-1.2%	-6.7%	-1.8%	-0.4%	-26
France	0.1%	-6.8%	-3.3%	3.2%	3.6%	5.1%	-6.3%	-4.7%	-0.1%	-3
Germany	-9.8%	6.3%	-0.2%	6.0%	2.1%	6.0%	-11.6%	1.6%	2.0%	58
Italy	-4.0%	-0.3%	1.1%	-0.2%	-11.2%	15.5%	-10.6%	6.5%	-3.5%	-67
UK	5.5%	-12.7%	1.8%	4.9%	5.8%	2.5%	-17.6%	1.6%	0.9%	16
<i>European Four</i>	-1.1%	-0.1%	0.0%	4.2%	0.3%	6.4%	-11.2%	0.5%	0.0%	3
<b>Total</b>	<b>0.4%</b>	<b>5.3%</b>	<b>1.3%</b>	<b>1.4%</b>	<b>2.0%</b>	<b>3.6%</b>	<b>-7.5%</b>	<b>2.3%</b>	<b>1.1%</b>	<b>385</b>
kb/d	15	93	145	43	89	130	-216	88	385	

**G7 - 12 Month Moving Average  
Annual Demand Change (%)**

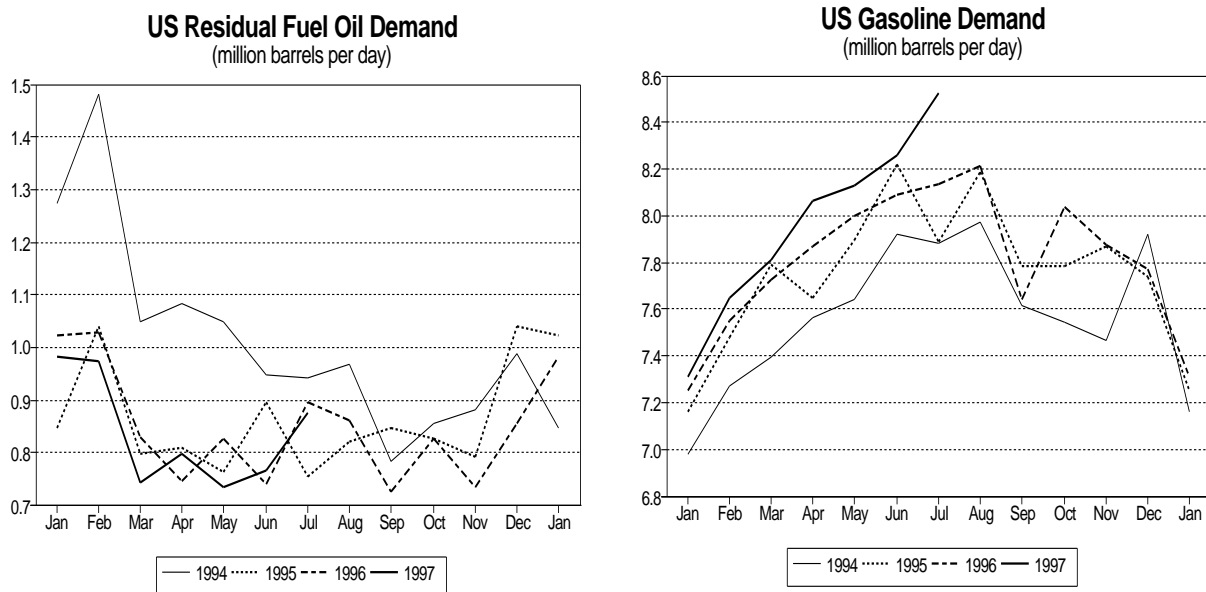


**G7 - 12 Month Moving Average  
Incremental Demand (kb/d & %)**

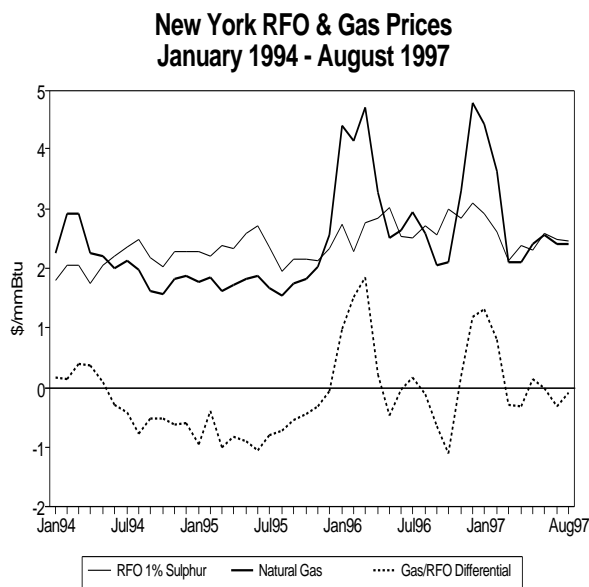
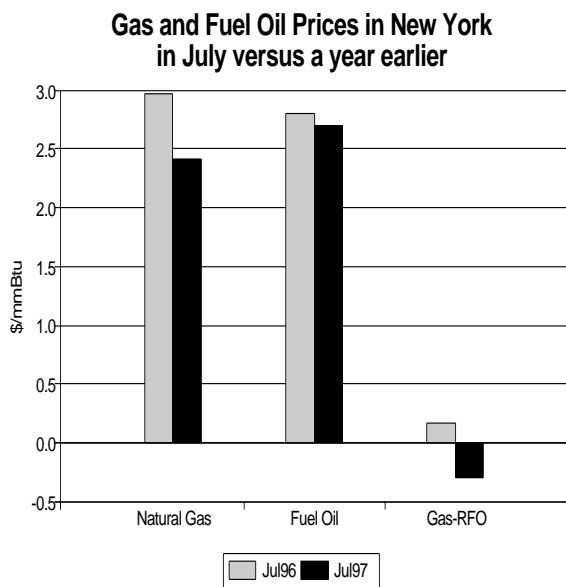


<sup>1</sup> Excluding some member countries, see note on back cover

Total US deliveries increased by 4.2% or 760 kb/d, with demand increasing for all products except residual fuel oil. More than half of the total increment was due to a 4.8% increase in gasoline deliveries, far in excess of the 1.4% increase in the 12-month moving average and the 2.1% increase in 2Q97 (see page 12). Growth in disposable incomes, and moderate retail prices, have both been favourable for increased gasoline demand in recent months, with retail prices in mid-July some 4.8% lower than a year earlier. Diesel deliveries increased significantly in line with strong commercial road and rail haulage, although there are indications that deliveries increased more than actual consumption. Other gasoil deliveries rose by 17.9% or 170 kb/d, far in excess of expectation, given that deliveries of heating oil in the summer are usually small and vary little. This may indicate that the preliminary data will be subject to subsequent revision. Jet/kerosene deliveries increased moderately, reflecting strong growth a year earlier, but by a rate slightly greater than the 12-month moving average (2.8% versus 2.4%) as continuing strong economic growth has resulted in strong increases in air cargo demand.



Following June's year-on-year increase in residual fuel oil deliveries (the first in ten months), deliveries in July fell back, by 2.5% or 22 kb/d. However, hotter weather than last year in the Northeast (see chart on page 13) is believed to have led to greater residual fuel oil consumption, as higher air-conditioning demand for electricity led to an increase in output from the power generation sector. The Mid-Atlantic and New England regions experienced 23.4% and 31.8% more cooling degree days than last year, albeit 8.1% and 5.0% less than normal. It is likely that utilities have drawn down fuel oil stocks to meet higher consumption, rather than increase purchases at unfavourable prices. Fuel oil deliveries to the power generation sector were not supported by fuel oil's price differential to natural gas, with fuel oil at a premium to natural gas in New York compared with a discount a year earlier (see graph below). Residual fuel oil prices in New York were at a \$0.30/mmBtu premium to natural gas in mid-July compared with a discount of \$0.17/mmBtu in July 1996.



The table below highlights the difference between preliminary US demand growth rates derived from the DOE/EIA's Weekly Petroleum Status Report and data provided by the American Petroleum Institute. The two organisations' estimates of total US demand for July again diverged, but by significantly less than in recent months. In addition, the two organisations are in broad agreement as to the direction of demand change for all products except residual fuel oil. As between them, API estimates higher demand growth for jet/kerosene, residual fuel oil and "other" products but lower growth for gasoline and gasoil.

**Comparison Between Estimates of Annual US Oil  
Demand Growth in July 1997**

	EIA	API	EIA-API kb/d
Gasoline	4.8%	3.6%	132
Jet/Kerosene	2.8%	5.8%	-49
Total Gasoil	8.4%	8.1%	-17
Diesel	na	3.6%	na
Other Gasoil	na	18.2%	na
Residual Fuel Oil	-2.5%	1.7%	-38
Other	2.0%	6.1%	-58
<b>Total</b>	<b>4.2%</b>	<b>4.7%</b>	<b>-30</b>

EIA = US Department of Energy, Energy Information Administration  
API = American Petroleum Institute

Demand in the four largest European oil-consuming countries decreased by only 0.7% or 54 kb/d in July, due to a 5.1% or 83 kb/d decrease in UK deliveries, caused by pre-buying in June ahead of excise duty increases on road transport fuels in the 2 July Budget. UK deliveries were also weak due to continuing year-on-year declines in residual fuel oil deliveries, following the cessation in March 1997 of *Orimulsion* deliveries to electricity utilities, which had been recorded in official government statistics as a fuel oil. French and German deliveries increased moderately, with strong increases in gasoil deliveries offsetting declines in gasoline and residual fuel oil. Italian deliveries declined, primarily due to a reduction in fuel oil deliveries, consistent with increased gas penetration in the power generation sector.

In **France**, deliveries were dampened by one fewer working day than a year earlier. However, heating oil deliveries increased by 17.4% or 56 kb/d, reaching record levels for July. Timing of heating oil deliveries in the summer months is particularly affected by perceptions of future retail prices, not necessarily by current prices. Although heating oil prices were some 6.9% higher than in the previous July, deliveries may have been encouraged by prevailing prices that were lower than earlier in the year. Gasoline deliveries declined despite a 2.0% decline in the previous July, consistent with the continuing dieselisation of the passenger car fleet that has contributed to a 3.3% decline in deliveries on a 12-month

moving average basis. The decline would have been greater had not demand been supported by an increase in foreign tourist traffic, particularly from the UK, due to favourable exchange rates. In contrast to the general weakness for gasoline, deliveries of diesel increased by 18 kb/d or 3.5%, and by 3.6% on a 12-month moving average. Residual fuel oil deliveries declined marginally with a 0.3% increase in deliveries to industry more than offset by a 35.7% decrease in deliveries to the electricity company, EDF. By the end of July, deliveries to EDF had declined by 47% on a 12-month moving average. Electricity production in the first six months of the year declined by 2.8%, with oil and coal use particularly affected by weaker electricity demand, lower electricity exports and resulting spare production capacity at nuclear and hydro facilities. Following a 37.6% decline in naphtha deliveries in July 1996, deliveries this July recovered, increasing by 5.4% or 14 kb/d, but by an amount insufficient to reverse a 12-month moving average decline of 6.8%.

**German** oil demand increased by 0.5% or 15 kb/d, with strong gasoil and “other” product deliveries to more than offset by declines in gasoline, residual fuel oil and LPG. The increase in heating oil deliveries was greater than the assumed increase in consumption (based on consumer stock data), with consumer stocks ending the month some 6.5 mb higher than a year earlier. The size of the shift in consumer stocks compared with ex-refinery deliveries is probably indicative of a shift in stocks from secondary to tertiary (or consumer) level. In June, a large increase in deliveries probably indicated a significant stockbuild at a secondary level, far in excess of the stockbuild that took place at the tertiary level. The consumer stockbuild in July appears to have been partly motivated by a perception of a further weakening of the Deutschmark against the dollar. Elsewhere, increased gas penetration in the industrial and utility sectors contributed to a 26.5% decline in fuel oil deliveries, taking the 12-month moving average decline in deliveries to 11.6%.

#### Percentage Annual Change in Retail Prices in July 1997<sup>1</sup>

(% per annum change in local currency)

	Gasoline	Diesel	Heating Oil	RFO
USA	-4.8%	na	2.3%	na
Canada	-1.6%	4.4%	na	na
Japan <sup>2</sup>	0.0%	4.6%	10.0%	17.8%
France	2.5%	4.3%	6.9%	7.2%
Germany	2.1%	2.8%	4.5%	4.4%
Italy	0.9%	1.9%	2.8%	-2.2%
UK	16.0%	16.7%	-0.7%	-3.1%
European Four Average	5.4%	6.4%	3.4%	1.6%
G7 Average <sup>3</sup>	2.2%	5.8%	4.3%	4.8%

<sup>1</sup> Mid-month prices

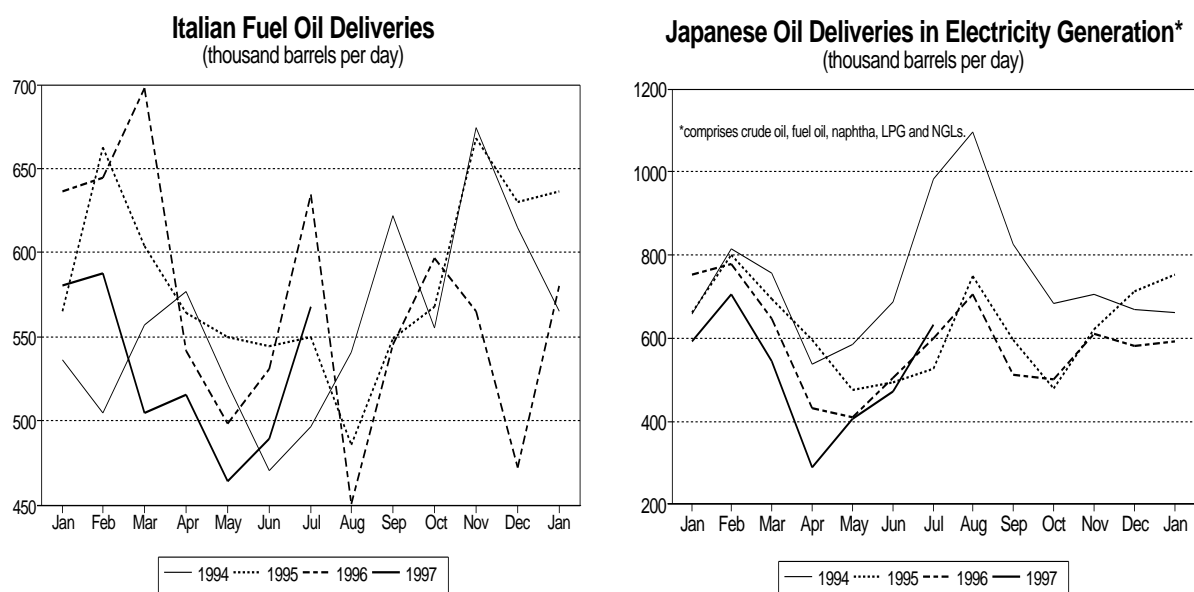
<sup>2</sup> Japanese heating oil is represented by kerosene

<sup>3</sup> Countries with missing data are excluded from the average calculation

Oil demand in the **UK** decreased by 5.1% or 83 kb/d, with deliveries declining for all fuels except LPG (+4.4%) and jet/kerosene (+2.1%). Deliveries were weak partly as an effect of pre-buying in June by wholesalers ahead of increased excise duties on most products in the 2 July Budget. Road transport fuel deliveries were particularly affected, with gasoline and diesel deliveries declining by a combined 16 kb/d. The combination of excise increases (in November 1996 and July 1997), with a cessation in a retail price war, led gasoline and diesel retail prices higher in mid-July by 16.0% and 16.7% respectively compared with a year earlier. In the most recent Budget increase, the excise component of gasoline and diesel was raised by 9.3%. More significant, however, was the 55 kb/d or 55.1% decline in residual fuel oil deliveries caused by the combination of the cessation in March 1997 of the use of Venezuelan *Orimulsion* in the power generation sector and ongoing substitution by natural gas. This which contributed to a 17.6% decline in fuel oil deliveries on a 12-month moving average. Strength in LPG and jet/kerosene deliveries was partly due to the absence of tax increases for LPG and the exemption from consumption taxes for a substantial majority of jet fuel purchased at the UK's international airports. Naphtha deliveries declined by 13 kb/d or 22.7%, reflecting strong demand a year earlier and consistent with the recent weak trend.

**Italian** oil deliveries decreased by 1.9% or 35 kb/d, primarily due to a 48 kb/d decline in residual fuel oil deliveries, which more than offset moderate growth for most other products. Despite an apparent decline in deliveries of fuel oil to the power generation sector, consumption of fuel oil probably increased in July to meet a 5.0% increase in electricity demand. Thermal power generation (including gas-fired output) increased by 4.2% and hydro-electric output climbed by 24.7%. Electricity demand was also met by a 1.4% increase in electricity imports. For the year-to-date, electricity demand has increased by 2.2%, which

has been largely met by increased hydro-electric output and electricity imports. Output from thermal power stations that consume oil or natural gas increased by only 0.1%. The weakness in fuel oil use in the power generation sector is related to the ongoing substitution of Algerian natural gas for fuel oil. However, the latest data indicate weak demand for all thermally-generated electricity in the face of the increased hydroelectric output and electricity imports.



In July, **Japanese** oil demand decreased by 0.7% or 37 kb/d, with deliveries declining for most products, with the exception of LPG and residual fuel oil. In recent months, Japanese demand has been dampened by weak crude and fuel oil deliveries as the electricity utility companies have progressively reduced purchases. In contrast, July's total oil deliveries to the power generation sector increased by 5.7%, primarily due to an increase in crude oil and LPG deliveries to the utility companies of 6.1% and 105.8% respectively. Deliveries of residual fuel oil to the power generation sector increased by a more modest 0.7%, compared to an electricity demand increase of 1.2%. Due to increases in hydro, nuclear and coal use of 17.7%, 6.0% and 1.8% respectively, LNG and total oil use declined by 3.5% and 13.0% respectively. The latter contributed to a drop in oil stocks at the utility companies, which ended the month some 2.2% lower than a year earlier. Almost 30% of the 45 kb/d increase in LPG deliveries was attributable to increased deliveries to the power generation sector, with most of the remainder due to feedstock switching in the petrochemical sector. However, the switch to LPG was less than the overall decline in naphtha deliveries, which fell by 50 kb/d or 6.4%. Gasoline deliveries were essentially unchanged but diesel deliveries declined by 3.3% compared with a 0.5% increase in the trend, partly due to an abnormally large 5.5% increase in the previous July.

#### Demand in 2Q97

OECD demand in 2Q97 increased by 1.1 mb/d or 2.7% to 40.7 mb/d, a 0.1 mb/d downward revision from last month's Report, reflecting a combination of revisions to preliminary G7 demand data for June and receipt of delivery data from some smaller oil-consuming countries in May and June. Despite these revisions, overall growth has been comparatively strong, reflecting a combination of weak demand a year earlier, a large consumer heating oil stockbuild in Germany and robust US and Canadian economies.

#### Second Quarter OECD Oil Demand by Region

(million barrels per day)

	2Q96	2Q97	Change	
			mb/d	%
North America	19.9	20.6 <sup>r</sup>	0.7	3.4
Europe	13.5	14.0 <sup>r</sup>	0.4	3.2
Pacific	6.2	6.1	-0.0	-0.6
<b>Total</b>	<b>39.6</b>	<b>40.7 <sup>r</sup></b>	<b>1.1</b>	<b>2.7</b>

<sup>r</sup> Revised from last month's Report

**North American** demand has been revised downwards by 86 kb/d from last month's Report, to 20.6 mb/d, primarily due to a 270 kb/d downward adjustment to preliminary estimates of US demand in June. June demand is now estimated to have increased by 2.8%, compared with 4.3% originally reported. Although the estimate of gasoline demand growth was increased (as was anticipated in last month's Report) from 0.8% to 2.1%, the impact on incremental demand was more than offset by downward revisions to the growth rates for jet/kerosene, gasoil and residual fuel oil. Conversely, the preliminary estimate of Canadian demand growth in June was revised upwards from 3.9% to 5.4%, representing an additional 33 kb/d of demand, primarily due to adjustments to the residual fuel oil demand estimate, from 10.3% to 15.8%. The strength in North American demand across almost all oil products and in both the US and Canada is symptomatic of strong economic growth that is viewed as likely to continue in the second half of the year.

A 131 kb/d upward revision to last month's preliminary estimate of June demand in the four largest **European** oil-consuming countries was offset somewhat by weaker-than-anticipated demand in Spain and Sweden. This result was an overall upward revision to European demand of 42 kb/d for the quarter. Spanish demand increased by only 2.2%, while Swedish deliveries declined by 4.0%. The estimate of European demand in 2Q97 remains sensitive to revision due to the incomplete June data from a small group of countries.

**Pacific** demand has been revised downwards by 20 kb/d, reflecting downward revisions for Japan in May and June and weaker-than-expected demand in Australia and New Zealand. Japanese demand in May increased by 0.8% (compared with 1.2% originally reported), leading to a 18 kb/d downward adjustment for the month. Moreover, New Zealand demand declined unexpectedly in June, by 8.4%, a reduction of some 14 kb/d from the previous estimate. Pacific demand in the quarter is now estimated to have declined by 0.6%, primarily due to weak deliveries to the Japanese power generation sector.

#### Change in Number of Working Days in 2Q97 and 3Q97 Compared with a Year Earlier<sup>1</sup>

	USA	Canada	Japan	France	Germany <sup>2</sup>	Italy	UK
April	-	2	-	1	2	1	2
May	-1	-1	-	-1	-1	-1	-1
June	1	1	1	1	1	1	1
2Q97	0	2	1	1	2	1	2
July	-	-	-	-1	-	-	-
August	-1	-1	-1	-1	-1	-1	-1
September	1	1	1	1	1	1	1
3Q97	0	0	0	-1	0	0	0

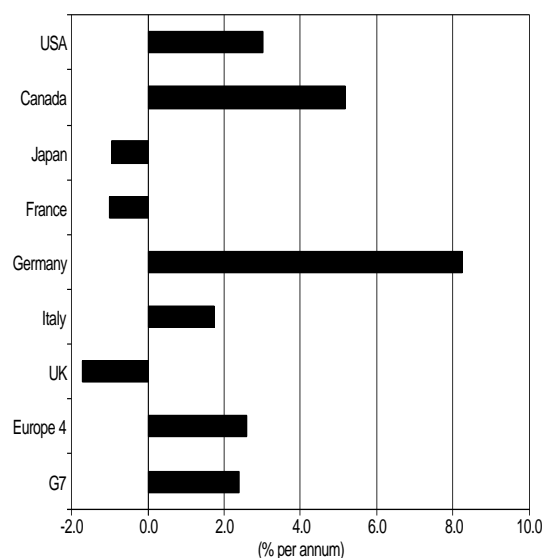
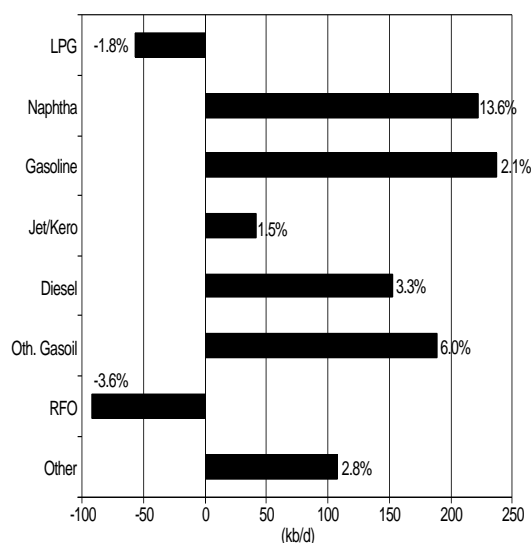
<sup>1</sup> Includes public holidays

<sup>2</sup> Public holidays in Germany are based on Southern German dates

The table below shows annual demand changes for major oil products for the G7 countries in 2Q97, following revisions to preliminary demand data for June. Ongoing substitution for residual fuel oil, primarily by natural gas, led to a 3.6% decline in fuel oil deliveries. However, the decline in the UK was due to the cessation in March 1997 of *Orimulsion* deliveries to electricity utilities; *Orimulsion* had been recorded in official government statistics as a fuel oil. The decline in Italian fuel oil deliveries was mainly attributable to the start-up of a new Algerian gas contract for ENEL in October 1996. LPG deliveries declined in most G7 countries, reflecting feedstock switching in the petrochemical sector, lower demand for space heating and higher consumer stocks due to milder weather in the quarter and in 1Q97. In addition, greater MTBE (methyl tertiary butyl ether) production may have led to an increased diversion of LPG components within the refinery, reducing LPG deliveries from the refinery. The petrochemical feedstock switching is evident in the 13.6% increase in naphtha deliveries. The 223 kb/d increase is outweighed only by the 2.0% or 237 kb/d increase in gasoline deliveries. Gasoline deliveries increased strongly in most countries, except in France, where the ongoing dieselisation of the passenger car market resulted in a 2.0% decline. In the US, the 2.1% growth rate in gasoline demand was less than that for total products, but contributed an additional 166 b/d or 21% of total incremental G7 demand.

### Annual Change in Oil Demand in 2Q97 in G7 Countries (% per annum)

	LPG	Naphtha	Gasoline	Jet/Kero	Diesel	Other Gasoil	RFO	Other	Total	kb/d
USA	-1.2	34.7	2.1	4.3	4.8	-0.4	-0.7	7.0	3.0	543
Canada	-2.2	17.7	2.7	9.1	3.9	7.8	22.8	5.9	5.2	95
Japan	-1.1	8.7	3.3	-9.7	-2.4	3.2	-1.1	-12.1	-1.0	-50
France	-3.9	15.9	-2.0	1.0	6.0	-2.4	-7.8	-16.7	-1.0	-19
Germany	-5.2	22.6	0.9	6.5	3.8	16.5	-2.0	5.0	8.3	234
Italy	2.9	-1.4	2.5	1.3	-2.5	31.1	-6.4	26.6	1.8	31
UK	-8.9	-23.3	3.0	4.2	7.8	2.1	-32.9	0.9	-1.7	-31
European Four	-4.9	11.7	1.3	3.7	3.9	11.6	-10.1	-0.2	2.6	215
Total	-1.8	13.6	2.1	1.5	3.3	6.0	-3.6	2.8	2.4	803
kb/d	-57	223	237	42	153	189	-92	108	803	



The strength of US demand for road and aviation transport fuels reflects the current strength of the economy. The strong growth in German demand is seen as reflecting more a pattern of restocking of heating oil than underlying economic strength. The perception of future heating oil prices in 2Q97 and the equivalent period last year (particularly in relation to exchange rate movements) has led to a significant increase in German heating oil deliveries for stockpiling. In Japan, the decline in deliveries to the power generation sector more than offset strong increases in gasoline consumption. Demand increased most strongly in Canada, primarily due to marked increases in residual fuel oil deliveries, in contrast to other G7 countries. Despite strong pre-buying in June ahead of the Budget, UK demand declined in the quarter due to the combination of weak petrochemical demand, higher gasoline and diesel prices and lower fuel oil use in the power generation sector.

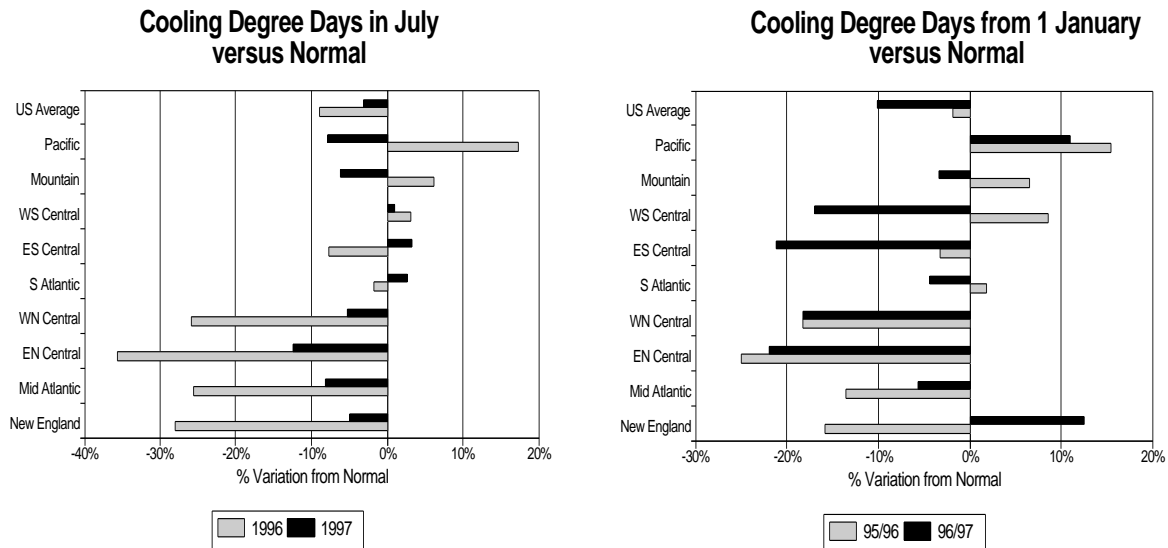
#### Demand in 3Q97

OECD demand in 3Q97 is projected to increase by 0.8 mb/d or 1.9% to 41.4 mb/d, a 33 kb/d upward adjustment from last month's Report, reflecting stronger-than-anticipated demand in July in Canada, France and Germany. Although preliminary US demand in July was less than indicated by partial monthly data in last month's Report and partial data for August indicate only moderate growth (see below), the projection of US demand in September has been adjusted upwards, consistent with a reappraisal of potential gasoline deliveries.

#### Third Quarter OECD Oil Demand by Region

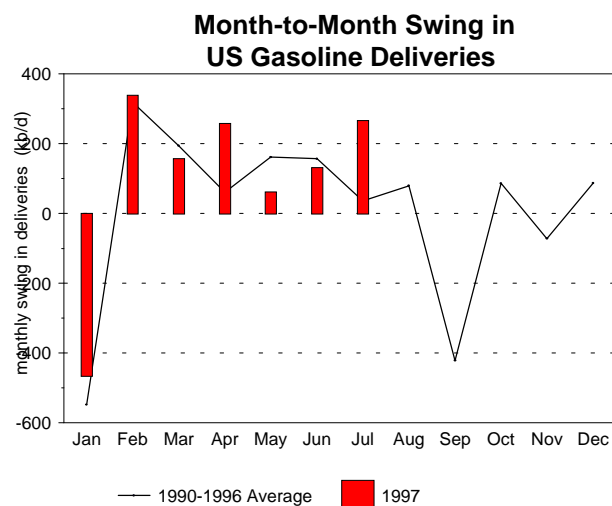
	(million barrels per day)		Change	
	3Q96	3Q97	mb/d	%
North America	20.2	20.7	0.6	2.7
Europe	14.2	14.3	0.1	0.5
Pacific	6.3	6.4	0.1	2.1
Total	40.6	41.4	0.8	1.9

US demand in July increased by 115 kb/d, less than anticipated in last month's Report, based on an extrapolation of weekly delivery data covering part of the month. Preliminary indications of demand in August, based on delivery data up to 29 August, show that total oil demand increased by 1.1% or 200 kb/d, with residual fuel oil declining by 17.4% or 156 kb/d. This decline was more than offset by increases in gasoline, jet/kerosene, gasoil and other products of 0.1%, 6.4%, 2.3% and 3.9% respectively. The decline in residual fuel oil deliveries is consistent with cooler weather than last year that is likely to have led to decreased air-conditioning demand. In August, the Northeast and Mid-Atlantic regions experienced 25% and 22% fewer cooling degree days than a year earlier.



As in July, it is possible that fuel oil stocks were drawn down in the light of higher fuel oil prices. As residual fuel oil prices in mid-August were at a \$0.11/mmBtu premium to natural gas in New York, compared with a \$0.08/mmBtu premium a year earlier, it would be expected that there was no significant incentive to increase the extent of fuel switching from fuel oil to natural gas in the power generation sector as compared to a year earlier. The preliminary data for August are based on data for part of the month and should therefore be treated with caution. For example, the apparent weakness in gasoline deliveries appears inconsistent with other anecdotal evidence and it is likely that the gasoline data will be revised upwards.

After Labor Day, US gasoline demand typically declines on a month-to-month basis following the end of the driving season. The graph to the right shows the average swing in month-to-month deliveries of gasoline in the period 1990-1996 and similar data for the first seven months of 1997. A month-to-month drop in demand tends to occur in January, September and November. In the period 1990 to 1996 the average drop in demand from August to September was 422 kb/d, compared with 548 kb/d in January. The largest month-to-month increases tended to occur in May and June, increasing by about 160 kb/d. The variation in the peak and trough months averaged 1.01 mb/d over the 1990 to 1996 period. It is evident that the drop-off in demand in September of 422 kb/d is a comparatively small proportion of the peak variation and less than the maximum change in monthly demand in January. However, the end of the driving season tends to attract an inordinate amount of attention and has a disproportionate impact on oil prices. In recent years, the phenomenon has become less abrupt, and so the recent strength in gasoline demand may continue (albeit to a smaller degree) for the remainder of 3Q97.



**European** demand is projected to increase by the smallest proportion of the three OECD regions, consistent with strong demand last year when consumer stocks of heating fuels were rebuilt. German demand in 3Q97 may be weak following a strong consumer stockbuild of heating oil in April and June.

**Pacific** demand is projected to increase by 2.1%, consistent with weak deliveries a year earlier, but with continuing evidence of weakness in oil deliveries to the Japanese power generation sector, the projection remains sensitive to downward revision.

#### *Demand in 1997 and 1998*

OECD demand for oil in 1997 is projected to increase by 0.6 mb/d or 1.3% to 41.7 mb/d, unchanged from last month's Report. The downward revision to OECD demand in 2Q97 has been partly offset by upward revisions to North American demand in 3Q97, reflecting strong demand in July. Demand is projected to grow fastest in North America, despite strong demand growth in 1996, with robust economic activity manifesting itself in strong growth in transport fuel demand. European oil demand growth is expected to slow from 1.5% in 1996 to 1.1% in 1997, largely reflecting ongoing substitution of fuel oil, higher end-user prices due to weaker European currencies against the dollar and tax increases, most notably in the UK. In the Pacific region, demand is projected to increase by 0.7%, with deliveries dampened by weak deliveries to the Japanese power generation sector.

**OECD Oil Demand in 1997 & 1998**

	North America		Europe		Pacific		Total	
	mb/d	change*	mb/d	change*	mb/d	change*	mb/d	change*
1Q97	20.4	0.0	14.2	-0.2	7.3	-0.1	41.9	-0.2
2Q97	20.6 <sup>†</sup>	0.7	14.0 <sup>†</sup>	0.4	6.1	-0.0	40.7 <sup>†</sup>	1.1
3Q97	20.7	0.5	14.3	0.1	6.4	0.1	41.4	0.8
4Q97	21.0	0.2	14.8	0.3	7.1	0.2	42.9	0.6
1997	20.7	0.4	14.3	0.2	6.7	0.0	41.7	0.6
1Q98	20.7	0.3	14.4	0.2	7.4	0.1	42.6	0.6
2Q98	20.6 <sup>†</sup>	-0.0	13.9 <sup>†</sup>	-0.1	6.2 <sup>†</sup>	0.1	40.7 <sup>†</sup>	0.0
3Q98	21.0 <sup>†</sup>	0.2	14.5	0.2	6.5	0.1	41.9	0.5
4Q98	21.3	0.3	15.0	0.2	7.2	0.1	43.5	0.6
1998	20.9	0.2	14.4	0.1	6.8	0.1	42.2	0.5

<sup>†</sup> Revised since last Report

\* Mb/d year-on-year change

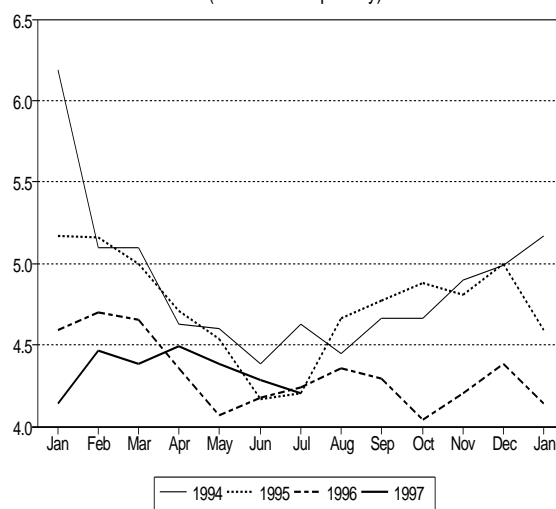
OECD demand in 1998 is projected to increase by 0.5 mb/d or 1.1% to 42.2 mb/d, unchanged from last month's Report. Although anticipated growth rates for 1998 are essentially unchanged, modifications to demand in 2Q97 have resulted in small revisions to the projection of OECD demand levels in 2Q98.

#### **Non-OECD<sup>2</sup>**

##### *Former Soviet Union*

Apparent demand in the former Soviet Union in 3Q97 and 4Q97 have been revised marginally but demand projections for 1997 are essentially unchanged at 4.4 mb/d, an annual increase of 0.3%. Apparent demand in 3Q97 has been adjusted upwards by 35 kb/d, reflecting the latest trade data for August and the most recent production data for July, combined with a change to the estimate of production in the remaining two months of the quarter. Conversely, demand in 4Q97 has been revised downwards by a similar amount, consistent with a reassessment of future production. Although these changes to apparent demand in 3Q97 and 4Q97 are, due to rounding, insufficient to lead to changes in Table 1, unchanged rates of projected growth in 1998 have led to similar-sized revisions to demand levels in 3Q98 and 4Q98. Due to rounding, this has triggered changes to Table 1. Apparent demand in 1998 is projected to increase by 1.0% or some 40 kb/d to 4.4 mb/d.

**FSU Oil Demand**  
(million barrels per day)



<sup>2</sup> Including some OECD member countries, see note on back cover

### Mexican Demand in July

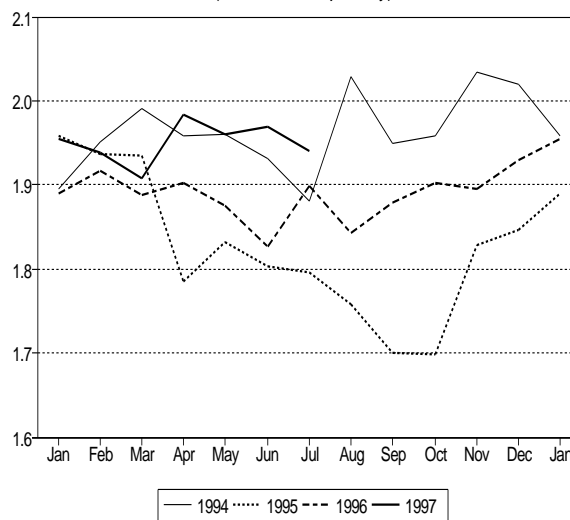
Preliminary data published by Pemex indicate that inland oil deliveries (excluding refinery fuels) grew by 2.9% in July, far less than the 12-month moving average of 6.6%. Including estimates of bunkers and refinery fuel use, and an adjustment to calibrate the monthly data to the historical series, total Mexican demand in July is estimated to have grown slightly more slowly than inland deliveries, increasing by 40 kb/d to 1.94 mb/d. Demand growth was comparatively low in July, partly due to strong growth a year earlier when a 17.6% increase in gasoil deliveries led to an overall 6.4% increase in product deliveries. This July, residual fuel oil deliveries declined by 21 kb/d or 4.8%. A shortfall in fuel oil production, due to planned refinery maintenance, was made up partly by increased imports. However, despite apparent strong demand from the power generation sector, deliveries of fuel oil declined due to low water levels in western Mexico that have constrained hydroelectric power output in recent months.

Gasoline and diesel deliveries increased by 4.3% and 10.9% respectively, or a combined 49 kb/d. The strength in diesel deliveries was particularly notable, given strong demand a year earlier. LPG deliveries increased by 14 kb/d or 5.8%. On a sectoral basis, some 70% of LPG demand is used in the commercial/residential sectors with 20% consumed as petrochemical feedstock and the remainder split between the transportation and industrial sectors. The increases in demand for most products has occurred despite significantly higher prices than a year earlier. In local currency terms, the retail prices of gasoline, diesel and LPG have increased by 21.6%, 23.5% and 37.6% respectively, reflecting a combination of increased commodity prices and currency movements. The tax rate on petroleum products has remained unchanged at 15%.

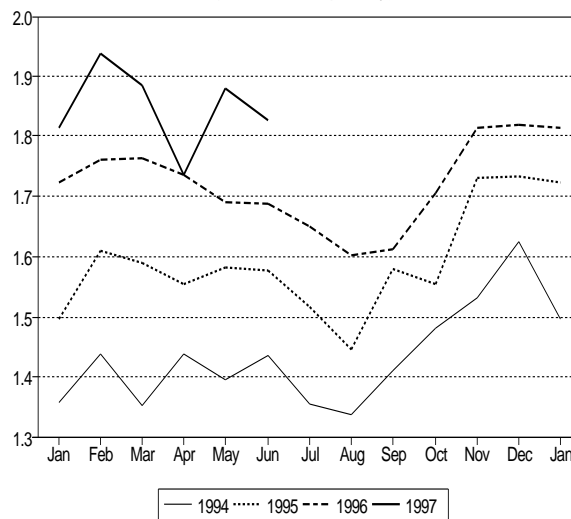
### Indian Demand in June

Data published by the Indian Ministry of Petroleum and Natural Gas indicate that Indian inland deliveries were relatively strong in June, increasing by 8.8%, compared with growth of 6.8% in the year-to-date and 7.1% on a 12-month moving average basis. Including estimates of bunkers and refinery fuel use, Indian demand in June is estimated to have increased by 140 kb/d to 1.83 mb/d. The growth was above trend, primarily due to a 10.6%, or 75 kb/d, increase in high-speed (automotive) diesel deliveries, which contributed almost 55% of total incremental demand. Strong diesel demand primarily reflects increased use in the agricultural sector (for both tractors and water pumping) and also in the road transport sector. LPG and naphtha deliveries increased by 10.4% and 36.9% or a combined 46 kb/d, primarily with increased petrochemical capacity, but also partly due to increased use of LPG in the residential sector. On a 12-month moving average basis, naphtha demand has grown faster than that for any other product, with deliveries increasing by 25.0%, followed by LPG (10.2%) and high-speed diesel (8.7%). The strength in LPG demand reflects government marketing incentives and reduced kerosene price subsidies to discourage kerosene and promote LPG use in the residential sector. Kerosene continues to lose market share, with demand on a 12-month moving average basis increasing by only 2.2% compared with 7.1% for total oil products.

**Mexican Oil Demand**  
(million barrels per day)

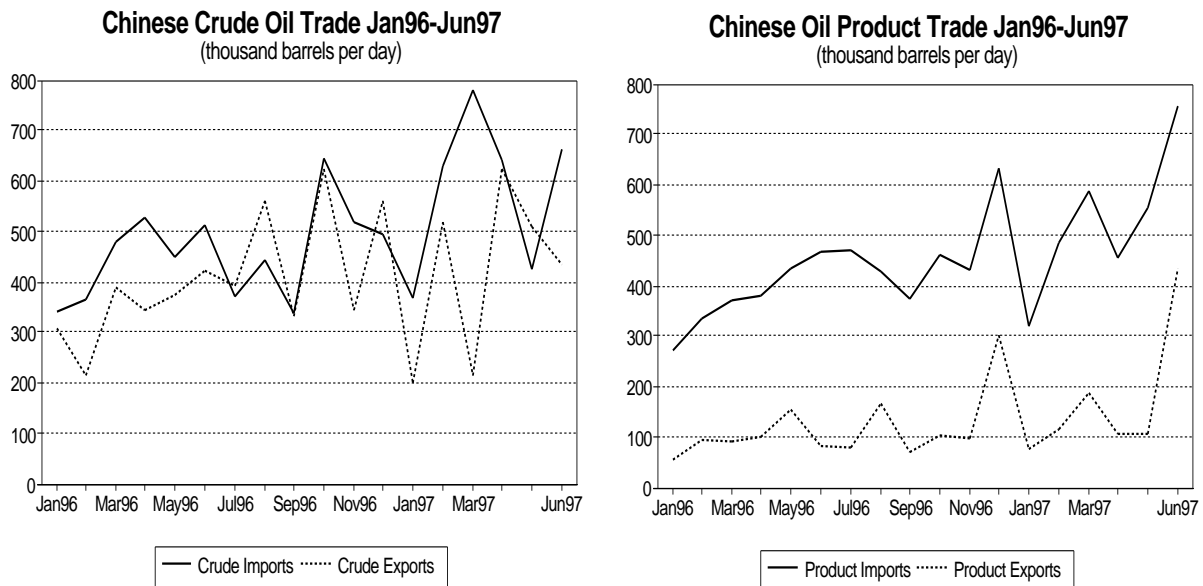


**Indian Oil Demand**  
(million barrels per day)



### Chinese Trade

In June, Chinese total net imports increased by 50% above the previous month at 184 kb/d, some 15% greater than a year earlier. Net crude oil trade moved from a net export level in May of 82 kb/d to a net import level of 228 kb/d. While product imports increased by 37% or 200 kb/d from May levels, product exports increased by almost 330 kb/d, leading to a 28% reduction in net product imports, to 127 kb/d. Crude oil exports decreased by 15%, from 508 kb/d in the previous month to 434 kb/d, 49% of which was shipped to Japan (213 kb/d) and 17% to the USA (73 kb/d). Korea and Japan were also destinations for significant amounts of crude oil exports. Crude imports increased by 55% from the previous month to 662 kb/d, some 29% greater than a year earlier. Crude imports increased significantly above May levels from Oman (+78 kb/d), Indonesia (+62 kb/d) and Yemen (+ 86 kb/d) amounting to a combined 452 kb/d of imports and representing 68% of total crude imports in June. Conversely, imports from Angola, Congo and Iran declined by a combined 71 kb/d, to 116 kb/d. In June, China took its first recorded imports of Argentine crude, amounting to 33 kb/d. In product trade, China remained a 67 kb/d net exporter of gasoline, but net imports of light diesel increased to 69 kb/d. China also continued to be a substantial net importer of residual fuel oil, although net imports decreased by 13% from May levels, to 253 kb/d. Naphtha net imports reached 46 kb/d in June compared with essentially net zero trade in the product in May and in the previous June.



### Non-OECD Demand in 1997 and 1998

Non-OECD demand in 1997 is again projected to increase by 4.2% or 1.3 mb/d to 32.1 mb/d. Downward revisions to Other Asian demand in 2Q97 and FSU demand in 4Q97 have slightly more than offset an upward revision to FSU demand in 3Q97. The estimate of non-OECD demand in 2Q97 has been revised downwards by 0.1 mb/d, reflecting revisions to Other Asian demand and consistent with demand growth in Thailand of only 0.2% and indications of slower growth in other countries of Southeast Asia following devaluation of currencies in the region. Conversely, demand in the countries of the Indian sub-continent, Chinese Taipei and Korea, where the bulk of the region's oil is consumed, is continuing to grow strongly. In countries which have faced significant currency devaluation, the economies are likely to become more internationally competitive, possibly resulting in a export-led rebound in economic growth. However, the impact of this on oil demand is likely to be offset somewhat by the higher cost of road transport fuels expressed in local currency terms, which will constrain internal demand. Until the scale and the timing of the impact of currency devaluations on demand are better known, the projection of Other Asian demand growth for the rest of the year and in 1998 remains unchanged. The growth rate of non-OECD demand in 1998 continues at 4.3% but, due to a minor downward revision to 1997 demand (and rounding), demand in 1998 has been revised downwards by 0.1 mb/d to 33.4 mb/d.

## Non-OECD Demand in 1997 &amp; 1998

	FSU		Europe		China		Other Asia		L. America		M. East		Africa		Non-OECD	
	mb/d	change*	mb/d	change*	mb/d	change*	mb/d	change*	mb/d	change*	mb/d	change*	mb/d	change*	mb/d	change*
1Q97	4.3	-0.3	1.6	0.1	3.6	0.2	9.3	0.5	6.5	0.2	4.2	0.1	2.4	0.1	31.9	0.9
2Q97	4.4	0.2	1.5	0.1	3.8	0.2	8.9 <sup>r</sup>	0.5	6.7	0.3	4.2	0.1	2.4	0.1	31.8 <sup>r</sup>	1.5
3Q97	4.2	-0.1	1.4	0.1	3.8	0.2	8.7	0.6	6.7	0.2	4.4	0.1	2.3	0.1	31.5	1.1
4Q97	4.5	0.3	1.5	0.1	3.9	0.2	9.7	0.7	6.7	0.2	4.4	0.1	2.4	0.1	33.0 <sup>r</sup>	1.6
1997	4.4	0.0	1.5	0.1	3.8	0.2	9.1 <sup>r</sup>	0.6	6.6	0.3	4.3	0.1	2.4	0.1	32.1	1.3
1Q98	4.4	0.0	1.6	0.0	3.9	0.3	9.9	0.6	6.8	0.3	4.3	0.1	2.5	0.1	33.3	1.4
2Q98	4.4	0.0	1.5	0.0	4.0	0.2	9.6 <sup>r</sup>	0.7	6.9	0.2	4.3	0.1	2.5	0.1	33.2 <sup>r</sup>	1.4
3Q98	4.3 <sup>r</sup>	0.0	1.4	0.0	4.0	0.2	9.3	0.6	7.0	0.2	4.5	0.1	2.3	0.1	32.8	1.3
4Q98	4.5 <sup>r</sup>	0.0	1.5	0.0	4.1	0.2	10.3	0.7	6.9	0.2	4.5	0.1	2.5	0.1	34.4 <sup>r</sup>	1.4
1998	4.4	0.0	1.5	0.0	4.0	0.2	9.8	0.6	6.9	0.2	4.4	0.1	2.4	0.1	33.4 <sup>r</sup>	1.4

\* Year-on-year change (mb/d)

<sup>r</sup> Revised since last Report

## Global Demand in 1997 and 1998

The annual increase of 1.8 mb/d or 2.6% in global demand in 1997 to 73.8 mb/d is essentially unchanged from last month's Report as downward revisions to global demand in 2Q97 and non-OECD demand in 4Q97, have been offset by an upward adjustments to North American and FSU demand in 3Q97. Global demand in 1998 is projected to increase by 1.8 mb/d higher than in 1997, at a rate of 2.5% unchanged from last month's Report. However, due to rounding, the impact of an unchanged rate of growth in 1998 upon a minor downward revision to global demand in 1997 has led to a 0.1 mb/d downward revision to the projection of global demand in 1998, to 75.6 mb/d. Similarly, the assumption of unchanged rates of growth in 1998 upon revisions to quarterly demand in 1997 is responsible for small adjustments to quarterly demand in 1998.

## Global Demand in 1997 and 1998

	Demand	Annual Change		Changes from last month's Report
	(mb/d)	(%)	(mb/d)	(mb/d)
1Q97	73.8 <sup>r</sup>	0.9%	0.7	-0.1
2Q97	72.5 <sup>r</sup>	3.7%	2.6	-0.1
3Q97	72.9 <sup>r</sup>	2.7%	1.9	0.1
4Q97	75.9	3.0%	2.2	-
1997	73.8	2.6%	1.8	-
1Q98	75.9	2.7%	2.0	-
2Q98	74.0 <sup>r</sup>	2.0%	1.5	-0.1
3Q98	74.8 <sup>r</sup>	2.5%	1.9	0.1
4Q98	77.9	2.6%	2.0	-
1998	75.6 <sup>r</sup>	2.5%	1.8	-0.1

\* Year-on-year change (mb/d)

<sup>r</sup> Revised since last Report

## SUPPLY

### Summary

- **World oil supply** rose in August to 74.3 mb/d, an increase of 0.5 mb/d above July's upwardly-revised 73.8 mb/d. The gain was driven by the resumption of Iraqi exports starting on the night of 13 August. After 13 August, the volume of Iraqi exports is estimated to have been 1.6 mb/d. For the month as a whole, Iraqi crude production increased by 0.8 mb/d, pushing **OPEC crude supply** up to 27.3 mb/d, an increase of 0.7 mb/d.
- **Non-OPEC oil supply** fell in August to 44.1 mb/d, a decrease of 0.2 mb/d compared to the 44.3 mb/d average in July. OECD oil supply decreased by 0.3 mb/d, as North Sea output was affected by the peak maintenance period in Norway. US production declined due to pump station shutdowns in Alaska. Non-OECD oil supply rose by 0.1 mb/d, as gains in Latin America and Africa outweighed losses in Russia.
- The "call on OPEC crude plus stock change" is estimated at 25.6 mb/d in 3Q97 and 26.8 mb/d in 4Q97, revisions of +0.1 mb/d and -0.1 mb/d respectively, from last month's Report. A downward revision of 95 kb/d was made in the forecast for 1998 Azerbaijani production, as details of plans for "early oil" at the Chirag field emerged.
- **Net FSU exports** averaged 2.92 mb/d in August, a drop of 80 kb/d compared with July. Seaborne exports fell by 310 kb/d, with cargoes originating at Black Sea ports falling by 190 kb/d, due in large part to competition from Iraqi exports after 13 August. However, overland exports via the Druzhba Pipeline increased by 260 kb/d, offsetting most of the reduction in tanker liftings.

### Non-OPEC Oil Supply

(million barrels per day)

	1996	1997 <sup>f</sup>	1998 <sup>f</sup>	2Q96	3Q96	4Q96	1Q97	2Q97 <sup>p</sup>	3Q97 <sup>f</sup>
<b>CRUDE OIL</b>									
North America	8.03	8.05	8.26	7.95	7.97	8.10	8.07	7.99	7.99
United States	6.46	6.45	6.53	6.43	6.39	6.49	6.47	6.45	6.39
Canada	1.56	1.60	1.73	1.52	1.57	1.61	1.60	1.54	1.61
Europe	6.20	6.42	6.98	6.12	6.11	6.41	6.35	6.12	6.17
North Sea	5.79	6.01	6.55	5.70	5.69	6.01	5.93	5.71	5.77
UK*	2.45	2.50	2.79	2.38	2.34	2.61	2.52	2.23	2.45
Norway	3.09	3.24	3.46	3.09	3.09	3.13	3.15	3.21	3.05
Other North Sea**	0.25	0.28	0.31	0.23	0.26	0.27	0.26	0.27	0.27
Other Europe	0.41	0.41	0.43	0.43	0.42	0.41	0.42	0.41	0.40
Pacific	0.59	0.65	0.75	0.60	0.61	0.59	0.59	0.63	0.67
Australia	0.54	0.57	0.67	0.55	0.55	0.52	0.52	0.56	0.61
Other Pacific	0.05	0.07	0.08	0.05	0.06	0.07	0.07	0.07	0.07
<b>Total OECD</b>	<b>14.82</b>	<b>15.12</b>	<b>15.99</b>	<b>14.67</b>	<b>14.68</b>	<b>15.10</b>	<b>15.00</b>	<b>14.73</b>	<b>14.84</b>
Latin America	5.76	6.15	6.51	5.75	5.76	5.86	6.00	6.06	6.16
Asia (inc. China)	5.03	5.11	5.21	5.03	4.99	5.07	5.11	5.10	5.09
Africa (inc. Gabon)	2.42	2.57	2.76	2.37	2.45	2.48	2.51	2.53	2.58
Other Middle East	1.86	1.85	1.84	1.85	1.87	1.88	1.85	1.84	1.86
Central and Eastern Europe	0.25	0.25	0.24	0.24	0.24	0.25	0.25	0.24	0.25
<b>Total Non-OECD (ex. FSU)</b>	<b>15.31</b>	<b>15.91</b>	<b>16.56</b>	<b>15.24</b>	<b>15.31</b>	<b>15.54</b>	<b>15.71</b>	<b>15.78</b>	<b>15.93</b>
Russia	5.84	5.84	5.82	5.84	5.88	5.82	5.78	5.92	5.85
Other Republics	0.91	0.99	1.08	0.90	0.92	0.94	0.94	0.97	0.99
<b>Total FSU</b>	<b>6.75</b>	<b>6.82</b>	<b>6.90</b>	<b>6.74</b>	<b>6.80</b>	<b>6.76</b>	<b>6.72</b>	<b>6.89</b>	<b>6.85</b>
<b>NGLS &amp; OTHER</b>									
United States	2.13	2.20	2.22	2.12	2.13	2.22	2.18	2.18	2.19
Canada	0.90	0.91	0.95	0.86	0.90	0.92	0.94	0.84	0.91
North Sea	0.41	0.42	0.44	0.39	0.37	0.45	0.43	0.37	0.38
Russia	0.19	0.20	0.21	0.18	0.17	0.20	0.21	0.19	0.18
Other Non-OPEC	1.58	1.61	1.82	1.62	1.54	1.54	1.57	1.60	1.62
<b>Total NGLs and Other</b>	<b>5.20</b>	<b>5.34</b>	<b>5.64</b>	<b>5.17</b>	<b>5.11</b>	<b>5.32</b>	<b>5.33</b>	<b>5.18</b>	<b>5.28</b>
Processing Gains	1.52	1.57	1.64	1.50	1.50	1.55	1.57	1.56	1.56
<b>Total Non-OPEC Supply</b>	<b>43.60</b>	<b>44.76</b>	<b>46.72</b>	<b>43.32</b>	<b>43.40</b>	<b>44.26</b>	<b>44.33</b>	<b>44.14</b>	<b>44.45</b>

<sup>p</sup> preliminary

<sup>f</sup> forecast

\* excluding on-shore production

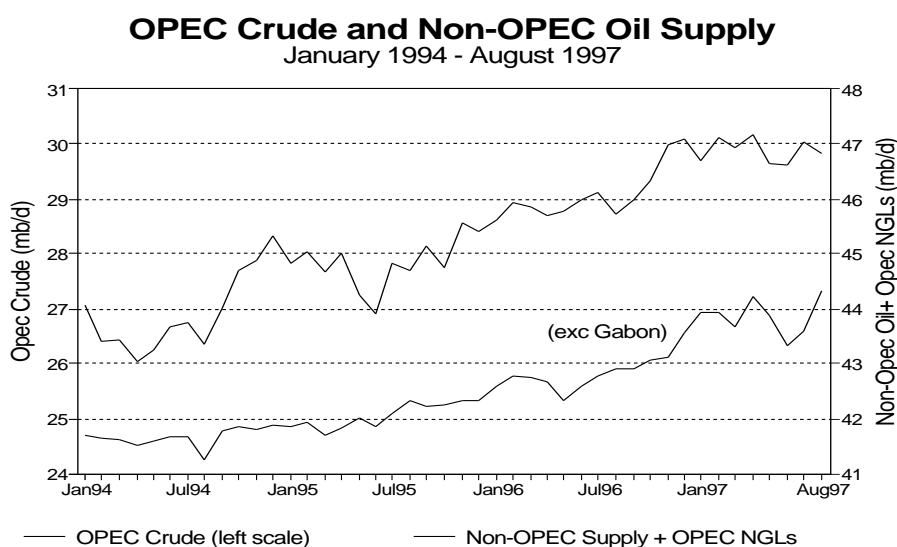
\*\* Denmark, offshore Netherlands and offshore Germany

## Overview of Supply Developments and Revisions

World oil production in August increased by 0.5 mb/d to 74.29 mb/d. OPEC crude supply rose by 0.73 mb/d to 27.32 mb/d, as Iraq resumed crude exports late in the day on 13 August. From 14 August onwards, Iraqi export volumes averaged 1.56 mb/d, including liftings from storage. Iraqi crude production averaged 1.34 mb/d over the full month, an increase of 0.79 mb/d. Production declines in Saudi Arabia (-55 kb/d) and Iran (-30 kb/d) limited the increase in total OPEC crude supply.

Non-OPEC oil supply in August averaged 44.09 mb/d, a drop of 255 kb/d compared to the July figure. OECD production was 18.11 mb/d, a decrease of 330 kb/d. Norwegian output decreased by 375 kb/d, as maintenance peaked last month. In addition, two pump stations were taken out of service in Alaska, pulling US production down by 100 kb/d. On the upside, supply in Canada and the UK rose by 35 kb/d and 65 kb/d, respectively.

Non-OECD production increased by 75 kb/d to 24.42 mb/d. Gains were posted in Latin America (+60 kb/d) due to contributions from Mexico and Colombia, where increases at the Cusiana field appear to have more than compensated for the effect of further guerrilla attacks on the Cano Limon pipeline. Widely distributed gains in Africa (+60 kb/d) also helped to outweigh a decline in production by the FSU (-55 kb/d), where a modest increase in Kazakhstan could not overcome a Russian decline of 70 kb/d.



## Revisions

The major revisions to June and July oil supply figures were in the North Sea. June crude production in the UK was revised up by 138 kb/d, reflecting more complete data. July crude production in both the UK and Norway was revised up by 87 kb/d and 110 kb/d respectively. In the UK, the revision was due to the absence of maintenance that had been expected to take place at some fields. In Norway, half of the revision was maintenance-related, while the other half was due to unexpectedly strong performance at the Statfjord and Ekofisk fields.

The Statfjord strength is expected to continue, and resulted in a roughly 60 kb/d increase in the production forecast for 4Q97 and for 1998. The main change made to the 1998 outlook, however, was in Azerbaijan, where newly released plans for “early oil” production at the Chirag field indicate average output for the project next year of only 30 kb/d, not the 100-120 kb/d previously expected. The forecast for average production in Azerbaijan next year was therefore lowered by 95 kb/d. Elsewhere, the previous forecast for synthetic crude production in Canada for 1998 was judged to have been too optimistic, and was lowered by 25 kb/d. A 25 kb/d (+9%) year-on-year increase is still forecast, however, with output growing from 270 kb/d this year to 295 kb/d in 1998.

## The Upstream Environment: Offshore Delays

Forecasts for offshore production in the North Sea and several other areas have recently been revised downwards. Why? First, it should be emphasised that essentially all new fields under development now are “fast track” projects, in which optimistic assumptions are used for the duration of project phases and where different phases either take place simultaneously or follow other phases without any slack time allowance. This means that there are no delays built into schedules. As recently as 1993 and 1994, when the current uptrend in North Sea production started, fast tracking was still a novel approach. Thus, a forecaster could factor new fields into a field-by-field production outlook with confidence that results would be fairly accurate; a few fields would be early, a few would be on time, a few would be late, and differences from forecasts for a given country tended to net out to zero, or to a relatively small number. This no longer appears to be the case. When all projects are fast tracked, there is only one direction for schedules to move, and that is backwards, i.e. delays. This is what has been happening in the North Sea and in other areas in the last couple of years.

Various other factors contribute to this phenomenon. More technologically ambitious projects are being implemented, and these are naturally more susceptible to delays, as operators move up the learning curve. More floating production, storage, and offloading units (FPSOs) are being used. It has been common for hulls and topsides of the ships to be built by different contractors, often in different parts of the world, with the hulls built by shipbuilders, and the topsides built by offshore oil equipment contractors. Technical problems arise in mating the topsides and the hull, resulting in cost overruns and delays. Another area of technical difficulties, from Australia to the North Sea, seems to be in gas compressors. While the technical reasons for the compression problems are unclear, more and more oil fields are associated with gas, and since flaring is not usually acceptable for environmental reasons, the gas is very often compressed and reinjected, both to aid oil recovery and for later gas production and sales. Thus, gas compressor reliability may be an ongoing issue.

Another factor is the overall tightness in the offshore rig market. Deepwater rigs (third- and fourth-generation semisubmersibles and drillships) are essentially at 100% capacity utilization in the North Sea and the Gulf of Mexico, and close to 100% in West Africa and Brazil. Reflecting this, day rates have more than doubled in the last two and a half years. The world offshore drilling industry has reacted by contracting (with up-front work commitments) to build six new drillships, three new semisubmersibles, and five new jack-ups. Upgrades and conversions of four more drillships and 14 more semisubmersibles are under way. It takes time, however, for these new rigs and upgrades to reach the market (on the order of 18 months to three years). Scarce shipyard capacity, a shortage of skilled labour, and long lead times for rig components are lengthening delivery schedules. In an environment of low finding, development, and production costs, robust exploration and production budgets, and high upstream rates of return, the rig market will remain tight for years to come. There is clearly no shortage of attractive targets around the world.

For some time, aside from higher dayrates, the rig tightness did not have much impact on projects. That has now changed. Some producers are unable to find rigs to drill exploration or appraisal wells. So far, development wells in projects already in progress have not been affected, but the 100% utilization rates mean that unforeseen delays in one project immediately affect other projects. Another impact may be on the pace of production increases at new fields. One of the impressive features of the North Sea in 1993 and 1994 was that large fields, producing 150-250 kb/d, reached their plateau levels within two or three months, historically a very fast rate. This only happens when all the production wells in a field are pre-drilled, and this seems to be a less frequent occurrence nowadays, with rig tightness a contributing factor. It was recently reported that a producer dropped plans to pre-drill some wells for a field due to high day rates. The wells will be drilled, but only after production from the field has started (and there is positive cash flow). The common thread among all of the factors discussed here is that they result in delays and slower acceleration in production at new fields. While the oil comes eventually, it has been coming more slowly.

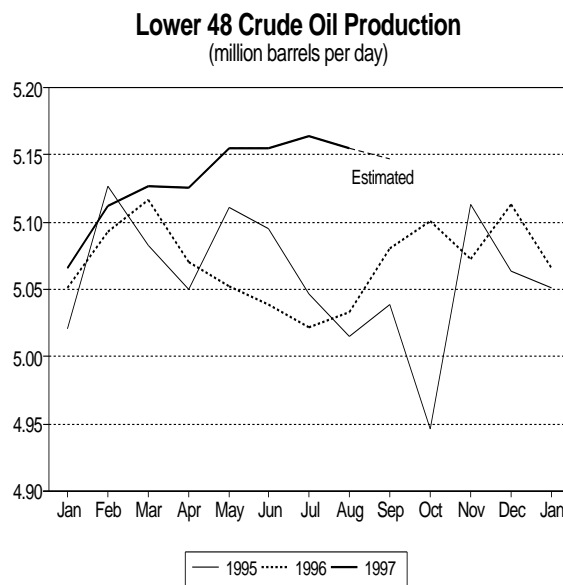
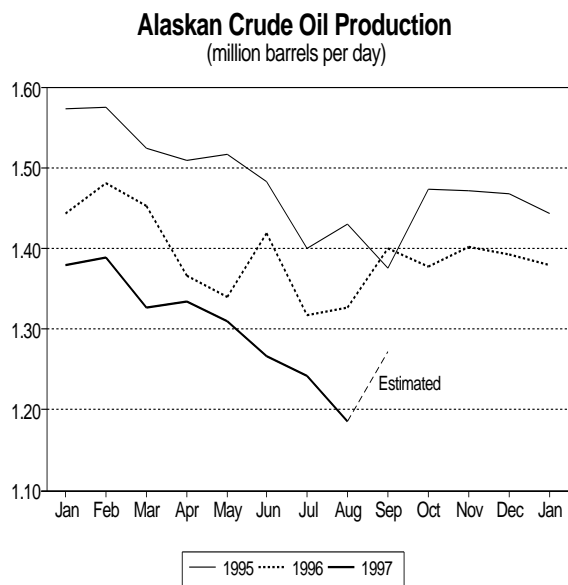
## OECD<sup>1</sup>

### *North America*

US crude oil production is estimated at 6.34 mb/d for August, down 67 kb/d from the July average. As is typical during the summer, most of the month-to-month change occurred in Alaska. Based on preliminary data, Alaskan production averaged 1.19 mb/d, down 57 kb/d from July's 1.24 mb/d. The

<sup>1</sup> excluding some member countries, see note on back cover.

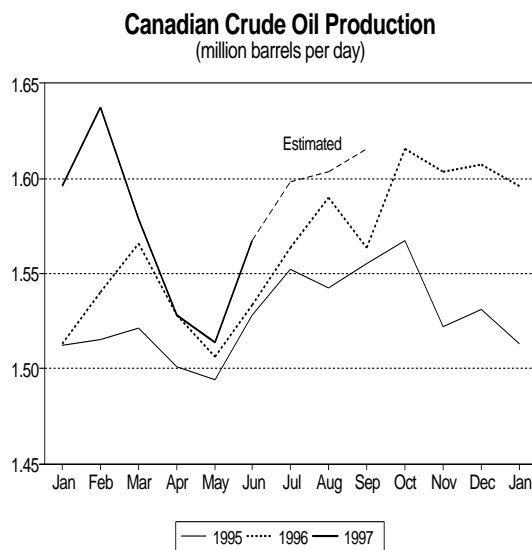
main factor on the North Slope, aside from the summer warmth (average temperature 49°F), was the shutdown of Trans-Alaska Pipeline System (TAPS) Pump Stations 2 and 6, which were permanently taken out of service in late July/early August. As part of the shutdown work, a 16-inch pipeline was closed on 1 August and a 14-inch pipeline was closed on 8 August. On those two days, total Alaskan North Slope production fell to 387 kb/d and 504 kb/d respectively, and in both cases output took four days to return to normal levels. Prudhoe Bay crude production averaged 621 kb/d for the month (up to 26 August), down from 648 kb/d in July.



Total crude production in the Lower 48 states averaged 5.16 mb/d in August, a decline of 9 kb/d. Output is estimated at 1.45 mb/d in Texas (-10 kb/d), 1.28 mb/d in the offshore Gulf of Mexico (+11 kb/d), 920 kb/d from California (-4 kb/d), and 1.51 mb/d from the rest of the lower 48 states (-6 kb/d). In the Gulf of Mexico, the Ram-Powell field, with a plateau production level of 60 kb/d, had been scheduled to begin production in August, but startup was delayed into early or mid-September. The operator announced that the passage of Hurricane Danny through the Gulf in July had pushed the onstream date back by several weeks.

For the non-crude components of August US oil production, preliminary government data indicated NGLs production of 1.85 mb/d (-26 kb/d) and production of "other hydrocarbons" of 310 kb/d (-5 kb/d). US crude production in September is forecast at 6.42 mb/d (+79 kb/d), with Alaskan output starting to come out of its summer trough and rebounding to 1.27 mb/d (+87 kb/d), or the same level reached in June.

Data for **Canada** for June show crude production of 1.57 mb/d, an increase of 53 kb/d over the previous month. Alberta, which produces 70% of Canada's crude, accounted for all but 4 kb/d of the increment, with light/medium grades up 30 kb/d, heavy grades up 12 kb/d, and bitumen up 8 kb/d. Supply of NGLs (including pentanes plus, propane, butane, ethane, and a small amount of condensate) continued to decrease seasonally, dropping 37 kb/d to 591 kb/d. Synthetic crude production recovered from April and May maintenance, with combined output from the Suncor and Sycrude plants reaching a 1997 high of 283 kb/d. July crude production is estimated to have increased further to 1.60 mb/d, as gains continued in Alberta (+34 kb/d). Synthetic crude production is thought to have reached 291 kb/d, with output for the



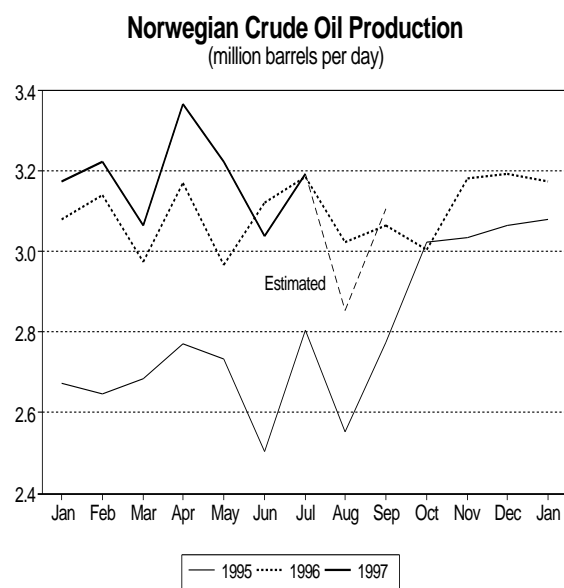
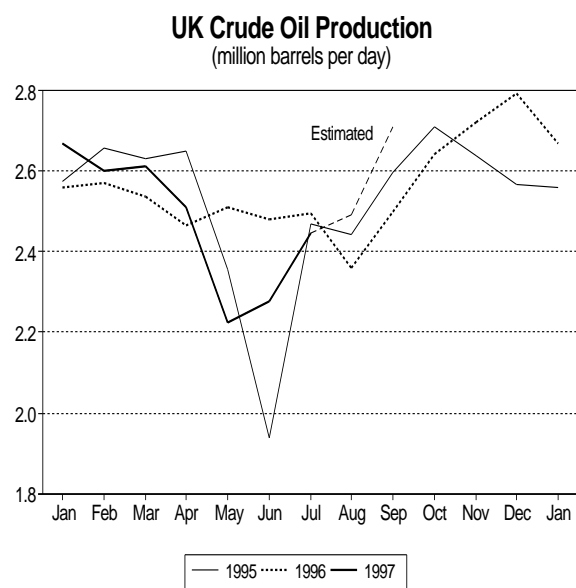
remainder of 1997 forecast at between 290 and 300 kb/d. Synthetic output is forecast to average 295 kb/d during 1998, with normal output of 300-310 kb/d reduced by the inclusion of an allowance for maintenance in the spring. The 1998 synthetic forecast was reduced by 25 kb/d, but still represents a 25 kb/d increase over the projected 1997 average of 270 kb/d. July NGLs production is estimated at 598 kb/d, up 7 kb/d over June.

### North Sea

July **UK** crude production averaged 2.36 mb/d (+177 kb/d compared to upwardly-revised June data). The June figure was revised upwards by 138 kb/d. The July crude output was 87 kb/d higher than forecast, as 92 kb/d worth of maintenance that had been factored into forecasts for several fields (Douglas/Lennox, Dunbar, and Fife/Fergus) did not appear to have taken place or had less of an impact than expected (Alba). Of course, this introduces downside potential at those fields for the remainder of the summer work season (through September), as those maintenance programmes may yet be carried out.

The July rebound in the UK was driven by the Forties System, which gained 249 kb/d over June as fields came back from maintenance. Output at the Scott (90 kb/d, +19) and Nelson (119 kb/d, +94) fields recovered somewhat but, as expected, were still well below trouble-free plateau levels of 155 kb/d and 145 kb/d respectively. Supply of crude from the Brent and Ninian Systems, which make up Brent Blend, increased by a combined 19 kb/d. Flotta System output fell by 4 kb/d, while Fulmar-Teal area production increased by 10 kb/d. Beryl Area production increased by 33 kb/d, due to the Beryl field, and the J-block gained 27 kb/d, on the way towards its initial plateau. "Other offshore loaded" crudes fell by 28 kb/d, with Alba accounting for 23 kb/d of the decrease. The decline was due to maintenance, although the impact had been expected to be 60 kb/d.

August **UK** crude production is estimated at 2.39 mb/d (+31 kb/d). Forties System crude is thought to have increased by 101 kb/d, despite the Nelson field going down for four days in order to remove an undetonated WWII bomb from a location near the field's export pipeline. Flotta System output is estimated to have increased by 39 kb/d, with the end of maintenance and the beginning of production, on 10 August at the MacCulloch field (60 kb/d at plateau). Brent System supply declined by 5 kb/d, while Ninian System production was off 63 kb/d due to maintenance at the Magnus and Ninian fields. In the Beryl Area (-3 kb/d), a six-month extended well test of the Katrine field began on 11 August, with initial production of 8 kb/d. Fulmar-Teal Area production fell by 37 kb/d due to maintenance at the Auk, Teal, and Guillemot fields. Among "other offshore loaded" fields, Captain is thought to have produced only 15 kb/d in August, down from 25 kb/d in July. Around two weeks of production were lost, as a tanker collided with the Captain FPSO during calm weather mid-month and there was an unrelated minor oil spill late in the month. The offshore-loaded Dauntless and Durward fields came onstream on 9 August and 11 August, respectively, with combined plateau output of 40-45 kb/d expected.



**Norwegian** crude production in July averaged 3.19 mb/d, an increase of 154 kb/d compared to the previous month's level of 3.04 mb/d, which was revised upwards by 14 kb/d. July crude production was 110 kb/d higher than forecast, due to unexpectedly high production levels at the Statfjord and Ekofisk fields (by 47 kb/d and 21 kb/d respectively) and due to a previously estimated 58 kb/d worth of maintenance programmes which did not appear to have taken place as scheduled (at Ula, Gyda, and Heidrun). Also, problems were reported at the Gullfaks field, and a decline of 25 kb/d had been expected, but production only fell by 3 kb/d, to 453 kb/d. Overall Statfjord/Gullfaks Area output fell by 60 kb/d, however, due mainly to a 45 kb/d decrease in Snorre field supply. The July increase in Norway took place on the strength of Oseberg-Troll Area production, which gained 196 kb/d, as the Oseberg, Veslefrikk, and Brage fields recovered from maintenance. Ekofisk and Other Teeside Area output declined slightly (-7 kb/d), while Haltenbanken output increased slightly (+6 kb/d).

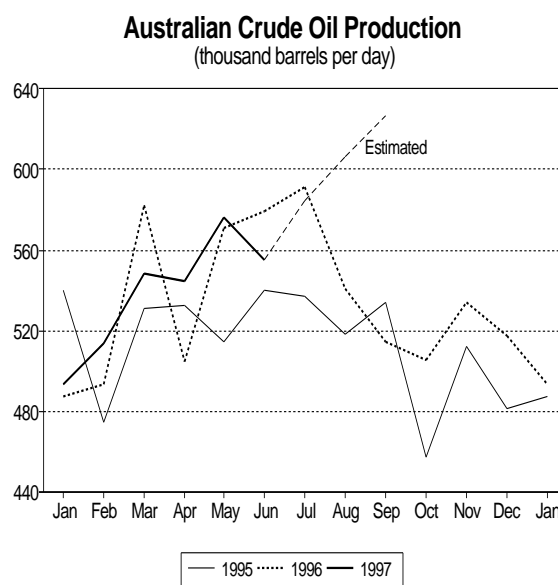
Crude production in August is estimated at 2.84 mb/d, as 1997 Norwegian maintenance peaked during the month, with "lost" production of around 350 kb/d thought to have taken place. Major work programmes were undertaken at Statfjord B, the Statfjord satellites, Sleipner East and West, and Troll West. Maintenance also began at Gullfaks A and B late in the month, although most of the production impact at Gullfaks will take place in September (down 230 kb/d from normal levels). The main changes in August compared to July were in the Oseberg Area (-112 kb/d), the Statfjord-Gullfaks Area (-153 kb/d) and at the Sleipner complex (-70 kb/d). Late in August, the Norne field (with a plateau of 160 kb/d) was reported to be on track for a mid-September startup; however, a strike action by one of the offshore oil field workers unions threatened to delay the project. The Njord field (plateau of 75 kb/d) is still expected onstream in October, but the 75 kb/d Balder field, which had most recently been expected in November, has been delayed until the summer of 1998 due to the poor quality of welds on the FPSO. In other revisions, the forecast for Statfjord production for the remainder of 1997 and 1998 has been increased by around 60 kb/d, due to consistently strong performance in recent months, as reflected in a recent reserves upgrade.

**Danish** crude oil production averaged 225 kb/d in July, a drop of 4 kb/d compared to June. The biggest differences from the previous month were at fields within the Tyra Area (+1 kb/d), as the Harald field declined by 6 kb/d and the Tyra field increased by 5 kb/d. Elsewhere, the Dan Area fell by 2 kb/d and the Gorm Area decreased by 3 kb/d. August output is estimated at 236 kb/d. **Dutch** offshore crude oil production, excluding condensate from the P18 field, averaged 26 kb/d in July, compared to 27 kb/d in June. Dutch supply is estimated to have returned to 27 kb/d for August.

### Pacific

**Australian** crude production in June totalled 555 kb/d, down 21 kb/d compared to May. The mature Gippsland Basin, which averaged 226 kb/d (-16 kb/d), accounted for most of the decline, turning in its first month-on-month decline this year. The rest of the decrease stemmed from the Carnarvon Basin, which fell 7 kb/d to 270 kb/d. Within Carnarvon, the North Rankin field was off 5 kb/d (to 48 kb/d), Wanaea/Cossack fell by 4 kb/d (to 65 kb/d) and, as planned, the Griffin field did not produce any oil in June due to vessel maintenance. Production in the Cooper-Eromanga and Bonaparte Basins both increased slightly.

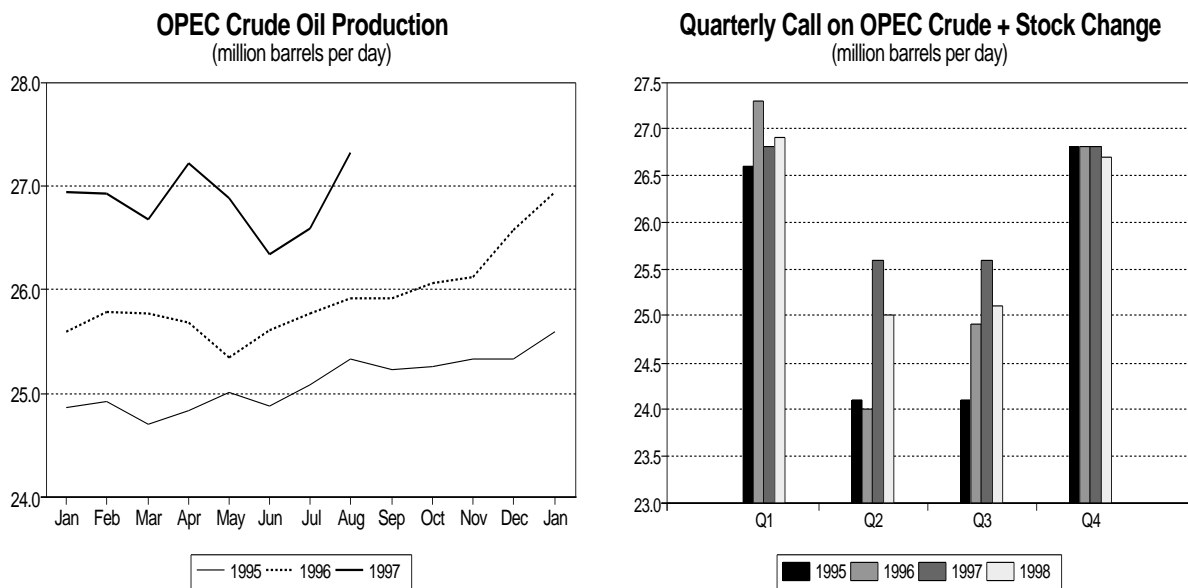
In July, Australian crude production is estimated to have recovered to 584 kb/d on the strength of an assumed 35 kb/d of supply from Griffin, which was believed to have resumed operations mid-month. Wanaea/Cossack output is thought to have averaged 60 kb/d, due to brief early-month maintenance. Australian crude supply in August is judged to have been 606 kb/d, including a full month of production from Griffin at 62 kb/d. Some further downward revisions to the production forecasts for some of the smaller Australian fields were made. On a positive note, however, during the last week of August, the 9 kb/d Agincourt field in the



Carnarvon Basin came onstream. Crude from the field, which produces from a single well, is blended with output from the nearby Harriet field. Development costs for the 15 million barrel Agincourt project were only \$18 million, or \$1.20 per barrel.

## OPEC

OPEC crude production in August is estimated to have averaged 27.3 mb/d, an increase of 730 kb/d over the July figure of 26.6 mb/d (revised upwards by 0.1 mb/d). The increase was driven by **Iraq**, which resumed exports on the night of 13 August, and is thought to have produced an average of 1.34 mb/d during the month, a gain of 790 kb/d compared to July (see table and discussion below).



The “call on OPEC crude plus stock change” this quarter is projected to be 25.6 mb/d, the same as for 2Q97. The “call” is 1.2 mb/d less than OPEC crude production in 2Q97, and 1.7 mb/d less than OPEC crude production during August. During the upcoming winter quarters, the “call” is expected to increase to 26.8 mb/d during 4Q97 and 26.9 mb/d during 1Q98.

**Saudi Arabian** crude production was 7.90 mb/d (-55 kb/d). Preliminary indications are that **Iranian** crude output was 3.69 mb/d (-30 kb/d). Each time this year that Iran has produced more than 3.7 mb/d in a month, a month with lower output has followed. **UAE** crude production was 2.26 mb/d (+8 kb/d), as Abu Dhabi’s Umm Shaif and Lower Zakum fields gained 7 kb/d and 3 kb/d, respectively. Tanker tracking data indicated that **Kuwaiti** crude output fell by 20 kb/d to 1.81 mb/d. In the **Neutral Zone**, crude production averaged 538 kb/d, up 12 kb/d, with the Khafji field accounting for 10 kb/d of the increase. For the third month in a row, **Qatar** increased production by 10 kb/d, reaching 635 kb/d in August.

**Venezuelan** crude production, on a long-term upward path, averaged 3.22 mb/d (+22 kb/d) in August. Tanker tracking data indicated that **Indonesian** crude production was 1.40 mb/d last month, a gain of 22 kb/d, despite a fire which caused some lost production (-5 kb/d) at the 47 kb/d light sweet Attaka field. This event may make the Indonesian estimate subject to downward revision however. **Nigerian** crude production was 2.26 mb/d in August, down 17 kb/d. Evidence of the current poor state of relations between the foreign joint venture partners and the Nigerian Finance Ministry continued to accumulate during August. As a result, and as a sign of displeasure, the pace of ongoing development work has been eased, with potentially a much greater impact on production than has been seen so far. Elsewhere in OPEC, **Libyan** crude production fell by 10 kb/d and **Algerian** crude output was unchanged.

As mentioned above, Iraqi exports resumed during the month. Volumes exported during the last 18 days of August totalled 28.1 million barrels, or 1.56 mb/d for that period. The table shows the breakdown by loading port and by source (i.e. whether from production or from storage). The 200 kb/d from storage is

consistent with an estimate of around 3.5 mb, or half the total in inventory at Ceyhan, being lifted between 14 August and 5 September. Average Iraqi production of 1.34 mb/d during August is the weighted average of the 550 kb/d produced during the first 13 days with the 1910 kb/d (550 kb/d plus 1360 kb/d) produced during the last 18 days.

### Iraqi Crude Exports, 14-31 August (average for 18-day period)

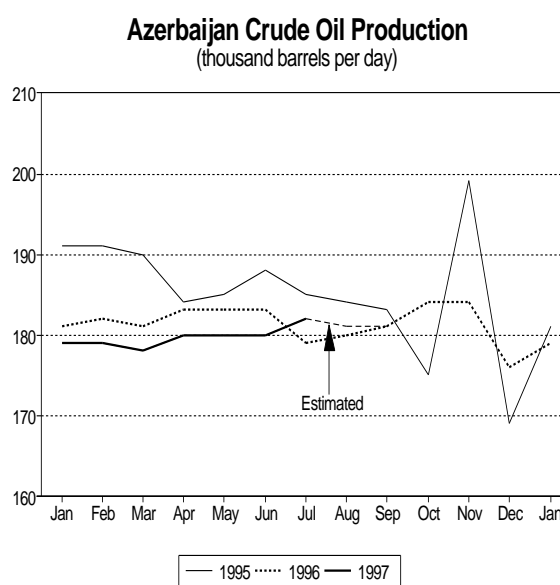
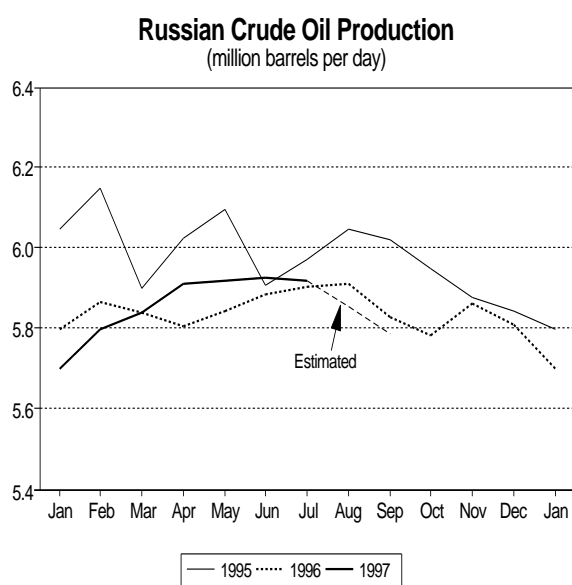
port	crude grade	production kb/d	from storage kb/d	total kb/d	number of days	total million bbls
Ceyhan	Kirkuk	750	200	950	18	17.1
Mina Al-Bakr	Basrah Light	610*	0	610*	18*	11.0
	Total	1360	200	1560	18	28.1

\* Liftings at Mina-Al-Bakr actually took place only during the last 13 days of the month and averaged 845 kb/d over that period

## Former Soviet Union (FSU)

### Production

Production statistics from Russia, Kazakhstan and Azerbaijan indicate that FSU crude supply in July averaged 6.89 mb/d, a minimal drop of 15 kb/d compared to the June figure. **Russian** crude production fell slightly, averaging 5.92 mb/d (-8 kb/d); however, the story line for Russian supply remains "unexpected stability". July was the fourth month in a row that crude output averaged between 5.91-5.93 mb/d. Combined production from the six largest Russian oil companies, each of which produces more than 400 kb/d, accounted for all of the 8 kb/d decline, led by a Tatneft supply decrease of



9 kb/d, to 492 kb/d. Output from joint ventures in Russia averaged 355 kb/d in July, down 6 kb/d. August output in Russia is estimated to have fallen by 65 kb/d, to 5.85 mb/d. Upstream indicators such as well completions and the number of idle wells suggest that the recent stability is not sustainable and that production levels will return to 1Q97 levels by 4Q97.

Crude production in **Azerbaijan** in July averaged 182 kb/d, a gain of 2 kb/d over the 180 kb/d level recorded in each of the previous three months; offshore production accounted for 150 kb/d of the total. Crude output in August is estimated at 181 kb/d. The start-up of production from the Azerbaijan International Oil Consortium (AIOC) offshore project has been delayed from 28 August to mid-November. Initial production (i.e., September) had been planned at 6 kb/d, increasing to 30 kb/d by year-end. This profile has been maintained, but has been pushed back by two months. Importantly,

additional details have emerged in recent weeks regarding the pace of production growth in the "early oil" phase at the Chirag field, resulting in a downward revision to the production forecast for 4Q97 and for all of 1998. Previously, the early oil plateau of 100-120 kb/d was anticipated to be reached within a few months of startup; however, AIOC has now publicised plans to produce only 30 kb/d in 1998 and 100 kb/d in 1999. While developments will be closely monitored, and changes in either direction are certainly possible, the forecast has been brought in line with the operator's plan. Although production has the potential to exceed these plans, output levels also depend on an agreement on pipeline tariffs between Chechen and Russian interests. All growth in Azerbaijan this year and next will come from the AIOC Guneshli/Chirag/Azeri fields, with current production operated by state company SOCAR expected to hold steady at 180 kb/d. Crude production in Azerbaijan is now expected to average 188 kb/d and 215 kb/d in 4Q97 and 1998 respectively. Before the downward revisions, the corresponding figures were 221 kb/d and 310 kb/d.

Crude production in **Kazakhstan** in July averaged 479 kb/d, a decline of 10 kb/d from the June figure. Output at the Tengizchevroil joint venture averaged 135 kb/d, down from 150 kb/d in June. This unexpected decline is thought to have been only temporary, with August production estimated at 499 kb/d, including 160 kb/d from Tengizchevroil. Steady gains in output at the Tengiz field are expected to push Kazakhstan's crude output to 532 kb/d in 4Q97.

### Net Exports

Net FSU exports averaged 2.92 mb/d in August, a drop of 80 kb/d compared to the previous month's figure. Seaborne exports fell by 310 kb/d, with cargoes originating at Black Sea and Baltic Sea ports falling by 190 kb/d and 120 kb/d, respectively. Competition from Iraqi export volumes after 13 August was a prime factor in the Black Sea decline, while rail maintenance at Ventspils affected Baltic Sea volumes. Overland exports via the Druzhba Pipeline increased by 260 kb/d, partially offsetting the reduced tanker liftings. August volumes recovered from July, when precautionary reductions in refinery and pipeline throughput took place due to widespread flooding in Central Europe.

### 1995-1997 Net FSU Exports

(million barrels per day)

	1995	1996	1997 <sup>f</sup>	4Q96	1Q97	2Q97	Apr	May	June	July <sup>p</sup>	Aug <sup>p</sup>
Black Sea Exports*	0.98	1.14	†	1.08	1.07	1.16	1.03	1.29	1.16	1.52	1.33
Baltic Exports	0.61	0.77	†	0.80	0.83	0.92	0.89	0.75	1.12	0.84	0.72
<b>Total Seaborne</b>	<b>1.59</b>	<b>1.91</b>	†	<b>1.88</b>	<b>1.90</b>	<b>2.08</b>	<b>1.92</b>	<b>2.04</b>	<b>2.28</b>	<b>2.36</b>	<b>2.05</b>
Druzhba Pipeline**	0.83	0.87	†	1.07	0.90	0.82	0.85	0.87	0.73	0.70	0.96
<b>Total Exports</b>	<b>2.42</b>	<b>2.78</b>	†	<b>2.95</b>	<b>2.80</b>	<b>2.89</b>	<b>2.77</b>	<b>2.90</b>	<b>3.01</b>	<b>3.06</b>	<b>3.01</b>
Imports	0.05	0.06	†	0.08	0.07	0.07	0.04	0.06	0.06	0.06	0.09
<b>Net FSU Exports</b>	<b>2.37</b>	<b>2.72</b>	<b>2.81</b>	<b>2.88</b>	<b>2.74</b>	<b>2.82</b>	<b>2.73</b>	<b>2.84</b>	<b>2.95</b>	<b>3.00</b>	<b>2.92</b>
NB: Crude Oil	1.91	2.12	†	2.25	2.14	2.12	2.10	2.18	2.07	2.29	2.32
Oil Products	0.46	0.61	†	0.62	0.60	0.70	0.63	0.66	0.88	0.72	0.60

\* includes a small amount of non-Russian crude oil exports

† data not available

f forecast

\*\* crude oil only

p preliminary

r revised

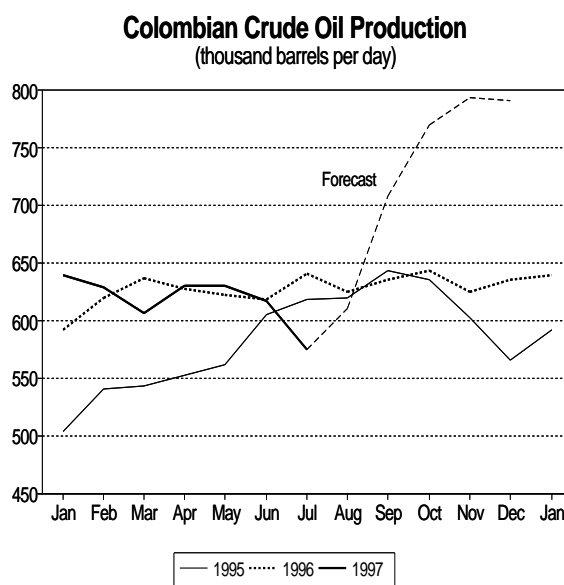
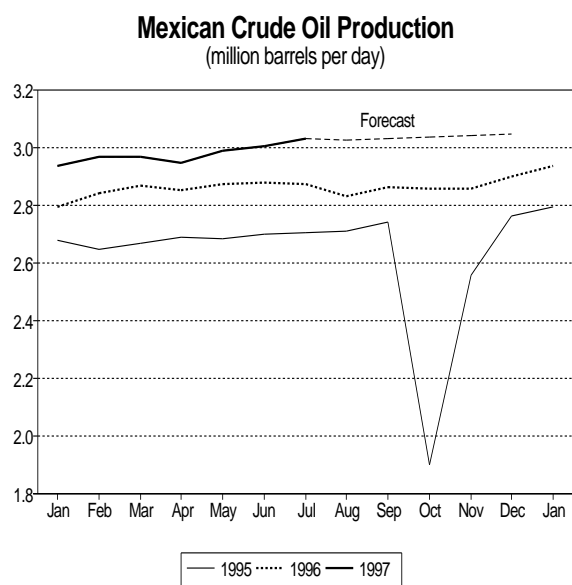
### Other Non-OPEC<sup>2</sup>

#### Latin America

**Mexican** crude production in July averaged 3.03 mb/d, a gain of 26 kb/d over the June level. It was the fourth consecutive month in which Mexican crude supply increased, with the gains coming mainly in heavy Mayan crude from the giant Cantarell field in the offshore Bay of Campeche. Pemex, the state oil company, appears to be on track to reach its target (announced at the end of last year) of having 1997 crude production exceed 1996 output by 150 kb/d. In contrast, Mexican NGL production, which averaged 371 kb/d in July (+2 kb/d), continues to stagnate. More than one year after the August 1996 Cactus gas plant explosion, NGL supply remains roughly 100 kb/d lower than pre-accident levels. Earlier this year, Pemex indicated that output was planned to return to normal this summer. A recovery is still projected, but has been pushed back progressively. NGL production is expected to average 420 kb/d during 4Q97, and 480 during 1998. In August, Mexico is estimated to have produced 3.03 mb/d of crude and 390 kb/d of NGLs.

<sup>2</sup> including some OECD member countries, see note on back cover.

Mexican crude exports in July averaged 1.80 mb/d, an increase of 69 kb/d over the 2Q97 figure. The stream breakdown for July was Mayan 1.04 mb/d (+25 kb/d over 2Q97), Olmeca 499 kb/d (-6 kb/d), and Isthmus 262 kb/d (+49 kb/d). By destination, 1.58 mb/d of the July volumes went to the United States (+71 kb/d over 2Q97), 183 kb/d to Europe(+10 kb/d), and 56 kb/d to the Far East (-13 kb/d).



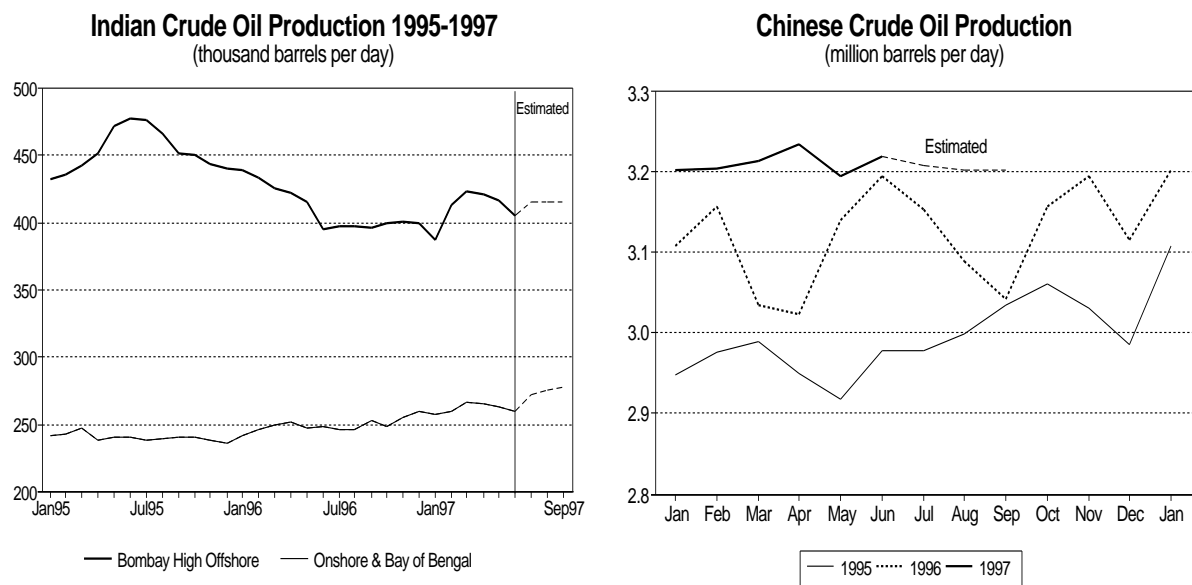
Based on partial data, **Colombian** crude production in July averaged 575 kb/d, a decline of 42 kb/d compared to the June level of 617 kb/d. Cusiana/Cupiagua production was 200 kb/d (up from 190 kb/d in June) but Cano-Limon production was negatively affected by pipeline attacks, with output of only 125 kb/d (down from 177 kb/d in June). Other production in July was assumed to have remained at June levels. Colombian crude production in August is estimated at 610 kb/d, with Cusiana/Cupiagua production at 230 kb/d and Cano-Limon at 120 kb/d. Cano-Limon was again hit hard by guerrillas, forcing Ecopetrol to declare force majeure on exports for only the second time since the field started up in 1985; the first time was last month. Loadings at the Covenas pipeline terminal were suspended between 30 July and 10 August, due to at least three rebel attacks on the pipeline. In addition, mudslides forced closure of another section of the line. Military analysts have described the recent successes of the guerrilla groups in classic terms, with poorly-trained and under-motivated government conscripts using "conventional" tactics in unfamiliar territory, fighting against well-trained, highly-motivated insurgent cadres who use "unconventional" tactics over terrain that they know intimately.

Some modest delays were reported in the startup of new equipment at the Cusiana field, but the production forecast was not affected, since such minor technical problems during startup are considered normal and had been factored into the forecast. Cusiana/Cupiagua output is expected to average 260 kb/d this month, 320 kb/d in October, and 340 kb/d in November and December, with Colombian crude production increasing commensurately.

Elsewhere in Latin America, President Fernando Cardoso of **Brazil** signed the new petroleum legislation (discussed in last month's Report) in early August. Brazilian crude production is estimated to have averaged 873 kb/d, 881 kb/d, and 885 kb/d in June, July, and August, respectively, with the increases coming from new production in the deepwater Campos Basin. Elsewhere in Latin America, crude production in **Guatemala** was reported to be 25 kb/d in August, with most output originating at the heavy sour Xan field in the Northeast part of the country.

### Asia

In June, **Indian** crude production averaged 665 kb/d, down 14 kb/d from the May figure. Onshore output of 259 kb/d was off 4 kb/d, as a result of torrential rainfall and electric power outages. Bombay High offshore output was 406 kb/d, off 10 kb/d. After increasing from 388 kb/d in January to 423 kb/d in March, Bombay High supply has drifted downwards for the last three months. June joint venture production of 36 kb/d (included in the onshore subtotal) was even with the previous month. July and August crude production is estimated at 687 kb/d and 690 kb/d, respectively. NGL production in India, is assumed to be holding steady at 80 kb/d.



**Chinese** crude oil production in June averaged 3.22 mb/d, a gain of 25 kb/d compared with the May figure. Among the largest producing areas, Daqing was flat at 1.12 mb/d, Shengli fell by 4 kb/d to 563 kb/d, Liaohe added 9 kb/d to 312 kb/d, and Xinjiang added 3 kb/d to 174 kb/d. Supply in the Tarim Basin, where over the last two years foreign explorers have become less optimistic about the potential for world-class discoveries, rose by 3 kb/d to 89 kb/d. Offshore output in China remained depressed at 318 kb/d, up 2 kb/d from last month. Maintenance is now thought to be the likely cause of the two-month offshore dip, and work programmes that had been assumed for 3Q97 have been factored out of the forecast, resulting in an upward revision of 32 kb/d.

In **Vietnam**, the Bach Ho field, which normally produces around 170 kb/d of the country's typical 180 kb/d total, will undergo a 20-day maintenance programme during September. The field will only be shut down partially, losing 74 kb/d during the work period, or 49 kb/d over the full month. Thus, September crude production is anticipated to be 131 kb/d, down from an estimated 170 kb/d in both July and August. During those two months, the 10 kb/d Dai Hung field, Vietnam's only other currently producing field, was shut in for planned maintenance.

## OECD STOCKS

### Industry Stock Changes in July

According to preliminary data OECD industry stocks were drawn down marginally in July. Tanker data indicate, however, a large buildup in oil-in-transit, particularly crude oil cargoes headed east from the OPEC Middle East producers. As to onshore stocks, a decrease in crude oil stocks of 0.49 mb/d was exceeded by the 0.53 mb/d increase in oil products, but a 0.07 mb/d reduction in stocks of other refinery inputs left total OECD industry stocks 0.03 mb/d below the end-June level. Among the oil products, distillate stocks increases exactly offset the 0.51 mb/d decline in gasoline, while a 0.80 mb/d rise in other product levels was more than double the decline in residual fuel stocks. Regionally, OECD Pacific inventories were modestly higher than in June, while North American and European industry stocks were each down slightly.

The most significant changes for the month occurred in North America where other products increased by 0.7 mb/d and gasoline and crude oil stocks fell by 0.43 mb/d and 0.40 mb/d respectively. High levels of US refinery runs reduced crude stocks, allowing total product stock levels to increase. But very strong gasoline demand exceeded daily production, requiring the additional stockdraw from gasoline inventories. European inventory changes are preliminarily estimated (based on data from only a few countries) to have been within 0.10 mb/d for each of the components. In the Pacific region, stocks of distillates rose by 180 kb/d, while crude oil inventories were reduced by 0.14 mb/d.

### Preliminary Industry Stock Changes in July

(million barrels per day)

	North America	Europe	Pacific	Total
Crude Oil	-0.40	+0.05	+0.14	-0.49
Gasoline	-0.43	-0.09	+0.01	-0.51
Distillates	+0.26	+0.07	+0.18	+0.51
Fuel Oil	-0.14	-0.10	-0.04	-0.28
Other Products	+0.70	0.00	+0.10	+0.80
Total Products	+0.39	-0.11	+0.25	+0.53
Other Oils*	-0.08	-0.01	+0.02	-0.07
Total Oil	-0.09	-0.07	+0.13	-0.03

\* includes feedstocks, NGLs and other hydrocarbons

A large revision to June US crude oil inventory estimates led to an overall 21.6 mb downward adjustment to OECD industry stocks. Other refinery input stocks were also revised down by 6.4 mb and European crude oil stocks are now thought to have been 7.3 mb lower than in last month's Report. Conversely, June estimates for the OECD Pacific region were revised upwards for all three categories, led by a 5.2 mb increase in the crude oil inventory estimate. Inventory estimates for May were adjusted upwards modestly (+2.6 mb) on the basis of higher European crude oil stock estimates.

### Revision to June OECD Industry Stock Levels

(million barrels)

	North America	Europe	Pacific	Total
Crude Oil	-16.7	-7.4	+5.1	-19.0
Products	-0.4	+3.2	+0.6	+3.4
Other Oils *	-6.3	0.1	+0.2	-6.0
Total Oil	-23.4	-4.1	+5.9	-21.6

\* includes feedstocks, NGLs and other hydrocarbons

### Preliminary Stock Levels at the End of July

Total OECD industry stocks at the end of July are estimated to have been 2439 mb, 2 mb below the downwardly-revised June level. Stocks were 20 mb above year earlier levels, but 114 mb below the end-July 1995 level. European crude oil inventories now lag behind relative to low year-earlier levels by 37 mb, but higher North American product inventories, particularly of distillates and other products, stand 45 mb above their end-July 1996 level. The year-on-year increase in total North American stocks slightly

exceeded the shortfall in total European industry stocks. Meanwhile, industry stocks in the Pacific region were 20 mb above year-earlier levels with half the difference in crude and half in product and other refinery input stocks. As shown on the last line of the table below, Pacific stocks are only marginally below 1995 levels, while North American and European inventories are each around 55 mb below end-July 1995.

### Year-on-Year End-July OECD Industry Stock Comparisons

	(million barrels)			
	North America	Europe	Pacific	Total
Crude Oil	+1	-34	+10	-24
Products	+45	-5	+6	+46
Other Oils *	-8	+2	+4	-2
Total Oil	+38	-37	+20	+20
vs. 1995	-55	-54	-4	-114

\* includes feedstocks, NGLs and other hydrocarbons

### Regional Stock Developments

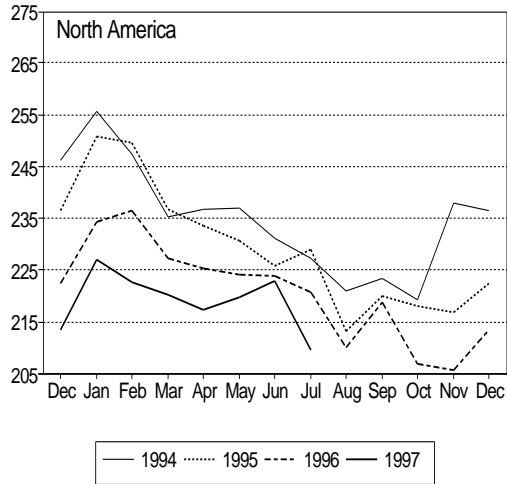
Total US oil inventories fell by an estimated 94 kb/d in July as the net result of strong countertrends among components. Product inventories rose by about 385 kb/d, nearly matching a decline of over 400 kb/d in crude oil inventories. Stocks of other refinery feedstocks and other hydrocarbons fell by about 75 kb/d. Gasoline and residual fuel inventories were drawn down at rates of 430 kb/d and 140 kb/d respectively, the latter despite weakening demand (see Demand section). The gasoline and residual fuel declines were more than offset by a nearly 700 kb/d rise in stocks of LPGs, naphthas and other products and an increase of 260 kb/d in middle distillate stocks. The crude oil stock reduction occurred despite slightly lower refinery runs (see Prices section below), as crude oil imports fell from 8.4 mb/d in June to 8 mb/d in July and US oil production was about 30 kb/d lower for the month. US oil inventories showed a moderate build up to 29 August, with increases in all products except gasoline more than offsetting declines in oil and unfinished oils. Gasoline stocks fell to 185 mb, about 6 mb below the year earlier and the lowest level since the US DOE began recording these data in 1979.

As in the US, **European** stocks also fell, but by a more moderate 73 kb/d in July. A 140 kb/d stockdraw in France more than offset aggregate increases in most of the other European countries. The French decline occurred in all components except for Other Products stocks, which were unchanged. French distillate stocks fell by 75 kb/d and gasoline by about 40 kb/d. The French distillate stockdraw was more than compensated for by a 120 kb/d increase in the Netherlands and a 60 kb/d rise in German distillate stocks. Including some small declines in other European countries, overall European distillates stocks advanced by 70 kb/d in July. Conversely, residual fuel oil inventories fell by nearly 100 kb/d and gasoline stocks by 85 kb/d as a result of modest declines in most countries, with the exception of the UK, where marginal increases occurred. Crude oil stocks rose by 55 kb/d, also primarily in the UK.

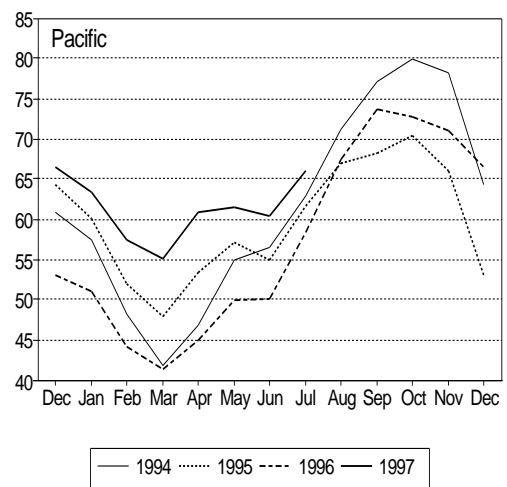
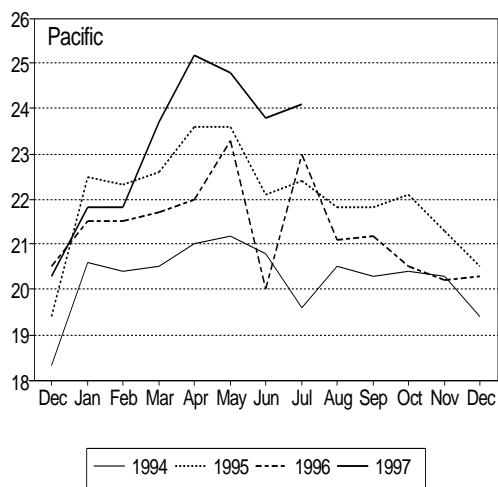
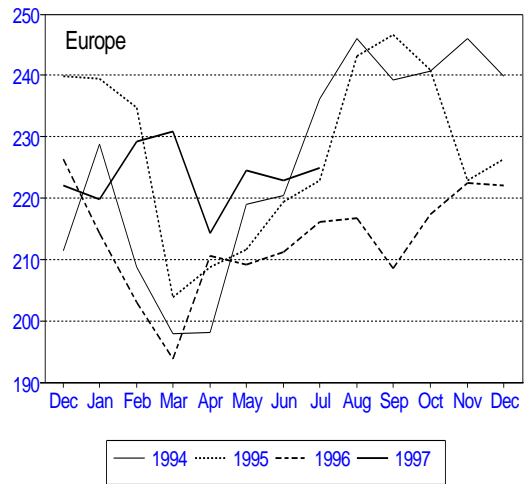
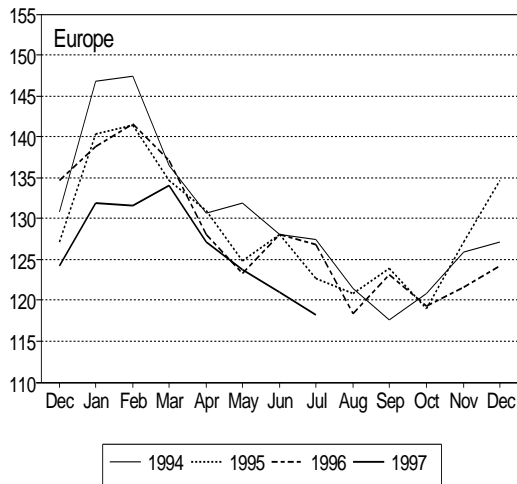
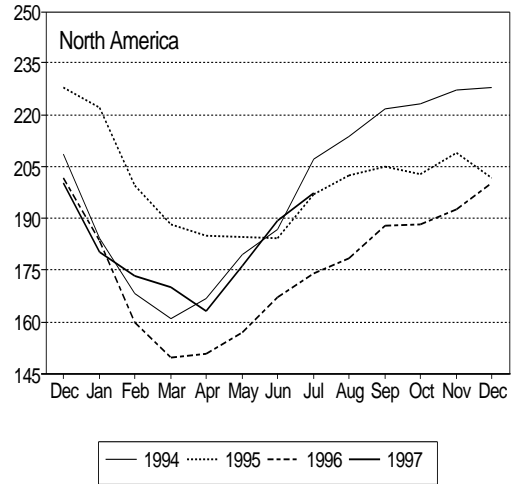
Following a decline in June, **Japanese** oil stocks increased by 130 kb/d in July. As opposed to the case in the US, a 255 kb/d increase in Japanese product stocks more than offset a 140 kb/d decline in crude oil, and other refinery input inventories increased 20 kb/d. Inventories of all products except residual fuel oil rose, led by gains in distillates (+185 kb/d) and other products (+100 kb/d) stocks. Gasoline stocks were up 10 kb/d for the month, while residual fuel inventories fell by 40 kb/d.

### Regional OECD Industry End-Month Stocks: Gasoline and Middle Distillates (Million barrels)

#### Gasoline

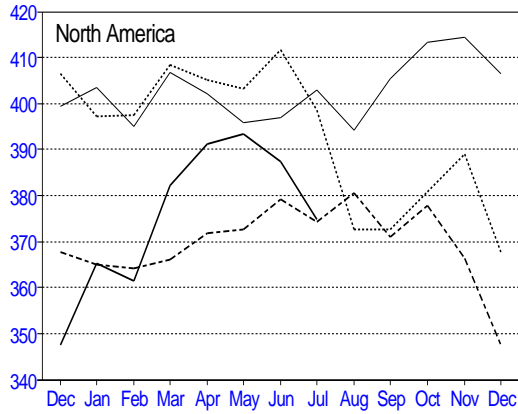


#### Middle Distillates



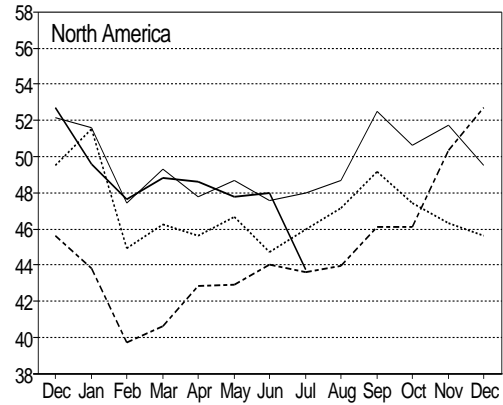
### Regional OECD Industry End-Month Stocks: Crude Oil and Fuel Oil (Million barrels)

**Crude Oil**

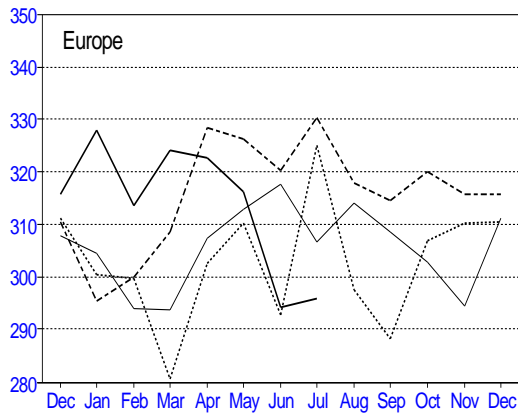


— 1994 ..... 1995 - - - 1996 - · - 1997

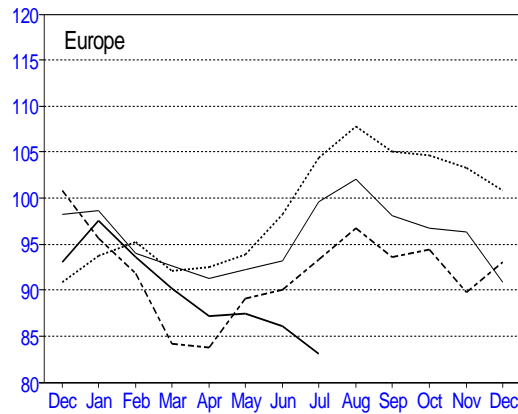
**Fuel Oil**



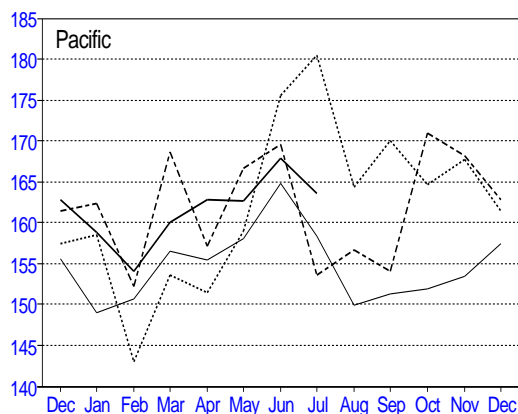
— 1994 ..... 1995 - - - 1996 - · - 1997



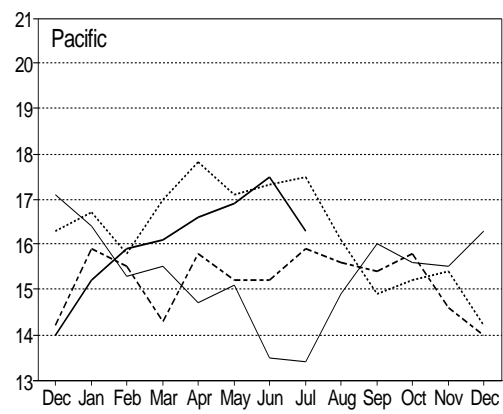
— 1994 ..... 1995 - - - 1996 - · - 1997



— 1994 ..... 1995 - - - 1996 - · - 1997

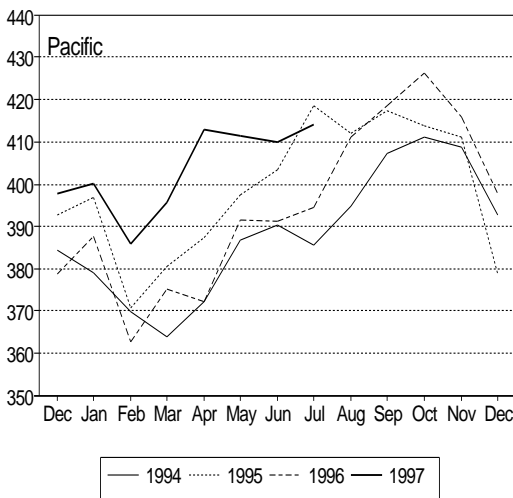
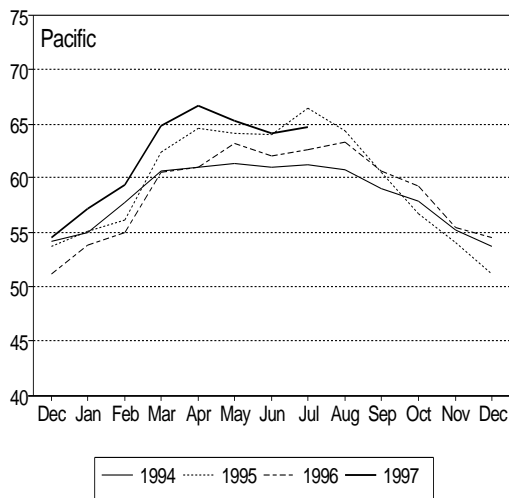
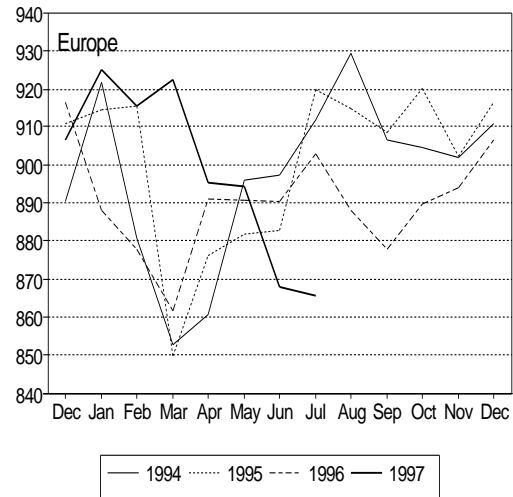
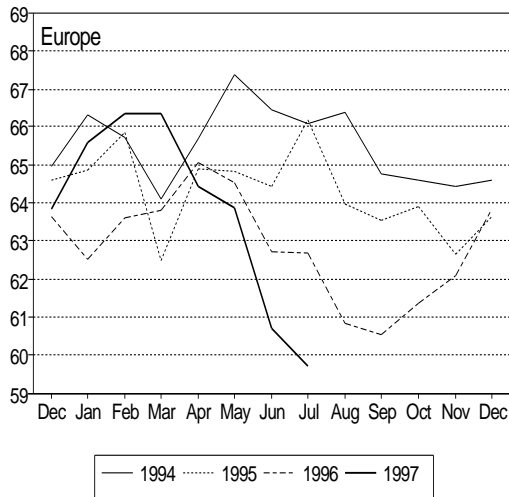
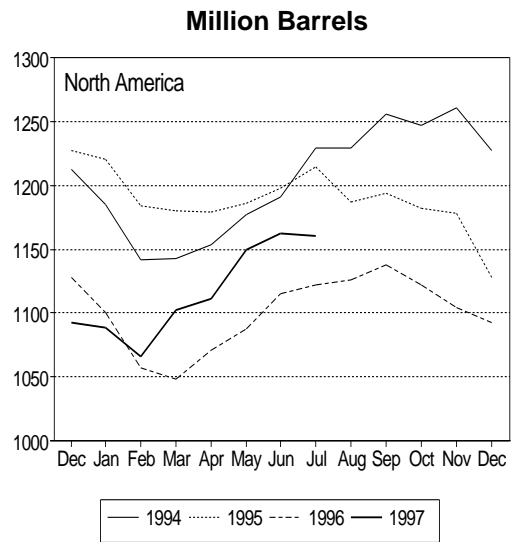
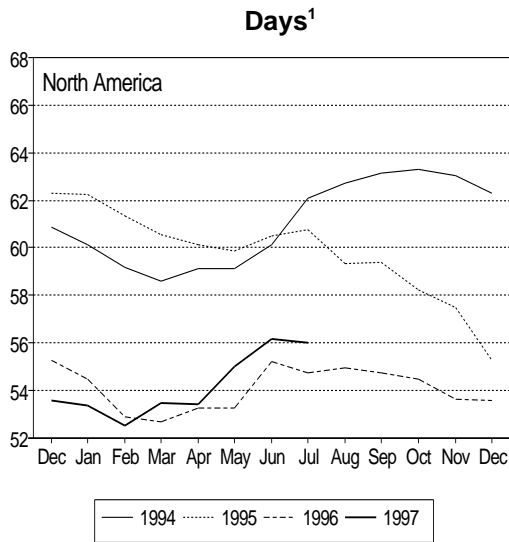


— 1994 ..... 1995 - - - 1996 - · - 1997



— 1994 ..... 1995 - - - 1996 - · - 1997

### Regional OECD End-Month Industry Stocks (In days of forward demand and million barrels)

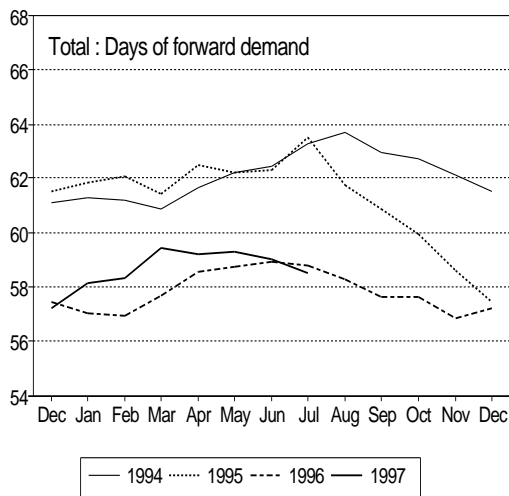


<sup>1</sup> Days of total stocks are based on demand for the next three months.

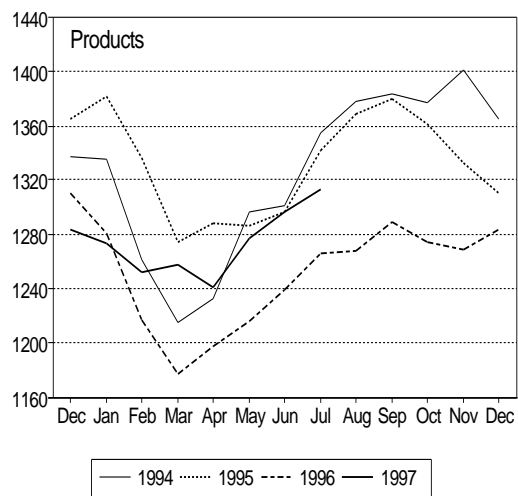
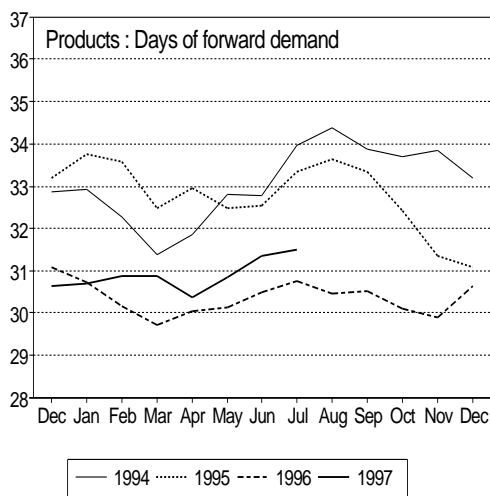
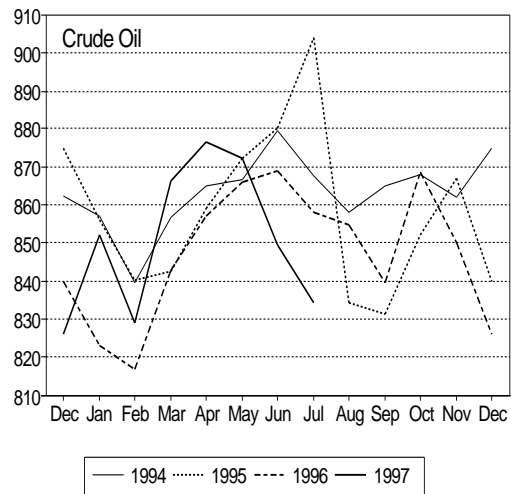
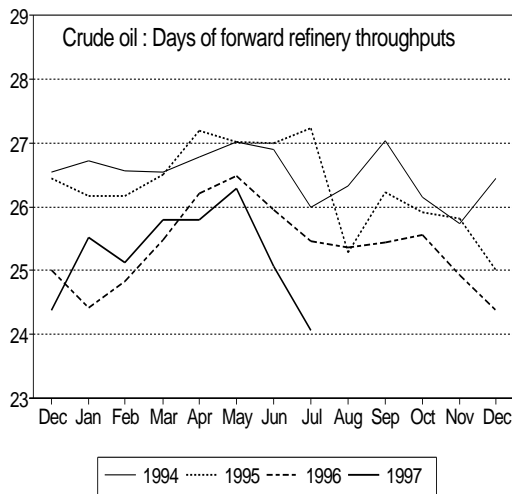
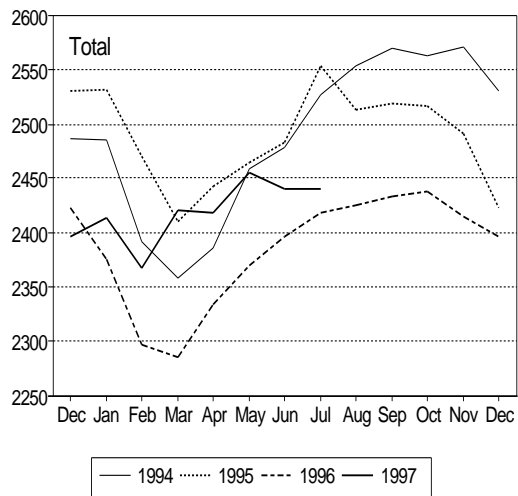
### Total OECD End-Month Industry Stocks

(In days and million barrels)

Days<sup>1</sup>



Million Barrels

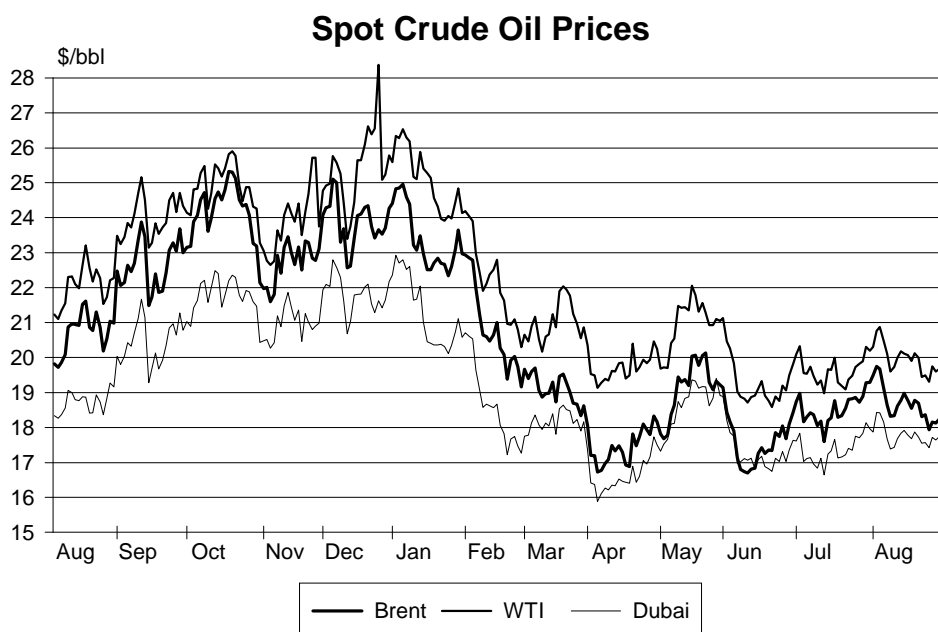


<sup>1</sup> Days of total and product stocks are based on demand for the next three months. Days of crude oil stocks are based on refinery throughputs for the next month.

## OIL PRICES AND REFINERY ACTIVITY

### Summary

- **Crude** oil prices were unexpectedly resilient in August in the face of the mid-month resumption of Iraqi crude exports. This was mainly due to unplanned outages of gasoline production capacity in refineries on both sides of the Atlantic which led to a surge in US and European gasoline prices. Firm refiner demand for crude in the Atlantic Basin, fuelled by favourable refining margins, contributed to closely-balanced Atlantic Basin crude supply/demand fundamentals and provided additional support for prices of the regional benchmark crudes Brent and WTI. The effect of renewed sour crude exports from Iraq has so far been confined to the Mediterranean, where the discount of regional sour benchmark Urals to Brent nearly doubled. A comparatively wide Brent/Dubai differential during most of the month caused Asian refiners to refocus on Mideast Gulf grades rather than West African crudes to cover spot crude demand. Light, sweet Asian benchmark crudes strengthened relative to Brent. **Freight rates** from the Mideast Gulf to eastern and western destinations have increased to the highest levels since the Gulf War
- There was an appreciable tightening of prompt gasoline availability. First in Europe and then in the US, a series of catalytic cracker outages on both sides of the Atlantic caused European and US gasoline prices to surge. The strength of gasoline markets provided support to other light product markets both in Europe and in the US. US **product** markets also gained additional support from unexpectedly strong gasoline and distillate demand. Asian product markets remained soft as a result of weak regional product demand and the return of refining capacity from turnaround in North Asia.
- Average refining **margins** increased sharply in Europe and the US, mainly from the surge in gasoline prices. In Singapore, however, margins declined further from already low levels, reflecting the weakness in Asian product markets.
- In July, aggregate refinery **throughputs** in OECD countries rose to the highest level of the decade. They are estimated to have increased by 0.73 mb/d to just below 34 mb/d from June's downwardly-revised figures (down 0.06 mb/d), and were 0.8 mb/d or 2.5% higher than a year earlier. A large increase in Japan and, to a lesser extent, in Europe was partly offset by a decrease in US throughputs, which nonetheless remained above 15 mb/d for the third successive month. Throughput levels in August appear to have increased in the US, Europe and Japan.
- Planned **refinery maintenance shutdowns** are expected to take some 600 kb/d of capacity out of operation in Europe in September and October. US turnarounds are expected to be as light as last autumn. East of Suez, the peak of autumn refining maintenance is expected in September with almost 1.2 mb/d of refining capacity out of operation, followed by an estimated reduction of 630 kb/d in October.



## Spot Crude Oil Prices

Atlantic Basin benchmark crude oil prices trended down during most of August. However, Brent and WTI remained unexpectedly resilient for the second successive month despite the bearish impact of the resumption of Iraqi crude exports on Atlantic Basin crude markets. To a large extent this was offset by the bullish impact of soaring gasoline prices in the US and Europe and by closely-balanced Atlantic Basin crude supply/demand fundamentals. Firm refiner demand for crude and limited supply disruptions, particularly in Colombia, restricted regional crude supplies. Bullish sentiment in futures markets during the first three weeks of the month also supported oil markets but the trend turned bearish in the last week of the month, when gasoline support waned and concerns rose about a loosening crude supply/demand balance in the Atlantic Basin.

The anticipated negative price impact of Iraqi crude exports, which resumed at a rate of about 1.56 mb/d on 13 August (see Supply section above), has so far been confined to the sour crude market in the Mediterranean. A large proportion of initial crude liftings from the Turkish port of Ceyhan was committed for the US Gulf or was taken into Mediterranean refiner's storage and consequently did not affect the market's balance in August.

Indigenous light, sweet Asian crude markets regained strength amid gradually rising regional demand. Asian refiners reportedly refocused on crude supplies from the Middle East as the comparatively wide Brent/Dubai differential deterred spot purchases of West African grades.

## Spot Crude Oil Prices and Differentials

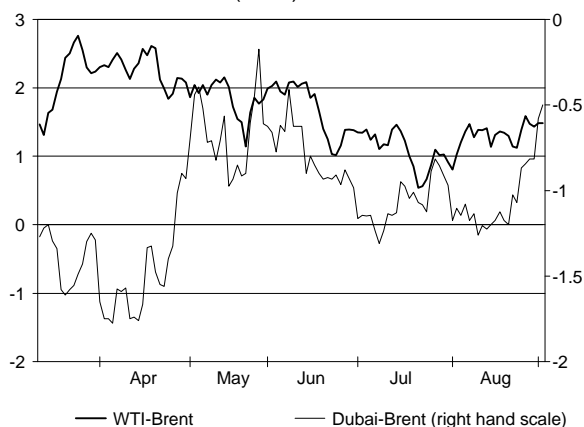
(monthly and weekly averages, \$/bbl)

	Jun	Jul	Aug	Change	Week Ending:					
					25 Jul	01 Aug	08 Aug	15 Aug	22 Aug	29 Aug
WTI	19.28	19.63	19.98	0.34	19.37	20.11	20.37	20.02	19.79	19.58
Brent Dated	17.58	18.54	18.68	0.14	18.67	19.14	19.10	18.69	18.54	18.11
Urals (del. Mediterranean)	16.48	17.85	17.84	-0.01	17.96	18.60	18.35	17.80	17.63	17.22
Dubai	17.28	17.37	17.77	0.40	17.38	17.90	18.01	17.73	17.68	17.63
Tapis	19.88	19.05	20.12	1.07	19.03	19.46	20.16	20.38	20.32	19.56
Brent over Dubai	0.30	1.17	0.91		1.30	1.23	1.09	0.97	0.86	0.48
WTI over Brent	1.70	1.09	1.30		0.70	0.97	1.27	1.32	1.25	1.47
Tapis over Brent	2.30	0.51	1.44		0.35	0.32	1.05	1.69	1.78	1.45
Brent 1st month minus 2nd month	-0.23	0.13	-0.03		0.15	0.24	0.21	-0.09	-0.13	-0.23
WTI 1st month minus 2nd month	-0.17	-0.12	-0.16		-0.25	-0.04	-0.13	-0.20	-0.21	-0.11

Despite the imminent return of Iraqi crude exports, dated **Brent** prices peaked on 4 August at \$19.75/bbl, supported by the highest Northwest European gasoline prices in five years. Improving European gasoline supplies then led Brent prices to step down to a narrow trading range around \$18.50/bbl during the second and third full weeks of the month, despite the resumption of Iraqi crude exports. Crude prices remained supported by strong regional refiner demand (fuelled by improved refining margins) in a tightly balanced market and by high US and European gasoline prices. In the last week of the month, Brent prices declined

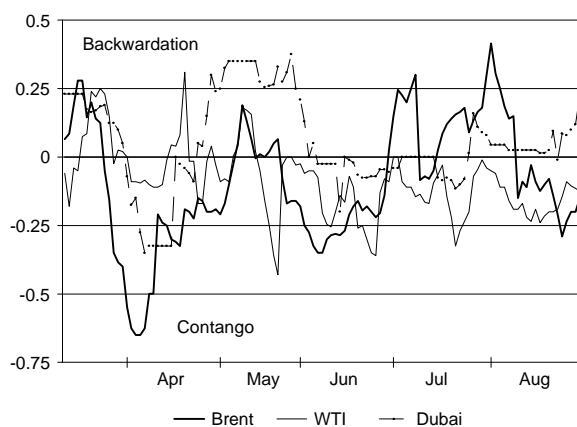
### WTI/Brent/Dubai Differentials

(\$/bbl)



### Forward Differentials

First month minus second month (\$/bbl)



to a level of around \$18.15/bbl, when market sentiment turned bearish due to waning support from US gasoline prices and the market's growing anticipation of a loosening supply/demand balance in the Atlantic Basin.

In early August, physical Brent prices changed from backwardation into a shallow (though gradually widening) contango as shown in the right-hand graph on the previous page. In contrast to offshore-loaded North Sea grades, generally with fixed freight rates, Brent, which is loaded at the Sullom Voe terminal, suffered from high North Sea freight rates. This contributed to the widening discount for dated Brent to near-months physical Brent prices. The opportunity for transatlantic arbitrage for North Sea crudes to the US remained marginal during August, as shown in the left-hand graph on the preceding page, and there was reportedly slack US demand for North Sea grades as unsold West African cargoes of similar quality were offered on the US Gulf Coast on a delivered basis in early August.

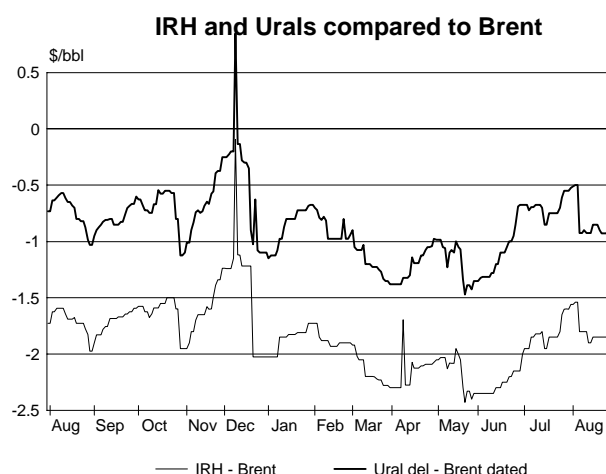
As was the case in the North Sea, **WTI** prices were caught between the bearish impact of renewed Iraqi crude exports and bullish market sentiment. Strong US gasoline prices, firm demand by refiners for crude and active trading in futures markets on the NYMEX all cushioned the impact of the Iraqi crude. Prices ranged between \$19.50/bbl and \$20.50/bbl, following the pattern described for Brent, but with a smaller overall decline for the month. Throughout August, WTI prices remained in shallow contango, both in the physical and futures markets. There was prompt tightness in the sour crude market on the US Gulf Coast, mainly as a result of a brief outage of Colombia's Cano Limon field (see Supply section) and the anticipated September maintenance on Canada's Interprovincial Pipeline, drawing crude up to the US Midwest. This caused sour crude prices to firm relative to sweet grades during all but the last week of the month. At the end of the month the prospects of additional Iraqi supplies in the near term started to gain market attention.

Prices for Asian sour benchmark crude **Dubai** largely tracked the development in Brent markets during the first three weeks of the month, as indicated by the almost flat Brent/Dubai differential in the left-hand graph on the previous page. However, the Brent/Dubai differential narrowed in the last week of August with declining Brent prices and firm Asian demand for Mideast crude grades. Strong sour crude demand from Japanese refiners (who failed to secure Iraqi crude imports) contributed to a firming market. With the exception of one day, inter-month Dubai spreads remained in shallow backwardation (see right-hand graph on previous page), which widened in the last week of the month.

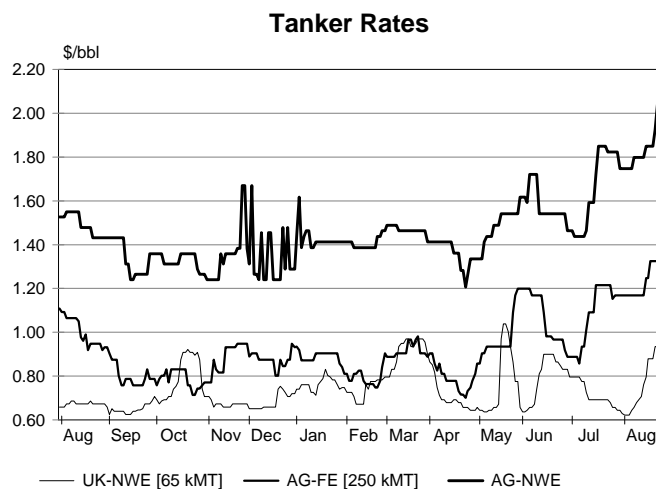
A comparatively wide Brent/Dubai differential, averaging \$1.15/bbl during the first three weeks of the month, and high freight rates to Asia, deterred Asian interest for Brent-related **West African grades**. A number of West African crude cargoes were thus shipped across the Atlantic unsold and offered on a delivered basis on the US Gulf Coast, curtailing regional demand for North Sea grades.

**Urals** prices in the Mediterranean, which were boosted by a more than two-months absence of Iraqi Kirkuk, dropped sharply in the first week of August. The day the UN approved Iraq's aid distribution plan under the "oil-for-food-deal", Urals prices fell by \$0.40/bbl relative to those of Brent (see graph to the right). However, during the last three weeks of the month, Urals prices remained almost unchanged at a \$0.90/bbl discount to Brent, despite the mounting competition from Iraqi Kirkuk, apparently because of firm regional crude demand due to favourable refining margins.

Prices for light, sweet Asian benchmark crude **Tapis** strengthened appreciably, both in absolute terms and relative to those for Brent (see table on previous page), amid active trading of light, sweet regional grades to meet September needs. Tapis's high kerosene yield made it particularly attractive to Japanese refiners preparing for the high kerosene demand season ahead. Minas was in strong demand from Chinese and Japanese refiners but traded at a slightly wider average differential to Brent in August than in July.



**Freight rates** from the Mideast Gulf to eastern and western destinations have increased to the highest levels since the Gulf War. A large number of spot fixtures faced a limited supply of VLCCs, as large volume loadings from West Africa to Asia in June and July tightened vessel availability. The resumption of Iraqi crude exports in August aggravated the tightness. Costs for a VLCC moving from the Gulf to Rotterdam have jumped to more than \$2.00/bbl, and are now some 50% higher than at the start of the year. Rates to the Far East showed similar gains as shown in the graph to the right.

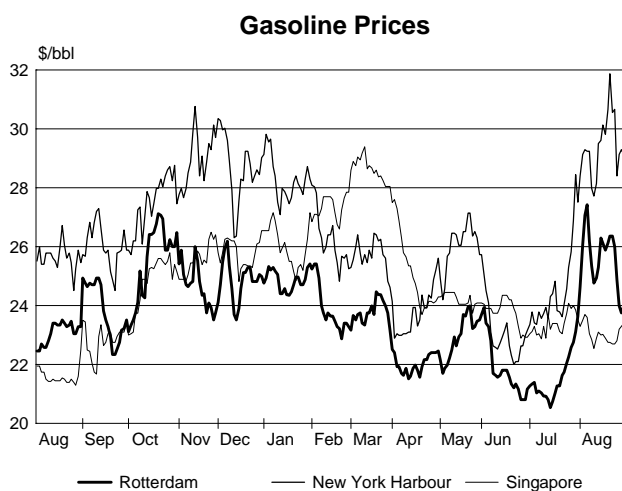


### CIF Crude Import Costs

Table 8 shows that the preliminary weighted average CIF cost for crude imported into IEA countries in June was \$17.81/bbl, \$0.63/bbl lower than in May. The corresponding estimates for July and August are \$18.30/bbl and \$18.65/bbl respectively.

### Spot Product Prices in August

In late July and early August, Rotterdam **gasoline** prices soared by more than 20% within a matter of days and peaked at the highest level since the Gulf War (see left-hand graph below). The primary cause was the coincidence of a series of unplanned catalytic cracker shutdowns in Northwest Europe, which cut gasoline output at the height of summer gasoline demand. The already tight Atlantic Basin gasoline supply/demand balance tightened further, and limited gasoline availability was additionally aggravated by low European gasoline inventory levels. Prices briefly receded as a result of returning gasoline

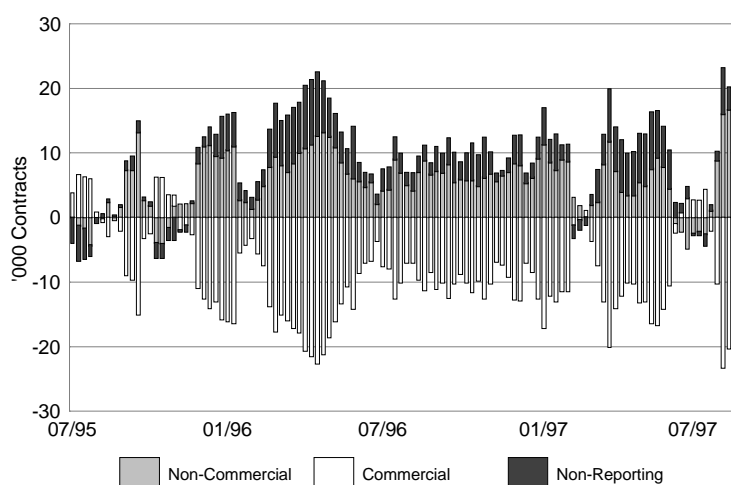


production capacity, but only to surge again, this time following soaring US gasoline prices. During most of the second and third week of the month, prices remained little changed at these unusually high levels, supported by the open arbitrage possibility for exports to the US. In the last week of the month European gasoline prices fell following a decline in US gasoline prices and waning regional demand in a steeply backwardated market. In the Mediterranean, gasoline prices largely followed the pattern of those in Northwest Europe and continued to derive support from export possibilities to the eastern Mediterranean and Nigeria. As shown in the newly expanded table below, the average regular gasoline/Brent differential in Rotterdam increased to an unusually wide \$6.90/bbl.

In the US, traders and refiners were caught by surprise by unexpected, sustained fundamental strength in US gasoline prices relatively late in the summer driving season. A combination of unanticipated strong gasoline demand and tight gasoline supplies, compounded by unplanned outages of substantial gasoline production capacity in the US and traditional gasoline export areas such as Venezuela and Europe resulted in gradually declining US gasoline inventory levels, to well below the psychologically sensitive 200 mb level. This led to appreciable tightness in the prompt New York Harbour gasoline market, causing growing gasoline supply anxiety, and led US gasoline prices to surge in the second and third weeks of August with spot prices reaching the highest level since the Gulf War.

The restart of some US gasoline manufacturing capacity in the last week of August, reports about large gasoline imports on the way to the US, mainly from Europe, and the approaching end of the summer driving season caused market sentiment to turn bearish. Gasoline prices consequently receded late in August, albeit remaining at comparatively high levels. The decline in prices and subsequent price volatility was reinforced by the liquidation of large net long positions in gasoline futures contracts held by non-commercial and non-reporting market participants on the NYMEX, as shown in the graph to the right.

### Distribution of Net Open Positions of Unleaded Gasoline Contracts on NYMEX



During the month, US gasoline prices remained in steep backwardation. The regular gasoline/WTI differential in New York Harbour surged to levels not seen in five years, peaking briefly at just under \$12/bbl and averaging \$9.42/bbl in August, as shown in the newly expanded table below.

Singapore gasoline prices, unlike those in the US and Europe, remained within a comparatively narrow band during most of the month. Downward pressure from supplies in excess of regional requirements continued. The average gasoline/Dubai differential declined further in August, reaching the lowest level since January.

### Spot Product Prices

(monthly and weekly averages, \$/bbl)

	Gasoline				Gas Oil				Low Sulphur Residual Fuel Oil			
	Rotterdam	Med	NY Harbour	Singapore	Rotterdam	Med	NY Harbour	Singapore	Rotterdam	Med	NY Harbour	Singapore
Jun	21.87	23.11	23.10	23.77	21.93	20.01	21.93	22.87	14.61	14.96	16.22	14.95
Jul	21.57	23.24	24.54	23.38	22.20	20.54	22.26	21.45	14.74	14.70	16.80	17.19
Aug	25.58	26.45	29.40	23.05	22.76	21.17	22.69	22.47	14.99	14.97	16.28	15.67
Aug-Jul	4.01	3.21	4.86	-0.33	0.56	0.63	0.43	1.02	0.25	0.27	-0.52	-1.52
Week ending:												
25 Jul	21.79	23.80	24.27	23.48	22.07	20.68	22.17	21.97	14.82	14.76	16.76	17.58
01 Aug	23.35	25.13	27.42	23.72	22.77	21.42	23.03	22.67	14.73	14.65	15.98	15.96
08 Aug	26.42	27.25	28.98	23.34	23.32	21.96	23.44	22.79	14.96	14.78	15.99	15.98
15 Aug	25.48	26.35	29.02	22.92	22.90	21.38	22.80	22.62	14.98	14.87	16.58	15.95
22 Aug	26.15	26.77	30.71	22.76	22.74	20.98	22.52	22.51	15.02	15.08	16.58	15.86
29 Aug	24.16	25.33	28.99	23.18	21.88	20.08	21.62	21.77	15.02	15.31	16.05	14.73
	Product Price Differentials to Crude Oil Prices											
	Brent	Urals	WTI	Dubai	Brent	Urals	WTI	Dubai	Brent	Urals	WTI	Dubai
Jun	4.29	6.64	3.82	6.49	4.35	3.53	2.65	5.59	-2.97	-1.52	-3.06	-2.33
Jul	3.03	5.39	4.91	6.01	3.66	2.69	2.63	4.08	-3.80	-3.15	-2.83	-0.18
Aug	6.90	8.61	9.42	5.28	4.08	3.33	2.71	4.69	-3.69	-2.86	-3.70	-2.11

European **gasoil** markets saw seasonally-limited prompt demand throughout the month. A strong dollar reportedly discouraged end-user buying, particularly in Germany (see Demand section). Growing regional supply pressure, exacerbated by high Russian gasoil exports and a closed arbitrage possibility to Asia, was largely alleviated by export possibilities to South America as well as a sufficient contango in physical and futures gasoil markets to provide enough incentive to transfer gasoil to storage. Spot gasoil prices largely moved in line with those of benchmark crudes (Brent in Northwest Europe and Urals in the Mediterranean), declining in the first week of the month, remaining little changed in the second and third weeks and declining again in the last week of August. On average, prices increased slightly and the gasoil differential to crude widened again to over \$4/bbl, as shown in the table above.

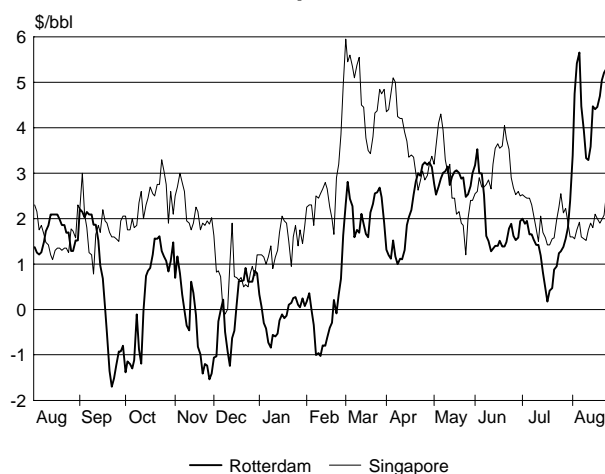
Unusually high gasoil production levels in the US (3.44 mb/d on average for the four-week period ending 22 August) resulting from high refinery runs were to some extent offset by unexpectedly strong US diesel demand (see Demand section). Total distillate stocks consequently increased gradually during August. The US gasoil markets, both physical and futures, remained in contango, encouraging the movement of heating oil into storage ahead of the winter heating season and shielding gasoil prices from decline. Spot gasoil prices in New York Harbour, like those in Europe, largely tracked those of regional benchmark WTI. However, the gasoil/WTI spread in New York Harbour moved slightly lower during the month, averaging just \$0.08/bbl over July, but lower than last August.

Downward pressure on the Singapore gasoil market remained high in August as ample, and increasing regional supplies (mainly due to North Asian refiners returning from maintenance shutdowns), were met by seasonally weak regional demand, in particular from two of the largest regional consumers, India and China. Gasoil inventory levels remained high. Spot gasoil prices remained within a narrow band around \$22.70/bbl during the first three weeks of the month and declined to just below \$22/bbl in the last week of August, trading at an atypical discount to those in Europe during the entire month. Nonetheless, the average gasoil/Dubai differential increased by \$0.61/bbl in August.

European **naphtha** prices gained strength in late July and early August in line with steeply rising gasoline prices and export possibilities to South America and Asia. Spot prices, however, came under downward pressure in the second half of August, as weak regional demand coincided with increased regional supplies. The arbitrage possibility for European naphtha into Asia closed in mid-August as a result of weakening Asian demand. Several Mediterranean cargoes for September loading, which were originally expected to move eastward, remained unsold and exerted downward pressure on the spot naphtha market. Nonetheless, the naphtha/Brent differential in Rotterdam increased from a level around \$2/bbl during most of July to just under \$3/bbl for most of August.

Spot naphtha prices in Singapore because of a prompt supply overhang. Arbitrage arrivals coincided with increased regional naphtha production in North Asia, where refineries returned from seasonal turnaround and the arbitrage possibility from Europe consequently closed by mid-month. The average naphtha/Dubai differential in Singapore declined by \$0.80/bbl to \$3.23/bbl in August. The **reforming margin** in Northwest Europe increased appreciably as a result of the steep rise in European gasoline prices (see graph to the right), while the Singapore reforming margin remained within a comparatively narrow band in the first half of August. In the last week of the month, the Singapore reforming margin increased when naphtha prices declined by more than those of gasoline.

Gasoline - Naphtha Differential



Spot **kerosene** prices in Europe and in the US generally moved in line with those of gasoil, with the US kerosene/gasoil differential trending slightly higher for the third successive month and the European spread remaining almost unchanged in a thinly-traded spot kerosene market. In Singapore, stagnant regional demand, high regional supply and high inventory levels combined to depress spot kerosene prices, which largely moved in line with those of gasoil, trading at an average premium of only \$0.44/bbl, compared to \$1.75/bbl in July.

In European fuel oil markets, **LSFO** prices remained little changed for the third successive month, almost unaffected by developments in crude markets. Weak demand from Italy's ENEL in the Mediterranean was offset by some limited demand from the eastern Mediterranean. Spot LSFO prices in New York Harbour increased by roughly \$1/bbl in the first half of the month but declined by the same amount in the second half of August, remaining largely in a price range between \$16/bbl and \$17/bbl for the third successive month.

During the first three weeks of the month, Asian **LSWR** (Low Sulphur Waxy Residue) prices remained within a very narrow band around the average of \$15.90/bbl in a well-supplied but balanced market. However, in the last week of August, prices declined by more than \$1/bbl in the face of large additional Indonesian supply allocations and weakening regional demand. Spot LSWR prices declined, as in June, to the lowest price level in two years and traded for most of the month below those of HSFO.

European **HSFO** prices remained firm within a very narrow trading range during most of August as refinery problems and loading disruptions in Northwest Europe and strong regional bunker demand combined to tighten markets. In early August, spot HSFO prices in Rotterdam briefly surpassed those of LSFO. However, rising Russian fuel oil supplies eroded that strength towards the end of the month and prices started to decline slightly.

HSFO prices in New York Harbour and on the US Gulf Coast increased during August in line with a tightening HSFO supply/demand balance as refiners favoured sweeter, gasoline-rich crudes in response to high gasoline margins. At \$15.47/bbl, New York Harbour HSFO prices reached their highest monthly average of the year. Consequently, the average LSFO/HSFO differential narrowed by \$1/bbl with LSFO and HSFO near parity in New York Harbour in the last week of August. Spot HSFO prices in Singapore were little changed for the seventh successive month, trading slightly above their sustained trading range of between \$15/bbl and \$16/bbl. Prices gained support in a well balanced market from firm regional demand, particularly from Indonesia.

### End-User Product Prices

In August, mid-month end-user prices for **gasoline** increased in local currencies in all of the countries shown in Table 9, with particularly steep rises in spot gasoline prices in the US and Europe. The exception was Japan, where prices remained unchanged. The steepest increases in prices occurred in Canada (6.7%) and Germany (4.8%). In Germany, prices increased to the highest level since the Gulf War. Again except for Japan, gasoline prices in local currency were higher compared to last August. In US dollar terms, however, gasoline prices were generally lower than last August (with the exception of the UK), reflecting the depreciation of most European currencies against the US dollar.

Mid-month **automotive diesel** end-user prices and **heating oil** prices for domestic consumers increased in all the countries shown in Table 9, except for Canada, where diesel prices remained unchanged, and Japan, where both diesel and kerosene prices matched mid-July levels. The steepest increases in distillate prices occurred in Germany (8.1% for heating oil and 6.2% for diesel) and Spain (5.1% for heating oil and 3.9% for diesel).

Mid-month **heavy fuel oil** prices for industry increased appreciably in all the countries, mainly reflecting the recent strength in global spot fuel oil markets. Again the exception was Japan, where prices remained unchanged. Compared to last August, prices were higher in all countries (both on tax-inclusive and on an ex-tax basis), except Japan, where ex-tax prices were slightly lower than last August.

**Excise** duty increased in the Netherlands on 1 July for gasoline and automotive diesel, and on 2 July in the UK for all products reported in Table 9.

### Monthly End-User Product Price Changes - August '97 Relative to July '97

Local Currency Including Taxes

	Gasoline <sup>1</sup> per Litre		Automotive Diesel <sup>3</sup> per Litre		Domestic Heating Oil per 1000 Litres		HFO for Industry <sup>5</sup> per Metric Ton	
US	0.011 <sup>2</sup>	3.3%	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Canada	0.034	6.7%	0.000	0.0%	n.a.	n.a.	n.a.	n.a.
France	0.090	1.7%	0.040	1.1%	52.3	2.9%	51.0	7.1%
Germany	0.067	4.8%	0.065	6.2%	33.7	8.1%	10.7	4.8%
Italy	11.77	0.7%	10.92	0.9%	10930	0.9%	15910	6.0%
Spain	2.450	2.4%	3.100	3.9%	2091	5.1%	1089	5.1%
UK	0.009	1.6%	0.009	1.5%	1.11	0.8%	5.87	7.1%
Japan	0	0.0%	0	0.0%	0 <sup>4</sup>	0.0%	0	0.0%

<sup>1</sup> Premium leaded gasoline for France, Italy, Spain, UK; regular unleaded gasoline for Canada, Germany, Japan and USA

<sup>2</sup> Estimated

<sup>3</sup> VAT excluded where it is refundable: HFO for Industry, Automotive Diesel for Industry

<sup>4</sup> Kerosene

<sup>5</sup> High sulphur fuel oil price for France, Spain, UK and Japan; low sulphur fuel oil price for Germany and Italy

## Refining Margins in August

Average European refining margins rose significantly on the back of increasing supply tightness in European and US gasoline markets. Steeply increasing gasoline prices and widening gasoline/crude differentials were the main contributors to the rise in European refining margins. Gasoline strength also spilled over to naphtha and distillate markets, where differentials to crude rose, lending support to refining margins, albeit by far less than in the case of gasoline. Contra-seasonal strength in European HSFO markets also provided some support for margins, particularly to the hydroskimming margin. As a result of the return of Iraqi crude exports, which led to a widening of the Brent/Urals differential, margins increased in the **Mediterranean** by more than those in **Rotterdam**, as shown in the table below. Cracking margins benefited from the strength in light product prices and the differential between the average cracking and hydroskimming margins increased to \$1.54/bbl in Rotterdam and \$1.62/bbl in the Mediterranean.

### Refining Margins in Major Refining Centres

(monthly and weekly averages, \$/bbl)

	Jun	Jul	Aug	Change	Week Ending:					
					25 Jul	01 Aug	08 Aug	15 Aug	22 Aug	29 Aug
<b>NW Europe</b>										
Brent (Hydroskimming)	0.44	-0.31	0.43	0.74	-0.31	-0.22	0.56	0.49	0.49	0.32
Brent (Cracking)	1.60	0.87	1.97	1.10	0.94	1.22	2.22	2.04	2.05	1.66
<b>Mediterranean</b>										
Urals (Hydroskimming)	1.02	-0.12	0.79	0.91	-0.03	-0.12	0.67	0.90	0.98	0.86
Urals (Cracking)	2.21	1.13	2.41	1.28	1.30	1.38	2.43	2.53	2.61	2.26
<b>US Gulf Coast</b>										
Brent (Cracking)	1.99	2.12	3.64	1.52	1.92	3.00	3.77	3.43	3.90	3.44
WTI (Cracking)	1.86	2.48	3.88	1.40	2.58	3.48	3.97	3.55	4.26	3.59
<b>Singapore</b>										
Dubai (Hydroskimming)	0.24	-0.42	-0.46	-0.03	-0.34	-0.56	-0.49	-0.31	-0.46	-0.58
Dubai (Cracking)	2.21	1.40	1.27	-0.12	1.54	1.43	1.35	1.41	1.20	1.06

Average refining margins on the **US Gulf Coast** continued their gradual increase in August, reaching the highest level in several years. The surprising surge in margins has been driven by very strong demand, particularly for gasoline, low gasoline inventories and the refinery problems in the US, Venezuela and Europe mentioned above, which caused the prompt gasoline market to tighten and sent gasoline prices steeply higher. Margins were very volatile (see graph on page 45), largely tracking the development in US gasoline prices.

Unlike in the US and Europe, already unsatisfactorily low refining margins in **Singapore** continued to trend lower during the month. Weakness in regional product markets, particularly gasoline and distillate, exerted sustained downward pressure on product prices and prompted some regional refiners to continue earlier refinery run cuts. The average Dubai cracking margin in Singapore declined to the lowest level in recent years and the spread between the cracking and hydroskimming margin narrowed to \$1.73/bbl.

## Refinery Crude Throughputs in July

The aggregate of OECD refinery crude throughputs for July increased by 0.73 mb/d from June's downwardly-revised figures to just under 34 mb/d, the highest level in at least nine years. A massive increase in Japanese throughputs of 0.7 mb/d and an increase of 0.14 mb/d in Europe was offset by an 0.12 mb/d decrease in the US. Total July throughputs were 0.8 mb/d or 2.5% higher than a year earlier. Average refinery utilisation in OECD countries increased to just under 92% in July, 2 percentage points higher than last year.

Preliminary data suggest that **European** refinery throughputs increased by 140 kb/d from June's downwardly-revised figures to 12.6 mb/d. Increased throughput levels, mainly in Germany (150 kb/d) and the UK (70 kb/d), were partly offset by minor decreases in other countries (France, Italy, the Netherlands, Denmark). July throughputs in OECD Europe were almost unchanged from last year. European refinery utilisation rates increased from 90.7% in June to 92.2% in July, but were varied widely from northwest Europe (98.3% in July, 95.9% in June) to southern Europe (80.4% in July, 80.5% in June), where some refiners reportedly maintained refinery run cuts in July as a result of unfavourable refining margins.

Refinery throughputs in the **US** declined in July by 120 kb/d to just above 15 mb/d, nonetheless remaining above 15 mb/d for the third successive month. The US refinery utilisation rate declined by 0.7% points to 96.2%, based on current operable refining capacity. However, US throughputs were still 4.6% or 660 kb/d higher than a year earlier. **Japanese** crude throughputs increased by 700 kb/d to 4.17 mb/d, consistent with the approaching end of the Japanese turnaround season. Japanese throughputs were 4.8% or 190 kb/d higher than in July 1996.

In August, refinery throughputs in Europe are thought to have increased slightly, consistent with lower planned refinery maintenance and increased refining margins. Japanese throughputs are expected to have increased further, but by far less than in July. Weekly US statistics up to 29 August suggest that US throughput levels increased by about 200 kb/d, reflecting robust product demand and high refining margins.

### Refinery Crude Throughput and Utilisation in OECD Countries

	million barrels per day						% change from		utilisation rate**	
	Mar	Apr	May	Jun	Jul*	Jan-Jul*	Jul '96	Jan-Jul '96	Jul '97	Jul '96
OECD Europe	12.06	12.62	12.69	12.48	12.62	12.59	-0.2	1.1	92.2%	91.6%
France	1.57	1.74	1.80	1.85	1.78	1.77	8.8	5.5	102.6%	94.3%
Germany	2.09	2.08	2.04	1.85	2.00	2.03	-8.0	-2.6	97.8%	102.5%
Italy	1.59	1.46	1.64	1.60	1.56	1.58	-2.2	1.1	77.1%	78.9%
Netherlands	1.02	1.20	1.21	1.22	1.20	1.18	-0.7	-0.4	99.0%	99.7%
UK	1.74	1.82	1.72	1.75	1.82	1.76	3.0	1.3	98.8%	95.9%
US	14.05	14.28	15.08	15.14	15.02	14.37	4.6	2.1	96.2%	93.3%
Canada	1.39	1.31	1.41	1.43	1.43	1.40	2.9	3.7	77.2%	75.1%
Japan	4.53	4.42	3.72	3.47	4.17	4.25	4.8	2.4	83.1%	80.0%
Australia/New Zealand	0.77	0.75	0.78	0.73	0.74	0.76	-6.5	3.6	91.0%	97.3%
OECD Total	32.80	33.39	33.68	33.25	33.98	33.38	2.5	1.9	91.9%	90.0%

\* estimate

\*\* based on crude throughput and current operable refining capacity

### Refinery Maintenance Shutdowns

Planned refinery maintenance shutdowns in Europe are estimated to take an average of just under 600 kb/d of refining capacity out of operation in both September and October. This is roughly the same as during the same period last year. However, US autumn refinery maintenance is expected as be as light as during the exceptionally light turnaround season last year, following heavy refinery turnarounds this spring. The peak of refining maintenance shutdowns in the Middle East and the Asia-Pacific is expected to be reached in September, with almost 1.2 mb/d of refining capacity out of operation, followed by a planned outage of some 630 kb/d in October. There is, nonetheless, some flexibility on the timing of turnarounds and the extent of maintenance shutdowns, which may well be influenced by product markets, refining margins and weather conditions. This is particularly true for Asia, where downward pressure on refining margins reportedly prompted refiners to cut refinery throughputs since July.

### Refinery Maintenance Shutdowns (Primary Distillation)

(million barrels per day of nameplate capacity)

	September	October	November
Europe	0.59	0.59	0.02
US	0.10	0.33	0.39
Middle East	0.46	0.16	0.06
Japan	0.40	0.19	0.01
Other Asia/Pacific	0.32	0.29	0.16

IEA estimates (except for US: PIRA Energy Group, New York)

Other Asia/Pacific consists of: Australia, Chinese Taipei, India, Indonesia, Korea, Malaysia, Pakistan, the Philippines, Singapore, Sri Lanka, Thailand

## Downstream Industry Developments

In August, Germany awarded the first tranche of its strategic oil stock sale to Shell (for processing in its Rotterdam Pernis refinery), to Sweden's Preem, to Germany's DEA (for processing in DEA's Wesseling refinery) and to Swiss-based Petrotrade. Preem has reportedly been awarded 1.3 mb of crude, Shell and Petrotrade 520 kb each and DEA 460 kb. Demand reportedly outweighed the supply of crude on offer in the first round of the sales. The next round is expected for mid- to end-September.

Gulf's 115 kb/d Milford Haven refinery in the UK is reportedly to be closed by 1 November. Parent company Chevron decided to pull out of the UK downstream business and no suitable buyer for the refinery has been found. The refinery's equipment will be sold, removed or demolished and the land reclaimed for agricultural use. Chevron confirmed that it is in talks to sell its 450-outlet retail network to Shell, with an agreement expected before the end of the year. Chevron is also in talks to sell Gulf's half-share in the Pembroke Cracking Company (PCC) to its joint venture partner Texaco. A projected three-way downstream merger of Chevron, Elf and Murphy Oil, which would also have led to the closure of the refinery, collapsed in March.

In the US, American Western's closed 86 kb/d Indian refinery in Lawrenceville, Indiana has been auctioned off in pieces. Buying interest in the plant dried up when federal regulators would not give prospective purchasers immunity from lawsuits involving an estimated \$500 million cleanup bill, because ground water around Indian refinery is contaminated. Press reports conjectured that since American Western is bankrupt, cleanup costs could fall on Texaco, the refinery's earlier owner.

Japanese refiner Kyokuto, owned in equal parts by Mobil and Mitsui, raised its primary distillation capacity by 12 kb/d to 155 kb/d at its Chiba refinery at the end of August.

Uzbekistan's new 50 kb/d Bukhara refinery came on stream in August. The refinery is planned to operate on crude from the Uzbek Kokdumalak oil field and to primarily cover domestic demand.

Ecuador's Esmeraldas refinery started up in late August after undergoing scheduled maintenance and the commissioning of a new unit that will boost refining capacity by 20 kb/d to 110 kb/d. With the new expansion, Petroecuador reportedly intends to reduce gasoil imports.

PDVSA affiliate Corpoven and US Phillips petroleum reportedly signed a preliminary agreement for the joint construction of a \$500 million upgrading unit consisting of a 58 kb/d coker and 110 kb/d vacuum unit at Phillips' 210 kb/d Sweeney refinery in Texas. Construction is due to begin in 1998 and the plants are expected to start up in 2000. The current supply of 30 kb/d of light Venezuelan crude will then be substituted by 165 kb/d of heavy Merey crude.

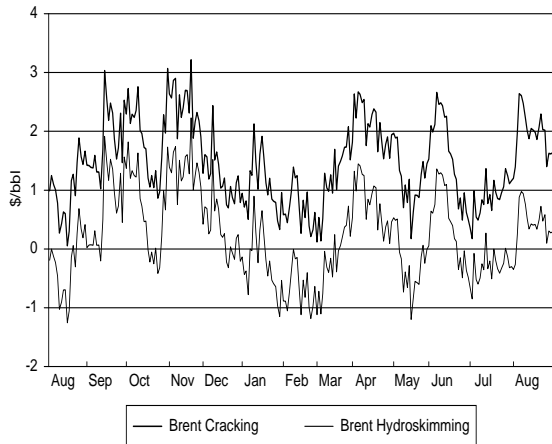
Venezuela has reportedly begun to integrate the two neighbouring refineries Cardon and Amuay to create the biggest oil refining complex in the world, able to process up to 940 kb/d of crude, equivalent to 75% of the country's entire capacity. The two plants have so far been operated by two separate PDVSA subsidiaries, which are due to disappear in line with the recently announced restructuring of PDVSA. Several pipelines already connect the two plants.

South Korean conglomerate Daewoo sold its 65 kb/d Antwerp refinery to the Dutch trading company Petroplus. Rotterdam-based Petroplus is mainly involved in oil product trading and storage, but also trades Russian crude oil and sometimes processes it at third-party refineries in Eastern Europe.

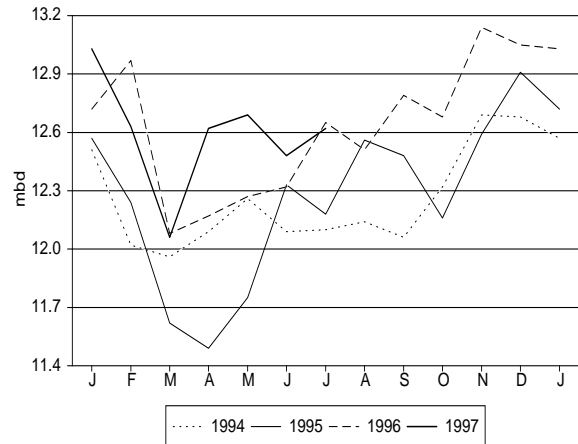
Amareda Hess has started to market the first cargoes of UK Durward and Dauntless Blend crude in the North Sea spot market. The crude is a sour blend with an estimated sulphur content of 1.1% and a 33° API gravity. As discussed in the Supply section, eventual projected output will be around 35 to 40 kb/d.

In August, the NYMEX raised the crude limits for the WTI contract after receiving permission from the US Commodity Futures Trading Commission to allow up to 15,000 contracts (15 million barrels) to be held overnight by any single party. This represents a rise of 50%. Traders will be able to hold half that amount in any single month, up from the previous 5,000 contracts limit for one month.

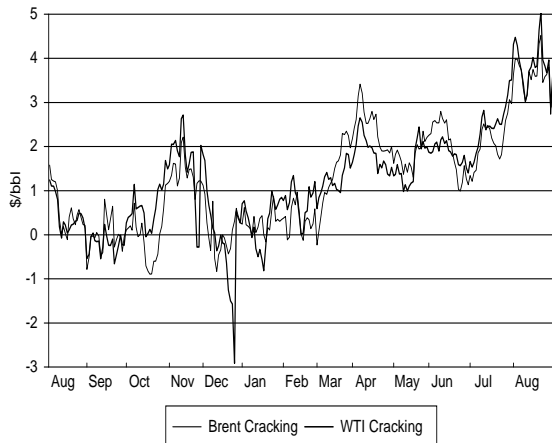
**Rotterdam Refining Margins**



**OECD Europe Crude Throughputs**



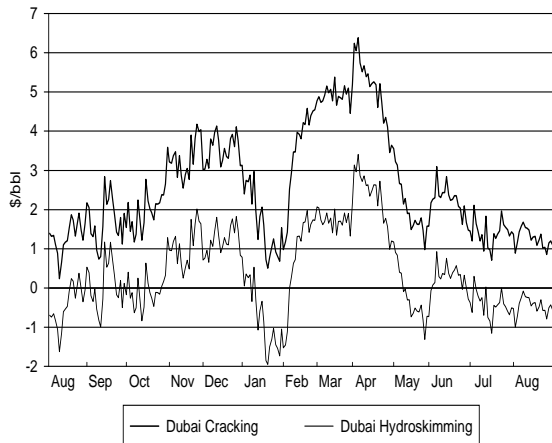
**US Gulf Refining Margins**



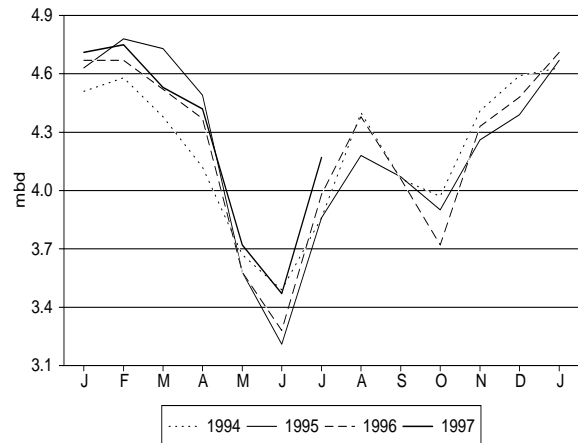
**US Crude Throughputs**



**Singapore Refining Margins**



**Japan Crude Throughputs**



**Table 1**  
**WORLD OIL SUPPLY AND DEMAND**  
(million barrels per day)

	1994	1995	1Q96	2Q96	3Q96	4Q96	1996	1Q97	2Q97	3Q97	4Q97	1997	1Q98	2Q98	3Q98	4Q98	1998
<b>DEMAND</b>																	
<b>OECD</b>																	
North America	19.8	19.8	20.4	19.9	20.2	20.8	20.3	20.4	20.6	20.7	21.0	20.7	20.7	20.6	21.0	21.3	20.9
Europe	13.6	13.9	14.4	13.5	14.2	14.5	14.2	14.2	14.0	14.3	14.8	14.3	14.4	13.9	14.5	15.0	14.4
Pacific	6.6	6.7	7.4	6.2	6.3	6.9	6.7	7.3	6.1	6.4	7.1	6.7	7.4	6.2	6.5	7.2	6.8
<b>TOTAL OECD</b>	<b>40.0</b>	<b>40.4</b>	<b>42.2</b>	<b>39.6</b>	<b>40.6</b>	<b>42.2</b>	<b>41.2</b>	<b>41.9</b>	<b>40.7</b>	<b>41.4</b>	<b>42.9</b>	<b>41.7</b>	<b>42.6</b>	<b>40.7</b>	<b>41.9</b>	<b>43.5</b>	<b>42.2</b>
<b>NON-OECD</b>																	
FSU <sup>1</sup>	4.9	4.8	4.6	4.2	4.3	4.2	4.3	4.3	4.4	4.2	4.5	4.4	4.4	4.4	4.3	4.5	4.4
Europe	1.3	1.4	1.5	1.4	1.3	1.4	1.4	1.6	1.5	1.4	1.5	1.5	1.6	1.5	1.4	1.5	1.5
China <sup>2</sup>	3.1	3.3	3.4	3.6	3.6	3.7	3.6	3.6	3.8	3.8	3.9	3.8	3.9	4.0	4.0	4.1	4.0
Other Asia	7.4	8.0	8.8	8.4	8.2	9.0	8.6	9.3	8.9	8.7	9.7	9.1	9.9	9.6	9.3	10.3	9.8
Latin America	6.0	6.1	6.2	6.3	6.5	6.5	6.4	6.5	6.7	6.7	6.7	6.6	6.8	6.9	7.0	6.9	6.9
Middle East	4.0	4.1	4.1	4.1	4.3	4.3	4.2	4.2	4.2	4.4	4.4	4.3	4.3	4.3	4.5	4.5	4.4
Africa	2.1	2.2	2.3	2.3	2.2	2.3	2.3	2.4	2.4	2.3	2.4	2.4	2.5	2.5	2.3	2.5	2.4
<b>TOTAL NON-OECD</b>	<b>28.8</b>	<b>29.9</b>	<b>31.0</b>	<b>30.3</b>	<b>30.4</b>	<b>31.5</b>	<b>30.8</b>	<b>31.9</b>	<b>31.8</b>	<b>31.5</b>	<b>33.0</b>	<b>32.1</b>	<b>33.3</b>	<b>33.2</b>	<b>32.8</b>	<b>34.4</b>	<b>33.4</b>
<b>TOTAL DEMAND<sup>3</sup></b>	<b>68.8</b>	<b>70.3</b>	<b>73.2</b>	<b>69.9</b>	<b>71.0</b>	<b>73.7</b>	<b>72.0</b>	<b>73.8</b>	<b>72.5</b>	<b>72.9</b>	<b>75.9</b>	<b>73.8</b>	<b>75.9</b>	<b>74.0</b>	<b>74.8</b>	<b>77.9</b>	<b>75.6</b>
<b>SUPPLY</b>																	
<b>OECD</b>																	
North America	10.9	11.0	11.0	10.9	11.0	11.2	11.0	11.2	11.0	11.1	11.4	11.2	11.4	11.2	11.4	11.7	11.4
Europe	6.0	6.3	6.6	6.6	6.5	6.9	6.7	6.8	6.5	6.6	7.6	6.9	7.3	7.0	7.3	8.3	7.5
Pacific	0.7	0.6	0.6	0.7	0.7	0.7	0.7	0.7	0.7	0.8	0.8	0.7	0.7	0.9	0.9	0.9	0.8
<b>TOTAL OECD</b>	<b>17.6</b>	<b>18.0</b>	<b>18.3</b>	<b>18.2</b>	<b>18.2</b>	<b>18.8</b>	<b>18.4</b>	<b>18.7</b>	<b>18.3</b>	<b>18.5</b>	<b>19.7</b>	<b>18.8</b>	<b>19.4</b>	<b>19.1</b>	<b>19.6</b>	<b>20.8</b>	<b>19.7</b>
<b>NON-OECD</b>																	
FSU	7.2	7.1	7.0	7.0	7.1	7.1	7.1	7.1	7.2	7.2	7.2	7.2	7.2	7.3	7.3	7.3	7.3
Europe	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
China	2.8	3.0	3.1	3.1	3.1	3.2	3.1	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2
Other Asia	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.3	2.3	2.2
Latin America	5.9	6.1	6.5	6.6	6.5	6.6	6.5	6.7	6.8	6.9	7.2	6.9	7.2	7.3	7.5	7.6	7.4
Middle East	1.8	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9
Africa	2.4	2.6	2.6	2.6	2.7	2.8	2.7	2.8	2.8	2.8	2.9	2.8	3.0	3.0	3.1	3.1	3.0
Processing Gains <sup>4</sup>	1.4	1.5	1.5	1.5	1.5	1.5	1.5	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6
<b>TOTAL NON-OPEC</b>	<b>41.6</b>	<b>42.5</b>	<b>43.4</b>	<b>43.3</b>	<b>43.4</b>	<b>44.3</b>	<b>43.6</b>	<b>44.3</b>	<b>44.1</b>	<b>44.4</b>	<b>46.1</b>	<b>44.8</b>	<b>46.0</b>	<b>46.0</b>	<b>46.7</b>	<b>48.2</b>	<b>46.7</b>
<b>OPEC</b>																	
Crude	24.7	25.1	25.7	25.5	25.9	26.3	25.8	26.8	26.8								
NGLs	2.4	2.4	2.5	2.6	2.7	2.7	2.6	2.7	2.8	2.9	2.9	2.8	2.9	3.0	3.0	3.0	3.0
<b>TOTAL OPEC</b>	<b>27.0</b>	<b>27.5</b>	<b>28.2</b>	<b>28.1</b>	<b>28.5</b>	<b>28.9</b>	<b>28.5</b>	<b>29.6</b>	<b>29.6</b>								
<b>TOTAL SUPPLY<sup>5</sup></b>	<b>68.6</b>	<b>70.0</b>	<b>71.6</b>	<b>71.5</b>	<b>71.9</b>	<b>73.2</b>	<b>72.1</b>	<b>73.9</b>	<b>73.8</b>								
<b>STOCK CHANGES AND MISCELLANEOUS</b>																	
<b>REPORTED OECD</b>																	
Industry	0.1	-0.3	-1.8	1.2	0.4	-0.4	-0.1	0.3	0.2								
Government	0.1	0.0	0.4	-0.1	-0.1	-0.1	0.0	0.0	0.0								
<b>TOTAL OECD</b>	<b>0.2</b>	<b>-0.3</b>	<b>-1.3</b>	<b>1.1</b>	<b>0.3</b>	<b>-0.5</b>	<b>-0.1</b>	<b>0.3</b>	<b>0.2</b>								
Floating Storage/Oil in Transit	-0.1	0.1	-0.3	0.1	0.0	-0.1	-0.1	0.1	0.5								
Miscellaneous to balance <sup>6</sup>	-0.3	-0.1	0.1	0.3	0.5	0.1	0.2	-0.4	0.5								
<b>TOTAL STOCK CH. &amp; MISC.</b>	<b>-0.2</b>	<b>-0.3</b>	<b>-1.6</b>	<b>1.5</b>	<b>0.9</b>	<b>-0.5</b>	<b>0.1</b>	<b>0.0</b>	<b>1.2</b>								
<b>Memo items:</b>																	
FSU Net Exports	2.4	2.4	2.4	2.8	2.8	2.9	2.7	2.7	2.8	2.9	2.7	2.8	2.8	2.9	3.0	2.8	2.9
Call on OPEC crude + Stock ch. <sup>7</sup>	24.9	25.4	27.3	24.0	24.9	26.8	25.8	26.8	25.6	25.6	26.8	26.2	26.9	25.0	25.1	26.7	25.9
Total Demand ex. FSU	64.0	65.5	68.5	65.7	66.7	69.5	67.6	69.5	68.1	68.7	71.4	69.4	71.5	69.5	70.5	73.4	71.2
Total demand exc. FSU (% ch) <sup>8</sup>	3.5	2.4	3.2	2.6	3.5	3.4	3.2	1.4	3.7	3.0	2.8	2.7	2.9	2.1	2.6	2.7	2.6

1 Figures for FSU are apparent demand derived from official production figures and quarterly trade data.

2 Annual Chinese demand is estimated from production and (adjusted) trade; quarterly figures represent estimates of domestic oil deliveries and are not derived from trade data.

3 Measured as deliveries from refineries and primary stocks, comprises inland deliveries, international marine bunkers and refinery fuel. It includes crude for direct burning, oil from non-conventional sources and other sources of supply.

4 Net of volumetric gains and losses in refining process (excludes net gain/loss in former USSR, China and non-OECD Europe) and marine transportation losses.

5 Comprises crude oil, condensates, NGLs, oil from non-conventional sources and other sources of supply.

6 Includes changes in non-reported stocks in OECD and non-OECD areas.

7 Equals total demand minus total non-OPEC supply minus OPEC NGLs. Thus includes "Miscellaneous to balance" for historical time periods.

8 Year on year % growth in global oil demand excluding FSU.

**Table 1A**  
**WORLD OIL SUPPLY AND DEMAND: CHANGES FROM LAST MONTH'S TABLE 1**  
(million barrels per day)

	1994	1995	1Q96	2Q96	3Q96	4Q96	1996	1Q97	2Q97	3Q97	4Q97	1997	1Q98	2Q98	3Q98	4Q98	1998
<b>DEMAND</b>																	
<b>OECD</b>																	
North America	-	-	-	-	-	-	-	-	-0.1	-	-	-	-	-0.1	0.1	-	-
Europe	-	-	-	-	-	-	-	-	0.1	-	-	-	-	0.1	-	-	-
Pacific	-	-	-	-	-	-	-	-	-	-	-	-	-	-0.1	-	-	-
<b>TOTAL OECD</b>	-	-	-	-	-	-	-	-	-0.1	-	-	-	-	-0.1	-	-	-
<b>NON-OECD</b>																	
FSU	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.1	-0.1	-
Europe	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
China	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other Asia	-	-	-	-	-	-	-	-	-0.1	-	-	-0.1	-	-0.1	-	-	-
Latin America	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Middle East	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Africa	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>TOTAL NON-OECD</b>	-	-	-	-	-	-	-	-	-0.1	-	-0.1	-	-	-0.1	-	-0.1	-0.1
<b>TOTAL DEMAND</b>	-	-	-	-	-	-	-	-0.1	-0.1	0.1	-	-	-	-0.1	0.1	-	-0.1
<b>SUPPLY</b>																	
<b>OECD</b>																	
North America	-	-	-	-	-	-	-0.1	-	-	-	-	-	-0.1	-	-	-	-0.1
Europe	-	-	-	-	-	-	-	-0.1	-	0.1	-	0.1	-0.1	-0.1	0.1	0.1	0.1
Pacific	-	-	-	-	-	-	-	-	-	-	-	-0.1	-	-	-	-	-
<b>TOTAL OECD</b>	-	-	-	-	-	-	-	-	0.1	-	-	-	-	-	-	-	-
<b>NON-OECD</b>																	
FSU	-	-	-	-	-	-	-	-	-	0.1	-	-	-0.1	-0.1	-	-0.2	-0.1
Europe	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
China	-	-	-	-	-	-	-	-	-	-	-	-	-	-0.1	-	-0.1	-
Other Asia	-	-	-	-	-	-	-	-	-	-0.1	-	-	-	-	-	-	-
Latin America	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Middle East	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Africa	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Processing Gains	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>TOTAL NON-OPEC</b>	-	-	-	-	-	-	-	-	-	-0.1	-	-	-	-0.1	-	-0.1	-0.1
<b>OPEC</b>																	
Crude	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
NGLs	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>TOTAL OPEC</b>	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>TOTAL SUPPLY</b>	-	-	-	-	-0.1	-	-	-	0.1	-	-	-	-	-	-	-	-
<b>STOCK CHANGES AND MISCELLANEOUS</b>																	
<b>REPORTED OECD</b>																	
Industry	-	-	-	-	-	-	-	-	-0.3	-	-	-	-	-	-	-	-
Government	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>TOTAL OECD</b>	-	-	-	-	-	-	-	-	-0.3	-	-	-	-	-	-	-	-
Floating Storage/Oil in Transit	-	-	-	-	-	-	-	-	-0.1	0.3	-	-	-	-	-	-	-
Miscellaneous to balance	-	-	0.1	-	-0.1	-	-0.1	-	0.1	-	-	-	-	-	-	-	-
<b>TOTAL STOCK CH. &amp; MISC.</b>	-	-	-	-0.1	-0.1	-	-	-	0.1	-	-	-	-	-	-	-	-
<b>Memo items:</b>																	
FSU Net Exports	-	-	-	-	-	-	-	-	-	-	-	-	-0.1	-0.1	-0.1	-0.1	-0.1
Call on OPEC crude + Stock ch.	-	-	-	-	-	-	0.1	-	-0.1	0.1	-0.1	-	-	-	0.1	0.1	-
Total Demand ex. FSU	-	-	-	-	-	-	-	-	-0.2	-	-	-0.1	-	-0.2	-	-	-0.1

When submitting their monthly oil statistics, IEA Member countries periodically update data for earlier years. Similar updates to non-OECD data can occur. While the changes are generally small, due to rounding they can lead to changes to historical data of 0.1 mb/d.

**Table 2**  
**OECD REGIONAL OIL DEMAND**  
(million barrels per day)

	February			March			First Quarter			April			May		
	1996	1997	%	1996	1997	%	1996	1997	%	1996	1997	%	1996	1997	%
<b>North America</b>															
LPG	2.57	2.60	1.3	2.36	2.14	-9.0	2.53	2.47	-2.2	2.20	2.23	1.3	2.15	2.06	-4.0
Naphtha	0.35	0.32	-9.6	0.35	0.33	-6.5	0.33	0.34	3.6	0.28	0.35	24.9	0.28	0.39	41.1
Motor Gasoline	8.19	8.29	1.2	8.34	8.44	1.1	8.14	8.23	1.1	8.51	8.72	2.5	8.66	8.81	1.7
Jet/Kerosene	1.91	1.76	-7.8	1.75	1.71	-2.0	1.82	1.80	-1.5	1.66	1.77	7.1	1.58	1.67	5.6
Gasoil	4.30	3.99	-7.2	3.95	4.03	2.1	4.15	4.13	-0.6	3.82	3.99	4.4	3.58	3.73	3.9
Residual Fuel Oil	1.25	1.19	-5.1	1.00	0.92	-7.8	1.16	1.10	-5.0	0.90	0.98	9.3	0.98	0.91	-7.1
Other Products	2.10	2.35	11.9	2.48	2.39	-3.5	2.28	2.34	2.9	2.45	2.59	5.7	2.60	2.78	6.8
<b>Total</b>	<b>20.66</b>	<b>20.49</b>	<b>-0.8</b>	<b>20.23</b>	<b>19.97</b>	<b>-1.3</b>	<b>20.40</b>	<b>20.40</b>	<b>0.0</b>	<b>19.83</b>	<b>20.64</b>	<b>4.1</b>	<b>19.83</b>	<b>20.34</b>	<b>2.6</b>
<b>Europe</b>															
LPG	1.06	1.01	-5.4	0.94	0.83	-11.6	1.01	0.99	-1.8	0.87	0.91	4.5	0.81	0.81	-0.1
Naphtha	1.08	1.17	8.8	1.09	1.04	-5.0	1.09	1.08	-0.9	0.87	1.01	15.7	1.05	1.05	-0.1
Motor Gasoline	2.81	2.83	0.5	2.84	2.85	0.5	2.76	2.77	0.4	3.08	3.12	1.4	3.05	3.00	-1.8
Jet/Kerosene	0.86	0.89	3.4	0.84	0.87	3.1	0.84	0.88	4.6	0.85	0.91	6.3	0.91	0.91	-0.1
Gasoil	5.85	5.22	-10.8	5.21	4.79	-8.0	5.40	5.19	-3.8	4.70	5.32	13.1	4.58	4.46	-2.8
Residual Fuel Oil	2.40	2.28	-4.8	2.32	2.09	-10.0	2.33	2.21	-5.0	2.04	2.00	-1.8	1.93	1.85	-4.4
Other Products	0.95	1.05	9.5	0.94	1.09	15.4	0.96	1.05	9.2	1.14	1.19	4.0	1.25	1.30	4.2
<b>Total</b>	<b>15.03</b>	<b>14.45</b>	<b>-3.8</b>	<b>14.18</b>	<b>13.55</b>	<b>-4.4</b>	<b>14.38</b>	<b>14.17</b>	<b>-1.5</b>	<b>13.56</b>	<b>14.46</b>	<b>6.6</b>	<b>13.59</b>	<b>13.37</b>	<b>-1.6</b>
<b>Pacific</b>															
LPG	0.83	0.83	-0.3	0.78	0.76	-2.0	0.80	0.79	-1.5	0.76	0.71	-6.3	0.66	0.66	-0.9
Naphtha	0.81	0.82	1.9	0.74	0.87	18.2	0.78	0.85	9.3	0.78	0.82	5.4	0.72	0.79	9.6
Motor Gasoline	1.20	1.24	2.9	1.23	1.24	0.6	1.19	1.22	2.5	1.24	1.25	0.8	1.23	1.28	3.5
Jet/Kerosene	1.30	1.29	-0.9	1.11	0.95	-14.4	1.20	1.16	-3.5	0.81	0.69	-14.4	0.58	0.54	-6.4
Gasoil	1.76	1.74	-0.8	1.71	1.65	-3.8	1.65	1.64	-0.5	1.54	1.53	-0.7	1.43	1.44	0.7
Residual Fuel Oil	0.99	0.87	-12.1	0.87	0.79	-9.5	0.91	0.81	-11.4	0.76	0.68	-10.9	0.69	0.70	2.2
Other Products	0.86	0.93	8.7	0.85	0.83	-2.5	0.85	0.86	0.7	0.69	0.60	-12.9	0.68	0.62	-9.3
<b>Total</b>	<b>7.74</b>	<b>7.72</b>	<b>-0.3</b>	<b>7.28</b>	<b>7.08</b>	<b>-2.7</b>	<b>7.38</b>	<b>7.32</b>	<b>-0.8</b>	<b>6.58</b>	<b>6.28</b>	<b>-4.5</b>	<b>6.00</b>	<b>6.03</b>	<b>0.5</b>
<b>OECD</b>															
LPG	4.46	4.44	-0.6	4.07	3.74	-8.3	4.33	4.25	-2.0	3.83	3.85	0.5	3.62	3.53	-2.6
Naphtha	2.24	2.32	3.4	2.18	2.24	2.6	2.19	2.27	3.4	1.93	2.18	12.9	2.05	2.23	8.9
Motor Gasoline	12.21	12.36	1.2	12.41	12.53	0.9	12.09	12.22	1.1	12.83	13.09	2.0	12.94	13.08	1.1
Jet/Kerosene	4.07	3.94	-3.2	3.69	3.53	-4.5	3.86	3.83	-0.8	3.32	3.37	1.7	3.07	3.12	1.7
Gasoil	11.90	10.95	-8.0	10.87	10.47	-3.7	11.20	10.96	-2.1	10.06	10.84	7.7	9.60	9.62	0.3
Residual Fuel Oil	4.64	4.34	-6.4	4.19	3.80	-9.3	4.40	4.12	-6.3	3.70	3.66	-1.0	3.60	3.46	-3.9
Other Products	3.91	4.33	10.6	4.27	4.31	0.9	4.09	4.25	3.9	4.29	4.38	2.3	4.54	4.70	3.7
<b>Total</b>	<b>43.43</b>	<b>42.66</b>	<b>-1.8</b>	<b>41.69</b>	<b>40.61</b>	<b>-2.6</b>	<b>42.17</b>	<b>41.90</b>	<b>-0.6</b>	<b>39.96</b>	<b>41.38</b>	<b>3.6</b>	<b>39.41</b>	<b>39.74</b>	<b>0.8</b>

Demand, measured as deliveries from refineries and primary stocks, comprises inland deliveries, international bunkers and refinery fuel. It includes crude for direct burning, oil from non-conventional sources and other sources of supply.

Jet/kerosene comprises jet kerosene and non-aviation kerosene grades. Gasoil comprises diesel, light heating oil and other gasoils.

North America comprises US 50 States, territories and Canada.

**Table 3**  
**OIL DEMAND IN SELECTED OECD COUNTRIES**  
(million barrels per day)

	First Quarter			April			May			June			Second Quarter		
	1996	1997	%	1996	1997	%	1996	1997	%	1996	1997	%	1996	1997	%
<b>United States</b>															
LPG	2.20	2.14	-2.8	1.88	1.92	2.2	1.85	1.77	-4.2	1.77	1.75	-1.5	1.83	1.81	-1.2
Naphtha	0.25	0.26	4.1	0.21	0.27	26.1	0.20	0.30	49.0	0.21	0.27	29.3	0.21	0.28	34.7
Motor Gasoline	7.51	7.59	1.0	7.87	8.07	2.5	8.00	8.13	1.6	8.09	8.26	2.1	7.99	8.15	2.1
Jet/Kerosene	1.71	1.67	-2.0	1.54	1.65	7.1	1.48	1.55	4.7	1.58	1.60	1.1	1.54	1.60	4.3
Gasoil	3.62	3.58	-1.1	3.38	3.52	4.1	3.12	3.24	3.9	3.19	3.23	1.3	3.23	3.33	3.1
Residual Fuel Oil	0.96	0.90	-6.4	0.75	0.80	7.0	0.83	0.73	-11.0	0.74	0.77	3.5	0.77	0.77	-0.7
Other Products	2.05	2.11	2.9	2.20	2.34	6.2	2.38	2.52	5.7	2.46	2.68	9.1	2.35	2.51	7.0
<b>Total</b>	<b>18.29</b>	<b>18.24</b>	<b>-0.3</b>	<b>17.84</b>	<b>18.57</b>	<b>4.1</b>	<b>17.86</b>	<b>18.24</b>	<b>2.2</b>	<b>18.05</b>	<b>18.56</b>	<b>2.8</b>	<b>17.91</b>	<b>18.46</b>	<b>3.0</b>
<b>Japan</b>															
LPG	0.72	0.72	-0.4	0.68	0.63	-6.9	0.58	0.58	-0.7	0.58	0.61	5.3	0.61	0.61	-1.1
Naphtha	0.77	0.84	9.4	0.77	0.81	5.5	0.71	0.78	9.7	0.68	0.75	11.2	0.72	0.78	8.7
Motor Gasoline	0.84	0.87	3.5	0.89	0.90	0.9	0.88	0.92	5.0	0.86	0.90	3.9	0.88	0.91	3.3
Jet/Kerosene	1.10	1.05	-4.2	0.70	0.59	-16.0	0.48	0.44	-7.6	0.44	0.43	-1.9	0.54	0.49	-9.7
Diesel*	0.73	0.75	2.9	0.79	0.74	-6.4	0.75	0.72	-3.4	0.73	0.75	2.9	0.75	0.74	-2.4
Other Gasoil*	0.68	0.64	-5.4	0.51	0.51	0.6	0.42	0.45	6.8	0.42	0.43	2.7	0.45	0.46	3.2
Residual Fuel Oil	0.87	0.77	-11.2	0.72	0.65	-10.2	0.65	0.67	3.8	0.68	0.70	3.7	0.68	0.68	-1.1
Direct use of Crude Oil	0.35	0.33	-6.4	0.20	0.11	-44.1	0.20	0.18	-7.7	0.26	0.26	-0.6	0.22	0.18	-16.0
Other Products	0.36	0.40	11.3	0.36	0.36	-2.1	0.37	0.33	-12.0	0.35	0.30	-15.3	0.36	0.33	-9.8
<b>Total</b>	<b>6.43</b>	<b>6.38</b>	<b>-0.7</b>	<b>5.63</b>	<b>5.30</b>	<b>-5.8</b>	<b>5.03</b>	<b>5.08</b>	<b>0.8</b>	<b>5.00</b>	<b>5.13</b>	<b>2.7</b>	<b>5.22</b>	<b>5.17</b>	<b>-1.0</b>
<b>Germany</b>															
LPG	0.14	0.11	-18.4	0.09	0.09	1.7	0.10	0.09	-11.2	0.08	0.08	-5.7	0.09	0.09	-5.2
Naphtha	0.35	0.34	-1.2	0.34	0.37	9.3	0.33	0.41	24.0	0.28	0.39	36.6	0.32	0.39	22.6
Motor Gasoline	0.65	0.65	-0.8	0.71	0.74	3.4	0.72	0.70	-2.6	0.69	0.71	2.1	0.71	0.72	0.9
Jet/Kerosene	0.12	0.13	9.2	0.12	0.13	10.7	0.13	0.14	3.5	0.14	0.15	5.7	0.13	0.14	6.5
Diesel	0.38	0.38	0.6	0.45	0.50	11.5	0.44	0.41	-5.5	0.43	0.45	5.6	0.44	0.45	3.8
Other Gasoil	1.00	0.86	-14.0	0.71	1.03	46.5	0.80	0.71	-11.9	0.84	1.00	19.4	0.78	0.91	16.5
Residual Fuel Oil	0.19	0.16	-14.8	0.18	0.18	0.3	0.17	0.17	-3.5	0.17	0.16	-2.9	0.17	0.17	-2.0
Other Products	0.12	0.13	12.7	0.16	0.19	19.7	0.19	0.18	-2.6	0.21	0.22	1.1	0.19	0.20	5.0
<b>Total</b>	<b>2.94</b>	<b>2.77</b>	<b>-5.9</b>	<b>2.76</b>	<b>3.24</b>	<b>17.5</b>	<b>2.88</b>	<b>2.80</b>	<b>-2.7</b>	<b>2.84</b>	<b>3.15</b>	<b>10.7</b>	<b>2.83</b>	<b>3.06</b>	<b>8.3</b>
<b>Italy</b>															
LPG	0.14	0.13	-11.5	0.10	0.10	3.4	0.08	0.09	10.7	0.08	0.07	-5.9	0.09	0.09	2.9
Naphtha	0.12	0.13	3.9	0.13	0.13	2.1	0.13	0.13	4.5	0.13	0.11	-11.0	0.13	0.13	-1.4
Motor Gasoline	0.41	0.41	0.3	0.46	0.46	1.1	0.45	0.44	-1.2	0.43	0.46	7.8	0.45	0.46	2.5
Jet/Kerosene	0.06	0.06	-3.4	0.06	0.07	13.2	0.08	0.06	-22.7	0.06	0.07	23.5	0.07	0.07	1.3
Diesel	0.35	0.30	-14.3	0.32	0.32	-1.3	0.32	0.29	-8.0	0.32	0.33	1.9	0.32	0.31	-2.5
Other Gasoil	0.20	0.21	4.0	0.12	0.15	24.0	0.11	0.14	28.0	0.09	0.13	43.8	0.11	0.14	31.1
Residual Fuel Oil	0.66	0.56	-15.6	0.54	0.52	-4.8	0.50	0.46	-6.7	0.53	0.49	-7.9	0.52	0.49	-6.4
Other Products	0.09	0.09	-1.7	0.09	0.11	23.2	0.09	0.15	59.8	0.13	0.13	4.1	0.10	0.13	26.6
<b>Total</b>	<b>2.04</b>	<b>1.88</b>	<b>-7.8</b>	<b>1.82</b>	<b>1.86</b>	<b>2.1</b>	<b>1.74</b>	<b>1.76</b>	<b>1.0</b>	<b>1.77</b>	<b>1.81</b>	<b>2.2</b>	<b>1.78</b>	<b>1.81</b>	<b>1.8</b>
<b>France</b>															
LPG	0.14	0.13	-0.9	0.10	0.09	-8.2	0.08	0.08	-8.7	0.07	0.07	8.7	0.09	0.08	-3.9
Naphtha	0.21	0.20	-4.0	0.09	0.14	54.3	0.18	0.16	-13.1	0.12	0.16	34.4	0.13	0.15	15.9
Motor Gasoline	0.32	0.31	-3.8	0.37	0.37	-0.7	0.36	0.34	-4.0	0.35	0.35	-1.3	0.36	0.35	-2.0
Jet/Kerosene	0.10	0.10	4.0	0.11	0.11	3.0	0.11	0.11	-2.1	0.11	0.12	2.3	0.11	0.11	1.0
Diesel	0.45	0.46	2.7	0.49	0.54	9.0	0.47	0.48	2.0	0.48	0.51	6.9	0.48	0.51	6.0
Other Gasoil	0.49	0.49	0.5	0.35	0.34	-5.0	0.27	0.23	-14.4	0.28	0.31	12.9	0.30	0.29	-2.4
Residual Fuel Oil	0.20	0.19	-4.1	0.17	0.16	-7.1	0.14	0.13	-7.0	0.14	0.12	-9.5	0.15	0.14	-7.8
Other Products	0.15	0.14	-4.2	0.23	0.17	-26.5	0.20	0.19	-6.4	0.28	0.24	-16.1	0.24	0.20	-16.7
<b>Total</b>	<b>2.05</b>	<b>2.03</b>	<b>-0.9</b>	<b>1.92</b>	<b>1.91</b>	<b>-0.4</b>	<b>1.81</b>	<b>1.71</b>	<b>-5.5</b>	<b>1.82</b>	<b>1.87</b>	<b>3.0</b>	<b>1.85</b>	<b>1.83</b>	<b>-1.0</b>
<b>United Kingdom</b>															
LPG	0.16	0.19	14.0	0.19	0.18	-4.8	0.17	0.16	-10.3	0.18	0.16	-11.9	0.18	0.16	-8.9
Naphtha	0.08	0.06	-32.7	0.07	0.06	-20.2	0.07	0.04	-49.4	0.05	0.06	9.0	0.07	0.05	-23.3
Motor Gasoline	0.49	0.50	3.3	0.53	0.54	2.4	0.53	0.54	0.9	0.52	0.55	5.9	0.53	0.54	3.0
Jet/Kerosene	0.25	0.26	3.8	0.23	0.25	6.5	0.24	0.23	-1.5	0.22	0.24	8.0	0.23	0.24	4.2
Diesel	0.28	0.30	5.6	0.29	0.32	9.9	0.30	0.30	0.6	0.29	0.33	13.4	0.29	0.32	7.8
Other Gasoil	0.22	0.21	-4.8	0.19	0.20	6.1	0.18	0.17	-2.6	0.17	0.17	2.8	0.18	0.18	2.1
Residual Fuel Oil	0.17	0.15	-9.3	0.16	0.11	-33.3	0.17	0.11	-34.6	0.16	0.11	-30.6	0.16	0.11	-32.9
Other Products	0.18	0.19	2.1	0.20	0.19	-4.0	0.19	0.18	-6.1	0.16	0.19	15.1	0.18	0.18	0.9
<b>Total</b>	<b>1.83</b>	<b>1.85</b>	<b>0.8</b>	<b>1.85</b>	<b>1.84</b>	<b>-0.9</b>	<b>1.85</b>	<b>1.72</b>	<b>-6.7</b>	<b>1.75</b>	<b>1.80</b>	<b>2.9</b>	<b>1.82</b>	<b>1.79</b>	<b>-1.7</b>
<b>Canada</b>															
LPG	0.32	0.33	1.9	0.32	0.31	-3.8	0.29	0.28	-2.7	0.29	0.29	0.1	0.30	0.29	-2.2
Naphtha	0.08	0.08	2.2	0.07	0.08	21.3	0.08	0.09	20.2	0.07	0.08	11.8	0.07	0.09	17.7
Motor Gasoline	0.57	0.58	1.9	0.59	0.60	1.8	0.62	0.64	2.7	0.63	0.65	3.7	0.61	0.63	2.7
Jet/Kerosene	0.09	0.10	5.9	0.09	0.09	8.2	0.08	0.10	24.1	0.10	0.10	-2.3	0.09	0.10	9.1
Diesel	0.14	0.14	1.1	0.13	0.13	0.0	0.16	0.16	0.0	0.15	0.17	11.4	0.15	0.15	3.9
Other Gasoil	0.36	0.38	3.7	0.27	0.30	11.0	0.28	0.30	7.0	0.24	0.26	5.1	0.27	0.29	7.8
Residual Fuel Oil	0.14	0.14	1.5	0.09	0.12	33.5	0.10	0.13	20.8	0.11	0.13	15.8	0.10	0.13	22.8
Other Products	0.20	0.20	2.9	0.22	0.23	1.6	0.20	0.24	20.1	0.29	0.29	-1.2	0.24	0.25	5.9
<b>Total</b>	<b>1.90</b>	<b>1.95</b>	<b>2.5</b>	<b>1.78</b>	<b>1.86</b>	<b>4.8</b>	<b>1.82</b>	<b>1.94</b>	<b>6.9</b>	<b>1.90</b>	<b>1.97</b>	<b>3.9</b>	<b>1.83</b>	<b>1.93</b>	<b>5.2</b>

Demand, measured as deliveries from refineries and primary stocks, comprises inland deliveries, international bunkers and refinery fuel. It includes crude for direct burning, oil from non-conventional sources and other sources of supply.

Jet/kerosene comprises jet kerosene and non-aviation kerosene grades. Gasoil comprises diesel, light heating oil and other gasoils.

US figures do not include territories.

\* In Japan, the breakdown between Diesel and Other Gasoil in the latest month is estimated using the same split between the two products as last year.

**Table 4**  
**WORLD OIL PRODUCTION**  
(million barrels per day)

	1996	1997 <sup>f</sup>	1998 <sup>f</sup>	3Q96	4Q96	1Q97	2Q97 <sup>p</sup>	3Q97 <sup>f</sup>	Jun97	Jul97	Aug97
<b>OPEC<sup>1</sup></b>											
Crude Oil											
Saudi Arabia	7.91			7.93	7.90	7.98	7.92		7.88	7.96	7.90
Iran	3.67			3.71	3.66	3.62	3.62		3.62	3.72	3.69
Iraq	0.58			0.55	0.65	1.11	1.05		0.55	0.55	1.34
UAE	2.23			2.22	2.27	2.29	2.23		2.26	2.25	2.26
Kuwait	1.81			1.80	1.81	1.84	1.81		1.82	1.83	1.81
Neutral Zone	0.48			0.48	0.52	0.53	0.52		0.49	0.53	0.54
Qatar	0.49			0.49	0.51	0.56	0.60		0.62	0.63	0.64
Nigeria	2.15			2.15	2.23	2.25	2.29		2.30	2.28	2.26
Libya	1.39			1.40	1.40	1.41	1.43		1.43	1.44	1.43
Algeria	0.82			0.83	0.84	0.85	0.85		0.84	0.85	0.85
Venezuela	2.94			2.94	3.06	3.07	3.14		3.17	3.19	3.22
Indonesia	1.39			1.38	1.40	1.36	1.38		1.36	1.38	1.40
<b>Total Crude Oil</b>	<b>25.84</b>			<b>25.87</b>	<b>26.25</b>	<b>26.84</b>	<b>26.81</b>		<b>26.34</b>	<b>26.59</b>	<b>27.32</b>
NGLs <sup>2</sup>	2.61	2.84	2.98	2.67	2.67	2.73	2.81	2.88	2.81	2.85	2.88
<b>TOTAL OPEC</b>	<b>28.45</b>			<b>28.54</b>	<b>28.92</b>	<b>29.57</b>	<b>29.62</b>		<b>29.15</b>	<b>29.45</b>	<b>30.20</b>
<b>NON-OPEC<sup>1,3</sup></b>											
<b>OECD</b>											
North America	11.05	11.16	11.43	10.99	11.24	11.18	11.01	11.09	11.07	11.08	11.02
United States	8.59	8.65	8.75	8.52	8.71	8.65	8.63	8.58	8.63	8.60	8.50
Canada	2.46	2.51	2.68	2.47	2.53	2.54	2.37	2.51	2.44	2.49	2.52
Europe	6.66	6.89	7.47	6.51	6.90	6.82	6.53	6.60	6.28	6.61	6.33
UK	2.81	2.87	3.18	2.68	3.00	2.91	2.56	2.79	2.48	2.67	2.73
Norway	3.23	3.38	3.61	3.23	3.27	3.29	3.35	3.18	3.18	3.34	2.96
Others	0.61	0.64	0.68	0.61	0.63	0.63	0.63	0.63	0.62	0.60	0.63
Pacific	0.67	0.73	0.83	0.69	0.66	0.67	0.73	0.76	0.73	0.75	0.77
Australia	0.60	0.64	0.73	0.62	0.58	0.58	0.64	0.67	0.64	0.66	0.67
Others	0.07	0.09	0.10	0.08	0.09	0.09	0.09	0.08	0.09	0.10	0.09
<b>Total OECD</b>	<b>18.38</b>	<b>18.78</b>	<b>19.73</b>	<b>18.20</b>	<b>18.80</b>	<b>18.68</b>	<b>18.26</b>	<b>18.45</b>	<b>18.07</b>	<b>18.44</b>	<b>18.11</b>
<b>Non-OECD</b>											
Former USSR	7.07	7.17	7.29	7.10	7.09	7.06	7.23	7.17	7.23	7.21	7.16
Russia	6.04	6.03	6.03	6.06	6.02	5.99	6.11	6.04	6.12	6.10	6.03
Others	1.03	1.13	1.27	1.04	1.07	1.08	1.11	1.13	1.11	1.11	1.13
Asia	5.23	5.34	5.48	5.20	5.28	5.33	5.33	5.32	5.31	5.33	5.34
China	3.12	3.21	3.24	3.10	3.15	3.21	3.22	3.20	3.22	3.21	3.20
Malaysia	0.73	0.75	0.77	0.73	0.75	0.75	0.75	0.75	0.74	0.75	0.75
India	0.74	0.76	0.78	0.73	0.73	0.75	0.76	0.77	0.75	0.77	0.77
Others	0.64	0.62	0.69	0.65	0.65	0.62	0.61	0.60	0.61	0.61	0.61
Europe	0.28	0.28	0.27	0.28	0.29	0.28	0.28	0.28	0.26	0.29	0.28
Latin America	6.54	6.91	7.39	6.51	6.60	6.75	6.81	6.93	6.82	6.83	6.90
Mexico	3.28	3.39	3.50	3.24	3.25	3.33	3.35	3.42	3.38	3.40	3.42
Brazil	1.06	1.20	1.34	1.04	1.11	1.15	1.18	1.20	1.19	1.19	1.20
Argentina	0.83	0.89	0.89	0.85	0.85	0.87	0.89	0.91	0.90	0.91	0.92
Colombia	0.64	0.68	0.86	0.64	0.65	0.64	0.64	0.64	0.63	0.59	0.62
Ecuador	0.39	0.39	0.42	0.38	0.38	0.39	0.39	0.38	0.36	0.37	0.37
Others	0.36	0.37	0.38	0.36	0.37	0.37	0.37	0.37	0.37	0.37	0.37
Middle East <sup>4</sup>	1.89	1.89	1.87	1.90	1.91	1.89	1.87	1.89	1.88	1.89	1.89
Oman	0.89	0.90	0.91	0.90	0.91	0.90	0.90	0.91	0.91	0.91	0.91
Syria	0.58	0.56	0.54	0.58	0.57	0.57	0.56	0.56	0.56	0.56	0.56
Yemen	0.37	0.38	0.38	0.38	0.38	0.38	0.37	0.38	0.37	0.38	0.38
Africa	2.68	2.84	3.04	2.72	2.75	2.77	2.80	2.85	2.81	2.80	2.86
Egypt	0.92	0.92	0.94	0.91	0.90	0.91	0.91	0.93	0.90	0.92	0.93
Angola	0.69	0.73	0.84	0.69	0.70	0.71	0.72	0.73	0.72	0.73	0.74
Gabon	0.36	0.37	0.36	0.37	0.37	0.37	0.37	0.37	0.37	0.37	0.37
Others	0.71	0.82	0.90	0.75	0.79	0.78	0.81	0.82	0.82	0.79	0.83
<b>Total Non-OECD</b>	<b>23.70</b>	<b>24.42</b>	<b>25.35</b>	<b>23.70</b>	<b>23.92</b>	<b>24.08</b>	<b>24.32</b>	<b>24.44</b>	<b>24.32</b>	<b>24.35</b>	<b>24.42</b>
Processing Gains <sup>5</sup>	1.52	1.57	1.64	1.50	1.55	1.57	1.56	1.56	1.56	1.56	1.56
<b>TOTAL NON-OPEC</b>	<b>43.60</b>	<b>44.76</b>	<b>46.72</b>	<b>43.40</b>	<b>44.26</b>	<b>44.33</b>	<b>44.14</b>	<b>44.45</b>	<b>43.95</b>	<b>44.34</b>	<b>44.09</b>
<b>TOTAL SUPPLY</b>	<b>72.05</b>			<b>71.94</b>	<b>73.18</b>	<b>73.89</b>	<b>73.76</b>		<b>73.10</b>	<b>73.79</b>	<b>74.29</b>

1 Gabon is identified separately as a non-OPEC producer country throughout the period covered by this table for the purposes of comparison.

2 Includes condensates reported by OPEC countries, oil from non-conventional sources, e.g. Orimulsion, and non oil inputs to Saudi Arabian MTBE.

3 Comprises crude oil, condensates, NGLs and oil from non-conventional sources.

4 Includes small amounts of production from Israel, Jordan and Bahrain.

5 Net of volumetric gains and losses in refining (excludes net gain/loss in FSU, China and non-OECD Europe) and marine transportation losses.

p preliminary

f forecast

**Table 4A**  
**OIL SUPPLY IN OECD COUNTRIES<sup>1</sup>**  
(thousand barrels per day)

	2nd Quarter 97p		July		August		3rd Quarter 97f		1997f		1998f	
	Level	Change <sup>2</sup>	Level	Change	Level	Change	Level	Change	Level	Change	Level	Change
<b>United States</b>												
Alaska	1305	-60	1242	-25	1185	-57	1233	-72	1311	-83	1301	-10
California (inc. offshore)	923	6	924	1	920	-4	920	-3	919	-28	916	-3
Texas	1473	-13	1455	-8	1445	-10	1446	-27	1456	-26	1359	-97
Offshore Gulf of Mexico	1220	58	1267	19	1278	11	1278	58	1245	160	1506	261
Other US Lower 48	1530	-6	1518	-3	1512	-6	1511	-19	1518	-40	1448	-70
NGLs <sup>3</sup>	1841	-32	1874	32	1848	-26	1880	39	1886	61	1910	24
Other Hydrocarbons	343	36	315	-48	310	-5	310	-33	317	16	310	-7
<b>Total</b>	<b>8634</b>	<b>-12</b>	<b>8595</b>	<b>-32</b>	<b>8498</b>	<b>-98</b>	<b>8578</b>	<b>-56</b>	<b>8651</b>	<b>61</b>	<b>8749</b>	<b>98</b>
<b>Canada</b>												
Alberta Light & Medium	622	-39	650	16	655	5	652	30	647	-31	632	-15
Alberta Heavy	241	-15	277	31	275	-2	277	36	265	3	300	35
Alberta Bitumen	214	7	208	-13	210	2	210	-4	212	49	230	18
Saskatchewan	358	-21	366	-0	372	6	373	15	376	20	384	8
Other Conventional	101	1	97	-3	91	-6	94	-8	99	-31	182	83
NGLs	618	-42	598	8	627	29	617	-2	642	22	652	10
Syncrudes	219	-55	291	8	292	1	292	73	270	-9	295	26
<b>Total</b>	<b>2373</b>	<b>-163</b>	<b>2487</b>	<b>46</b>	<b>2522</b>	<b>35</b>	<b>2514</b>	<b>141</b>	<b>2511</b>	<b>23</b>	<b>2676</b>	<b>165</b>
<b>United Kingdom<sup>4</sup></b>												
Brent Fields	391	-78	408	13	403	-5	398	7	422	-57	407	-16
Forties Fields	751	-202	821	249	922	101	895	145	901	-7	983	81
Ninian Fields	257	-26	265	6	202	-63	243	-14	260	-47	227	-33
Flotta Fields	179	-32	166	-4	205	39	194	15	203	-19	248	46
Other Offshore Fields	655	54	699	-87	657	-41	717	62	711	182	925	214
NGLs	220	-60	220	16	240	20	240	19	261	5	278	18
<b>Total</b>	<b>2453</b>	<b>-343</b>	<b>2579</b>	<b>193</b>	<b>2630</b>	<b>51</b>	<b>2687</b>	<b>234</b>	<b>2758</b>	<b>57</b>	<b>3068</b>	<b>310</b>
<b>Norway<sup>4</sup></b>												
Ekofisk/Ula Area	530	71	532	-7	515	-17	521	-9	506	4	498	-8
Oseberg Area	856	-87	903	196	791	-112	877	21	906	-4	862	-44
Statfjord-Gullfaks-Snorre	1283	91	1177	-60	1024	-153	1081	-201	1221	19	1263	42
Haltenbanken	390	-17	413	6	425	12	432	42	455	99	621	166
Sleipner/Frigg	152	2	169	18	99	-70	139	-13	148	25	213	66
Plant Condensate (as NGLs)	7	-0	9	3	8	-0	9	2	8	0	7	-1
Lighter NGLs	134	4	134	4	101	-34	124	-10	135	1	145	10
<b>Total</b>	<b>3352</b>	<b>62</b>	<b>3337</b>	<b>160</b>	<b>2963</b>	<b>-373</b>	<b>3184</b>	<b>-167</b>	<b>3379</b>	<b>145</b>	<b>3610</b>	<b>231</b>
<b>Other OECD Europe</b>												
Other North Sea	277	1	270	-4	281	11	282	5	287	27	320	33
Onshore U.K.	103	-9	88	-5	102	14	101	-2	107	-0	112	5
Italy	112	3	110	0	121	11	120	8	118	18	130	12
Turkey	67	1	64	-1	64	0	64	-3	65	-2	61	-4
Other	125	-3	115	-12	118	3	119	-6	123	-17	125	3
NGLs	21	-6	19	0	22	3	21	0	24	1	20	-4
Non-Conventional Oils	22	3	24	-2	24	0	25	3	23	2	26	3
<b>Total</b>	<b>727</b>	<b>-11</b>	<b>691</b>	<b>-24</b>	<b>732</b>	<b>42</b>	<b>732</b>	<b>4</b>	<b>747</b>	<b>29</b>	<b>795</b>	<b>48</b>
<b>Australia</b>												
Gippsland Basin	230	33	232	6	230	-2	231	1	220	22	215	-5
Cooper/Eromanga	35	3	35	-0	34	-1	34	-1	34	-2	34	1
Carnarvon Basin	271	3	293	24	319	25	317	47	298	22	374	76
Bonaparte Basin	18	2	18	-1	18	0	18	-0	18	-2	43	25
Other Fields	5	-0	5	0	5	-1	5	-0	5	-1	5	0
NGLs	76	16	73	-10	68	-5	67	-9	64	0	61	-3
<b>Total</b>	<b>635</b>	<b>57</b>	<b>657</b>	<b>19</b>	<b>673</b>	<b>17</b>	<b>672</b>	<b>37</b>	<b>639</b>	<b>40</b>	<b>732</b>	<b>93</b>
<b>Other OECD Pacific</b>												
New Zealand	62	0	67	6	64	-3	56	-6	61	18	65	4
Japan	10	-1	11	1	11	0	11	1	11	0	11	0
NGLs	14	-0	13	-1	13	0	13	-1	14	2	13	-1
Synthetic Fuels	4	-1	4	0	4	0	4	0	4	-4	11	7
<b>Total</b>	<b>90</b>	<b>-2</b>	<b>95</b>	<b>6</b>	<b>92</b>	<b>-3</b>	<b>84</b>	<b>-6</b>	<b>90</b>	<b>16</b>	<b>100</b>	<b>10</b>
<b>OECD</b>												
Crude Oil	14734	-269	14858	359	14546	-312	14840	105	15115	273	15986	871
NGLs	2942	-125	2948	51	2935	-14	2981	39	3045	92	3100	55
Non-Conventional Oils	588	-17	634	-42	630	-4	631	43	614	5	643	29
<b>Total</b>	<b>18264</b>	<b>-412</b>	<b>18440</b>	<b>367</b>	<b>18111</b>	<b>-329</b>	<b>18451</b>	<b>187</b>	<b>18775</b>	<b>370</b>	<b>19730</b>	<b>955</b>

<sup>1</sup> Subcategories refer to crude oil only unless otherwise noted.

<sup>2</sup> All changes are period to period not year-on-year.

<sup>3</sup> To the extent possible, condensates derived from natural gas processing plants are included with NGLs, whereas field condensates are counted as crude oil.

<sup>4</sup> North Sea production is grouped by area including all fields being processed through the named facility, i.e. not just the field of that name.

**Table 5**  
**OECD INDUSTRY STOCKS<sup>1</sup> AND QUARTERLY STOCK CHANGES**

	RECENT MONTHLY STOCKS <sup>2</sup>					PRIOR YEARS' STOCKS <sup>2</sup>			STOCK CHANGES			
	in Million Barrels					in Million Barrels			in mb/d			
	Mar97	Apr97	May97	Jun97*	Jul97*	Jul94	Jul95	Jul96	Q396	Q496	Q197	Q297
<b>North America</b>												
Crude	382	391	393	387	375	403	399	374	-0.07	-0.25	0.38	0.06
Gasoline	220	217	220	223	209	227	229	221	-0.06	-0.06	0.07	0.03
Middle Distillate	170	163	176	189	197	207	197	174	0.23	0.14	-0.34	0.21
Residual Fuel Oil	49	49	48	48	44	48	46	44	0.02	0.07	-0.04	-0.01
Total Products <sup>3</sup>	572	572	599	625	637	654	651	592	0.29	-0.09	-0.34	0.59
Total <sup>4</sup>	1102	1111	1149	1163	1160	1229	1214	1122	0.27	-0.49	0.10	0.67
<b>Europe</b>												
Crude	324	323	316	294	296	307	325	330	-0.06	0.01	0.09	-0.33
Gasoline	134	127	124	121	118	127	123	127	-0.05	0.01	0.11	-0.14
Middle Distillate	231	214	225	223	225	236	223	216	-0.03	0.15	0.10	-0.09
Residual Fuel Oil	90	87	87	86	83	100	104	93	0.04	-0.01	-0.03	-0.04
Total Products <sup>3</sup>	535	509	518	514	511	549	538	515	-0.07	0.22	0.12	-0.23
Total <sup>4</sup>	922	896	894	868	866	912	920	903	-0.14	0.31	0.19	-0.60
<b>Pacific</b>												
Crude	160	163	163	168	164	158	180	154	-0.17	0.10	-0.03	0.09
Gasoline	24	25	25	24	24	20	22	23	0.01	-0.01	0.04	0.00
Middle Distillate	55	61	61	60	66	63	62	58	0.26	-0.08	-0.13	0.06
Residual Fuel Oil	16	17	17	17	16	13	17	16	0.00	-0.01	0.02	0.02
Total Products <sup>3</sup>	150	161	159	157	165	152	153	159	0.33	-0.18	-0.08	0.07
Total <sup>4</sup>	396	413	412	410	414	386	418	395	0.30	-0.23	-0.02	0.16
<b>Total</b>												
Crude	866	877	872	850	834	868	904	858	-0.30	-0.15	0.45	-0.18
Gasoline	378	369	368	368	352	374	374	370	-0.10	-0.05	0.22	-0.11
Middle Distillate	456	438	462	472	488	506	481	449	0.45	0.20	-0.37	0.18
Residual Fuel Oil	155	152	152	152	143	161	168	153	0.07	0.05	-0.05	-0.04
Total Products <sup>3</sup>	1257	1241	1276	1296	1313	1355	1341	1266	0.54	-0.06	-0.29	0.43
Total <sup>4</sup>	2420	2419	2455	2441	2439	2527	2553	2419	0.43	-0.40	0.27	0.23

**OECD GOVERNMENT-CONTROLLED STOCKS<sup>5</sup> AND QUARTERLY STOCK CHANGES**

	RECENT MONTHLY STOCKS <sup>2</sup>					PRIOR YEARS' STOCKS <sup>2</sup>			STOCK CHANGES <sup>3</sup>			
	in Million Barrels					in Million Barrels			in mb/d			
	Mar97	Apr97	May97	Jun97*	Jul97*	Jul94	Jul95	Jul96	Q396	Q496	Q197	Q297
<b>North America</b>												
Crude	563	563	563	563	563	592	592	583	-0.12	-0.09	-0.03	0.00
<b>Europe</b>												
Crude	132	132	132	131	131	134	134	134	0.01	-0.02	0.00	-0.01
Products	190	190	191	191	191	187	184	186	0.01	0.02	0.03	0.01
<b>Pacific</b>												
Crude	307	307	307	307	307	265	284	299	0.00	0.03	0.05	0.00
<b>Total</b>												
Crude	1003	1003	1003	1002	1002	991	1009	1016	-0.11	-0.07	0.02	-0.01
Products	190	190	191	191	191	187	184	186	0.01	0.02	0.03	0.01
Total <sup>4</sup>	1193	1193	1194	1193	1193	1178	1193	1202	-0.10	-0.05	0.05	0.00

\* Estimated

1 Stocks are primary national territory stocks on land (excluding utility stocks and including pipeline and entrepot stocks where known).

They include stocks held by industry to meet IEA, EU and national emergency reserve commitments and are subject to government control in emergencies.

2 Closing Stock levels.

3 Total products includes gasoline, middle distillates, fuel oil and other products.

4 Total includes NGLs, refinery feedstocks, additives/oxygenates and other hydrocarbons.

5 Includes government-owned stocks and stock holding organisation stocks held for emergency purposes.

**Table 6**  
**INDUSTRY STOCKS<sup>1</sup> ON LAND IN SELECTED COUNTRIES**

(million barrels)

	February			March			April			May			June		
	1996	1997	%	1996	1997	%	1996	1997	%	1996	1997	%	1996	1997	%
<b>United States</b>															
Crude	301.5	297.7	-1.2	299.6	314.1	4.8	303.0	320.4	5.7	304.8	327.0	7.3	314.3	321.8	2.4
Motor Gasoline	213.3	203.5	-4.6	203.2	199.7	-1.7	203.0	197.5	-2.7	205.1	202.0	-1.5	204.6	204.8	0.1
Middle Distillate	136.7	148.4	8.6	126.9	145.8	14.9	128.4	140.1	9.1	135.3	153.3	13.3	143.2	165.9	15.9
Residual Fuel Oil	31.5	39.9	26.7	31.7	41.3	30.5	33.7	40.6	20.4	34.3	39.2	14.4	34.9	39.2	12.2
Other Products	108.4	104.8	-3.3	108.8	114.1	4.9	116.1	123.3	6.2	121.9	136.1	11.6	130.9	147.7	12.9
Total Products	489.9	496.7	1.4	470.6	501.0	6.5	481.1	501.5	4.2	496.7	530.6	6.8	513.6	557.6	8.6
Other <sup>2</sup>	116.9	124.2	6.3	122.6	133.8	9.1	130.6	133.5	2.2	132.1	140.7	6.5	133.2	134.0	0.7
<b>Total</b>	<b>908.3</b>	<b>918.6</b>	<b>1.1</b>	<b>892.8</b>	<b>948.9</b>	<b>6.3</b>	<b>914.7</b>	<b>955.4</b>	<b>4.4</b>	<b>933.6</b>	<b>998.3</b>	<b>6.9</b>	<b>961.1</b>	<b>1013.4</b>	<b>5.4</b>
<b>Japan</b>															
Crude	138.2	139.5	0.9	152.3	144.6	-5.1	140.0	145.4	3.9	151.2	147.1	-2.7	152.7	152.4	-0.2
Motor Gasoline	14.2	13.5	-4.7	14.0	14.7	5.5	13.7	15.1	10.5	13.9	14.4	3.6	11.6	13.1	13.0
Middle Distillate	35.1	45.9	31.0	33.4	44.3	32.8	37.0	49.8	34.6	40.5	50.0	23.4	42.3	48.6	14.9
Residual Fuel Oil	12.7	13.5	6.0	12.1	13.6	12.1	13.0	14.0	7.5	12.7	14.0	9.8	12.6	14.6	15.8
Other Products	44.4	46.3	4.4	45.7	47.2	3.3	46.3	50.8	9.6	49.7	48.3	-2.8	49.7	47.4	-4.8
Total Products	106.4	119.3	12.1	105.2	119.9	14.0	110.0	129.7	17.9	116.8	126.6	8.4	116.3	123.7	6.4
Other <sup>2</sup>	71.0	77.4	9.0	69.7	78.3	12.3	72.2	83.3	15.3	73.3	83.8	14.3	71.9	79.4	10.5
<b>Total</b>	<b>315.6</b>	<b>336.1</b>	<b>6.5</b>	<b>327.2</b>	<b>342.8</b>	<b>4.8</b>	<b>322.1</b>	<b>358.3</b>	<b>11.2</b>	<b>341.2</b>	<b>357.5</b>	<b>4.8</b>	<b>340.8</b>	<b>355.5</b>	<b>4.3</b>
<b>Germany</b>															
Crude	20.1	23.4	16.6	22.2	22.9	3.1	21.2	21.6	2.2	20.9	23.0	10.4	20.9	20.7	-1.3
Motor Gasoline	12.4	13.2	6.3	11.8	14.3	21.8	9.6	13.5	40.2	9.7	12.5	29.6	11.4	11.4	0.4
Middle Distillate	15.2	21.6	42.0	12.3	23.4	90.5	17.8	15.9	-10.6	15.6	22.3	42.9	15.3	15.8	3.5
Residual Fuel Oil	9.4	9.5	0.9	8.2	9.0	9.8	8.4	8.5	0.9	8.9	9.5	7.1	8.3	8.6	3.2
Other Products	12.1	11.9	-1.1	11.9	11.5	-3.5	11.6	11.1	-5.0	11.2	11.8	4.5	11.9	11.2	-6.5
Total Products	49.1	56.3	14.5	44.2	58.2	31.8	47.5	48.9	3.1	45.4	56.1	23.6	46.9	47.0	0.2
Other <sup>2</sup>	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<b>Total</b>	<b>69.2</b>	<b>79.7</b>	<b>15.1</b>	<b>66.4</b>	<b>81.1</b>	<b>22.2</b>	<b>68.6</b>	<b>70.6</b>	<b>2.8</b>	<b>66.3</b>	<b>79.1</b>	<b>19.4</b>	<b>67.9</b>	<b>67.7</b>	<b>-0.3</b>
<b>Italy</b>															
Crude	34.4	33.9	-1.4	34.1	38.0	11.5	35.2	35.4	0.4	39.5	37.2	-5.8	39.6	38.6	-2.6
Motor Gasoline	22.7	19.8	-12.8	23.7	21.5	-9.1	21.1	19.0	-10.1	21.2	20.1	-5.1	21.0	21.0	-0.2
Middle Distillate	33.1	35.9	8.4	34.0	37.0	8.8	35.3	33.4	-5.4	35.1	32.6	-6.9	34.9	34.1	-2.2
Residual Fuel Oil	24.4	23.5	-3.7	22.6	23.7	4.9	20.0	21.6	7.9	23.0	20.8	-9.4	24.9	20.3	-18.3
Other Products	9.3	8.4	-9.7	9.8	7.4	-25.1	8.9	7.9	-10.9	9.9	9.0	-8.2	9.4	10.2	8.0
Total Products	89.5	87.6	-2.1	90.0	89.5	-0.6	85.3	81.9	-4.0	89.1	82.7	-7.3	90.2	85.5	-5.1
Other <sup>2</sup>	7.2	11.2	55.8	5.8	9.9	71.9	5.8	10.9	88.0	4.7	7.4	55.7	4.5	7.6	68.5
<b>Total</b>	<b>131.1</b>	<b>132.8</b>	<b>1.2</b>	<b>129.8</b>	<b>137.3</b>	<b>5.8</b>	<b>126.3</b>	<b>128.2</b>	<b>1.4</b>	<b>133.3</b>	<b>127.2</b>	<b>-4.6</b>	<b>134.3</b>	<b>131.7</b>	<b>-1.9</b>
<b>France</b>															
Crude	37.0	39.5	6.7	38.6	39.9	3.6	45.5	42.8	-5.8	40.3	43.4	7.6	37.6	35.2	-6.2
Motor Gasoline	23.4	20.9	-10.5	22.3	19.6	-12.0	20.5	17.3	-15.5	20.8	16.9	-18.6	21.2	16.1	-23.9
Middle Distillate	35.2	35.0	-0.6	34.7	36.0	3.6	36.5	34.6	-5.0	39.3	38.0	-3.2	38.7	36.3	-6.1
Residual Fuel Oil	7.8	7.8	-0.1	7.7	8.1	5.8	8.4	7.6	-9.6	8.9	8.0	-10.2	8.2	7.9	-2.9
Other Products	8.1	8.8	8.7	8.6	8.9	2.9	9.2	8.3	-9.1	8.5	8.2	-4.0	8.5	8.7	2.6
Total Products	74.5	72.6	-2.6	73.4	72.6	-1.0	74.5	67.9	-8.9	77.5	71.2	-8.2	76.4	69.0	-9.7
Other <sup>2</sup>	13.0	12.6	-3.6	12.4	12.5	0.3	12.2	12.9	5.7	12.7	12.2	-4.2	13.6	12.1	-11.2
<b>Total</b>	<b>124.6</b>	<b>124.6</b>	<b>0.0</b>	<b>124.4</b>	<b>125.0</b>	<b>0.5</b>	<b>132.2</b>	<b>123.6</b>	<b>-6.5</b>	<b>130.6</b>	<b>126.7</b>	<b>-2.9</b>	<b>127.6</b>	<b>116.3</b>	<b>-8.8</b>
<b>United Kingdom</b>															
Crude	32.2	31.3	-2.9	35.8	34.2	-4.4	35.4	34.9	-1.5	32.8	34.5	5.2	32.6	34.0	4.3
Motor Gasoline	16.2	16.5	1.9	15.4	16.1	4.5	15.1	15.0	-1.1	14.7	14.6	-0.7	15.2	14.7	-2.7
Middle Distillate	15.9	18.7	17.9	16.9	20.2	18.9	18.1	20.0	10.5	18.4	20.4	11.0	18.8	19.7	5.1
Residual Fuel Oil	6.4	6.7	3.8	6.8	7.1	5.1	7.4	7.0	-6.4	7.5	7.3	-2.1	6.5	7.5	14.3
Other Products	12.1	11.6	-4.0	11.9	11.1	-6.9	11.9	11.5	-3.2	11.7	12.0	3.3	12.4	12.7	2.5
Total Products	50.5	53.5	5.8	51.1	54.5	6.7	52.5	53.4	1.7	52.2	54.4	4.1	52.9	54.7	3.4
Other <sup>2</sup>	16.0	15.6	-2.6	15.1	15.4	2.3	17.0	15.0	-12.0	16.6	14.3	-14.0	15.2	16.2	6.7
<b>Total</b>	<b>98.8</b>	<b>100.4</b>	<b>1.6</b>	<b>101.9</b>	<b>104.1</b>	<b>2.2</b>	<b>104.9</b>	<b>103.3</b>	<b>-1.6</b>	<b>101.6</b>	<b>103.1</b>	<b>1.5</b>	<b>100.7</b>	<b>104.9</b>	<b>4.2</b>
<b>Canada</b>															
Crude	54.4	55.1	1.3	57.8	59.6	3.2	60.3	62.2	3.2	59.5	57.9	-2.8	56.3	57.1	1.5
Motor Gasoline	21.6	17.7	-18.1	22.6	19.0	-15.9	20.9	18.2	-12.6	17.4	16.2	-6.8	17.7	16.6	-6.5
Middle Distillate	19.6	21.4	9.1	19.3	20.7	7.1	18.6	19.5	4.9	18.0	19.2	6.5	20.3	19.7	-3.1
Residual Fuel Oil	4.2	3.6	-13.5	4.9	3.5	-29.0	5.1	4.1	-20.5	4.6	4.6	-0.7	5.0	4.8	-4.6
Other Products	15.6	16.7	7.3	16.9	17.2	1.7	15.9	17.9	12.5	17.7	18.4	4.1	16.8	16.2	-3.6
Total Products	61.0	59.5	-2.5	63.7	60.3	-5.3	60.4	59.6	-1.3	57.7	58.4	1.2	60.0	57.3	-4.4
Other <sup>2</sup>	9.7	8.9	-8.2	10.2	9.2	-9.8	11.0	9.8	-10.5	12.5	11.0	-12.1	13.6	11.0	-19.6
<b>Total</b>	<b>125.1</b>	<b>123.5</b>	<b>-1.3</b>	<b>131.7</b>	<b>129.2</b>	<b>-1.9</b>	<b>131.7</b>	<b>131.7</b>	<b>0.0</b>	<b>129.7</b>	<b>127.2</b>	<b>-1.9</b>	<b>129.9</b>	<b>125.5</b>	<b>-3.4</b>

<sup>1</sup> Stocks are primary national territory stocks on land (excluding utility stocks and including pipeline and entrepot stocks where known). They include stocks held by industry to meet IEA, EU and national emergency reserve commitments and are subject to government control in emergencies.

<sup>2</sup> Other includes NGLs, refinery feedstocks, additives/oxygenates and other hydrocarbons.

**Table 7**  
**TOTAL STOCKS ON LAND IN OECD COUNTRIES**  
('millions of barrels' and 'days')

	End June 1996		End September 1996		End December 1996		End March 1997 <sup>4</sup>		End June 1997 <sup>3,4</sup>	
	Stock <sup>1</sup> Level	Days Fwd <sup>2</sup> Demand	Stock Level	Days Fwd Demand	Stock Level	Days Fwd Demand	Stock Level	Days Fwd Demand	Stock Level	Days Fwd Demand
Canada	129.9	68	133.9	69	124.9	64	129.2	-	-	-
United States	1545.5	85	1553.7	83	1509.5	83	1512.3	-	-	-
<b>NORTH AMERICA</b>	<b>1699.1</b>	<b>84</b>	<b>1711.3</b>	<b>82</b>	<b>1658.2</b>	<b>81</b>	<b>1665.2</b>	<b>81</b>	<b>1726.0</b>	<b>84</b>
Australia	41.1	53	43.2	53	40.9	51	44.1	-	-	-
Japan	640.2	119	664.5	111	651.1	102	649.7	-	-	-
New Zealand	9.0	73	10.6	81	8.4	61	8.9	-	-	-
<b>PACIFIC</b>	<b>690.3</b>	<b>110</b>	<b>718.4</b>	<b>103</b>	<b>700.4</b>	<b>96</b>	<b>702.6</b>	<b>115</b>	<b>716.9</b>	<b>113</b>
Austria	17.9	73	17.2	73	17.9	74	17.9	-	-	-
Belgium	26.9	48	27.4	48	29.3	46	28.4	-	-	-
Denmark	19.2	87	19.1	77	19.2	80	20.2	-	-	-
Finland	22.7	125	23.8	111	26.8	136	24.4	-	-	-
France	156.2	82	147.6	75	154.4	76	156.5	-	-	-
Germany	298.6	98	297.0	103	303.0	109	312.4	-	-	-
Greece	20.9	58	19.7	52	21.8	57	23.4	-	-	-
Ireland	7.2	58	8.2	63	8.6	63	7.8	-	-	-
Italy	140.1	75	144.3	73	134.9	72	142.8	-	-	-
Luxembourg	0.8	23	0.8	20	0.8	20	1.0	-	-	-
Netherlands	105.2	138	97.4	126	106.3	135	108.2	-	-	-
Norway	54.8	248	57.7	252	59.7	271	53.5	-	-	-
Portugal	18.2	60	18.8	67	18.2	65	20.9	-	-	-
Spain	95.4	80	94.1	77	94.4	79	94.5	-	-	-
Sweden	31.3	85	29.7	67	32.5	83	33.0	-	-	-
Switzerland	45.1	156	44.5	153	45.4	169	45.4	-	-	-
Turkey	47.8	70	48.9	73	50.1	83	50.8	-	-	-
United Kingdom	100.7	55	101.7	53	103.8	56	104.1	-	-	-
<b>EUROPE<sup>5</sup></b>	<b>1209.0</b>	<b>85</b>	<b>1197.8</b>	<b>83</b>	<b>1226.9</b>	<b>86</b>	<b>1245.1</b>	<b>89</b>	<b>1190.3</b>	<b>84</b>
<b>Total</b>	<b>3598.4</b>	<b>89</b>	<b>3627.5</b>	<b>86</b>	<b>3585.5</b>	<b>86</b>	<b>3612.9</b>	<b>89</b>	<b>3633.2</b>	<b>89</b>
<b>DAYS OF IEA NET IMPORTS<sup>6</sup></b>	<b>-</b>	<b>127</b>	<b>-</b>	<b>127</b>	<b>-</b>	<b>122</b>	<b>-</b>	<b>123</b>	<b>-</b>	<b>-</b>

1 Stocks are primary national territory stocks on land (excluding utility stocks and including pipeline and entrepot stocks where known).

They include stocks held by industry to meet IEA, EU and national emergency reserves commitments and are subject to government control in emergencies.

2 Note that days of forward demand represent the stock level divided by the forward quarter average daily demand and is very different from the days of net imports used in the IEA's Emergency Sharing System.

3 End June 1997 stock level based on preliminary data.

4 End March and June 1997 forward demand figures are IEA Secretariat forecasts.

5 Data not available for Iceland.

6 Reflects stock levels and prior calendar year's net imports adjusted according to IEA emergency reserve definitions. Net exporting IEA countries are excluded.

### TOTAL OECD STOCKS

CLOSING STOCKS	Total	Government <sup>1</sup> controlled Millions of Barrels		Industry	Total	Government <sup>1</sup> controlled Days of Fwd. Demand <sup>2</sup>	
Q294	3655	1177		2478	92	30	62
Q394	3750	1180		2570	92	29	63
Q494	3720	1190		2530	90	29	62
Q195	3608	1198		2410	92	31	61
Q295	3676	1192		2484	92	30	62
Q395	3722	1202		2520	90	29	61
Q495	3614	1191		2423	86	28	57
Q196	3495	1210		2285	88	31	58
Q296	3598	1203		2396	89	30	59
Q396	3627	1194		2434	86	28	58
Q496	3585	1189		2397	86	28	57
Q197	3613	1193		2420	89	29	59
Q297	3633	1193		2441	89	29	60

1 Includes government-owned stocks and stock holding organisation stocks held for emergency purposes.

2 Days of forward demand calculated using actual demand except in June 1997 (when latest forecasts are used).

**Table 8**  
**AVERAGE IEA CIF CRUDE COST AND SPOT CRUDE AND PRODUCT PRICES**  
(\$/bbl)

	1994	1995	1996	2Q96	3Q96	4Q96	1Q97	2Q97	Mar97	Apr97	May97	Jun97	Jul97	Aug97
<b>Crude Oil Prices</b>														
IEA CIF Average Import	15.65	17.19	20.52	19.78	20.45	23.19	21.57	18.10*	19.55	18.04	18.44	17.81*	18.30*	18.65*
FOB Spot														
Brent (Dated)	15.80	17.02	20.65	19.51	20.96	23.58	21.10	18.06	19.10	17.46	19.14	17.58	18.54	18.68
WTI (1st month)	17.19	18.41	22.15	21.80	22.43	24.75	22.75	20.00	21.03	19.74	20.99	19.28	19.63	19.98
Urals (Del. Med.)	15.23	16.62	20.06	18.66	20.10	22.96	20.12	16.90	17.92	16.26	17.95	16.48	17.85	17.84
Dubai (1st month)	14.75	16.10	18.54	17.26	18.96	21.51	19.37	17.52	18.17	16.64	18.65	17.28	17.37	17.77
OPEC Basket	15.53	16.88	20.23	19.18	20.30	23.01	20.79	17.86	18.69	17.46	18.75	17.37	17.86	18.09*
<b>Product Prices<sup>1</sup></b>														
Rotterdam, Barges FOB														
Premium 0.15 g/l	20.18	21.25	24.62	25.52	24.83	26.93	25.92	24.15	25.64	23.85	24.92	23.69	23.72	27.44
Regular Unleaded	18.65	19.75	22.99	23.86	23.31	25.02	24.18	22.28	23.78	22.03	22.93	21.87	21.57	25.58
Naphtha	17.30	18.15	21.70	20.85	21.90	25.01	23.57	19.99	21.63	19.92	20.08	19.97	20.27	21.31
Jet/Kerosene	20.95	21.60	27.05	23.78	27.48	31.88	26.93	23.37	23.75	23.17	24.21	22.73	23.09	23.85
Gasoil	19.80	20.47	25.91	23.16	26.41	30.08	25.45	22.41	22.51	22.07	23.24	21.93	22.20	22.76
Fuel Oil 1.0%S	14.00	15.76	17.52	16.90	16.35	19.62	16.21	14.08	14.67	13.75	13.90	14.61	14.74	14.99
Fuel Oil 3.5%S	13.01	14.82	16.30	15.41	15.57	18.56	15.03	13.20	13.75	13.17	13.07	13.35	13.90	14.90
Gross Product Worth <sup>2</sup>	18.34	19.28	23.34	22.21	23.46	26.57	23.33	20.87	21.62	20.70	21.51	20.40	20.55	21.86
Brent Cracking Margin	1.49	1.15	1.51	1.51	1.41	1.84	0.99	1.63	1.17	2.11	1.17	1.60	0.87	1.97
Mediterranean - Basis Italy, Cargoes FOB														
Premium 0.15 g/l	20.23	20.99	24.56	25.86	24.80	26.49	25.51	23.93	25.49	23.69	24.98	23.11	23.24	26.45
Naphtha	15.71	16.35	19.81	18.91	20.13	23.14	21.96	18.74	20.15	18.75	18.83	18.65	19.05	20.10
Jet/Kerosene	19.26	19.94	25.39	22.38	26.00	29.70	24.70	20.99	21.69	21.24	21.52	20.21	20.30	21.16
Gasoil	18.71	19.39	24.64	22.42	25.06	28.81	23.73	21.07	21.29	21.35	21.86	20.01	20.54	21.17
Fuel Oil 1.0%S	13.93	15.48	18.10	17.33	18.02	19.72	15.91	14.45	15.19	14.02	14.37	14.96	14.70	14.97
Fuel Oil 3.5%S	11.98	13.95	18.00	13.70	25.65	17.51	14.03	12.35	11.93	12.61	12.30	12.13	12.61	13.19
Gross Product Worth <sup>3</sup>	17.46	18.39	22.17	21.24	22.23	25.19	21.87	19.64	20.31	19.70	20.21	19.02	19.31	20.57
Urals Cracking Margin	1.89	1.44	1.80	2.26	1.81	1.93	1.43	2.42	2.07	3.11	1.93	2.21	1.13	2.41
NY Harbour, Barges														
Premium Unleaded 93	23.65	24.81	27.77	28.17	28.00	30.59	28.19	26.56	27.57	25.23	28.32	26.13	28.42	32.53
Regular Unleaded 87	20.54	22.57	25.81	26.34	25.88	28.37	26.77	24.31	25.74	23.79	26.04	23.10	24.54	29.40
Jet/Kerosene	22.20	21.76	27.57	26.01	27.13	30.86	27.21	23.73	24.36	24.42	24.06	22.72	23.47	24.38
No.2 (Heating Oil)	20.68	20.72	26.35	24.45	25.69	30.06	25.93	23.17	22.98	24.02	23.56	21.93	22.26	22.69
Fuel Oil 1.0%S (Cargo)	15.05	16.06	19.21	18.23	17.93	21.34	17.10	15.72	15.87	14.89	16.05	16.22	16.80	16.28
Fuel Oil 3.0%S (Cargo)	12.25	14.47	16.03	15.17	15.49	18.52	14.83	14.43	13.42	14.07	14.77	14.44	14.96	15.48
Gross Product Worth <sup>4</sup>	19.54	20.33	23.06	23.89	23.93	26.57	24.62	22.87	23.35	22.71	23.66	22.23	23.21	24.95
WTI Cracking Margin	1.24	0.82	0.75	0.99	0.41	0.72	0.77	1.76	1.23	1.87	1.57	1.86	2.48	3.88
Singapore, Cargoes														
Gasoline <sup>5</sup>	21.10	22.11	23.58	25.01	22.32	25.38	27.34	24.38	28.62	25.15	24.21	23.77	23.38	23.05
Naphtha	16.34	17.54	20.22	19.53	20.22	23.62	24.36	21.21	23.90	21.45	21.46	20.73	21.40	21.00
Jet/Kerosene	21.74	22.72	28.36	25.32	27.75	31.70	28.97	24.48	27.36	25.04	24.71	23.67	23.20	22.91
Gasoil	20.87	21.60	27.07	25.47	25.86	31.07	26.90	24.98	27.48	26.85	25.21	22.87	21.45	22.47
LSWR (0.3%) <sup>7</sup>	13.58	14.74	18.04	17.86	17.57	20.54	19.61	15.19	17.58	15.54	15.08	14.95	17.19	15.67
HSFO (3.5%S 180cst)	13.17	14.98	16.83	15.63	15.89	18.67	15.91	15.57	15.58	15.35	15.79	15.56	15.27	16.09
HSFO (3.5%S 380cst)	12.37	14.30	15.90	14.64	15.21	17.85	14.89	14.55	14.55	14.32	14.72	14.60	14.83	15.57
Gross Product Worth <sup>6</sup>	18.76	19.74	23.06	22.39	22.03	25.88	24.12	22.11	24.51	23.03	22.23	21.06	20.38	20.83
Dubai Cracking Margin	2.97	2.35	3.10	3.79	1.58	2.96	3.34	3.12	4.91	5.08	2.07	2.21	1.40	1.27

\* = Estimated.

1 Product prices are mean values and are converted to \$/bbl using following conversion factors.

Rotterdam: 8.35 bbl/MT for premium leaded gasoline, 8.46 bbl/MT for regular unleaded gasoline, 8.82 bbl/MT for naphtha, 7.88 bbl/MT for jet fuel, 7.46 bbl/MT for gasoil, 6.49 bbl/MT for 1.0%S LSFO and 6.31 bbl/MT for 3.5%S HSFO.

Singapore: 6.46 bbl/MT for 3.5%S HSFO.

2 Calculated using Brent cracking yield of a typical refinery in Rotterdam.

3 Calculated using Urals cracking yield of a typical refinery in the Mediterranean.

4 Calculated using WTI cracking yield of a typical refinery in US Gulf Coast.

5 Changed from regular 0.15 g/l to unleaded 95 as of 2 February 1995.

6 Calculated using Dubai cracking yield of a typical refinery in Singapore.

7 As from 1 April 1996 mixed/cracked LSWR fob Indonesia.

**Table 9**  
**END USER PRICES FOR PETROLEUM PRODUCTS<sup>1</sup>**  
**August 1997**

	National Currency						US Dollars					
	Price	% ch Prev. Month		% ch Year Ago		Price	% ch Prev. Month		% ch Year Ago			
		Tax	Price	Excl. Tax	Price	Excl. Tax	Price	Excl. Tax	Price	Excl. Tax	Price	Excl. Tax
<b>GASOLINE<sup>2</sup> Price per Litre</b>												
France	6.462	5.162	1.7	7.4	4.3	13.0	1.035	0.208	-2.1	3.4	-15.5	-8.4
Germany	1.669	1.198	4.8	16.6	5.6	19.2	0.900	0.254	0.8	12.1	-15.6	-4.6
Italy	1921	1418	0.7	2.4	1.7	5.7	1.061	0.278	-3.6	-2.0	-14.8	-11.5
Spain	122.4	81.7	2.4	6.4	4.0	11.1	0.782	0.260	-1.9	2.0	-16.5	-10.7
UK	0.691	0.554	1.6	7.0	13.3	7.0	1.106	0.219	-3.1	2.1	16.9	10.5
Japan	104	59	0.0	0.0	0.0	-4.3	0.884	0.382	-2.6	-2.6	-8.4	-12.3
Canada	0.601	0.292	6.7	12.4	5.6	9.2	0.432	0.222	6.0	11.6	4.3	7.8
USA <sup>3</sup>	0.345	0.101	3.3	4.7	0.6	0.8	0.345	0.244	3.3	4.7	0.6	0.8
<b>AUTOMOTIVE DIESEL<sup>4</sup> Price per Litre</b>												
France	3.631	2.351	1.1	3.2	5.2	10.3	0.582	0.205	-2.7	-0.7	-14.8	-10.6
Germany	1.110	0.620	6.2	15.3	7.1	17.8	0.599	0.264	2.1	10.8	-14.3	-5.8
Italy	1201.68	747.47	0.9	2.5	2.9	8.0	0.664	0.251	-3.4	-1.9	-13.8	-9.5
Spain	81.95	43.20	3.9	8.7	8.1	18.8	0.524	0.248	-0.4	4.2	-13.2	-4.5
UK	0.547	0.403	1.5	6.6	12.1	0.0	0.875	0.232	-3.2	1.7	15.7	3.2
Japan	82	36	0.0	0.0	4.6	3.6	0.696	0.389	-2.6	-2.6	-4.2	-5.1
Canada	0.548	0.222	0.0	0.0	4.6	4.8	0.394	0.235	-0.7	-0.7	3.2	3.5
USA	..	..	..	..	..	..	..	..	..	..	..	..
<b>DOMESTIC HEATING OIL Price per 1000 Litres</b>												
France	2273.1	903.1	2.9	4.0	10.0	13.2	364.0	219.4	-1.0	0.1	-10.9	-8.2
Germany	517.5	147.5	8.1	10.0	12.7	15.9	279.1	199.6	3.9	5.7	-9.8	-7.3
Italy	1387005	968925	0.9	2.7	3.7	10.9	765.9	230.9	-3.4	-1.7	-13.2	-7.1
Spain	49668	19451	5.1	7.4	14.4	21.7	317.4	193.1	0.8	3.0	-8.1	-2.2
UK	150.50	36.95	0.8	1.0	-4.5	-7.4	240.8	181.7	-3.9	-3.7	-1.4	-4.4
Japan <sup>5</sup>	50190	2390	0.0	0.0	10.0	7.9	426.4	406.1	-2.6	-2.6	0.7	-1.2
Canada	..	..	..	..	..	..	..	..	..	..	..	..
USA <sup>6</sup>	252.8	..	-4.4	..	2.3	..	252.8	..	-4.4	..	2.3	..
<b>HFO FOR INDUSTRY<sup>4,7</sup> Price per Metric Ton</b>												
France	768.0	159.9	7.1	9.2	10.2	12.6	123.0	97.4	3.08	5.0	-10.7	-8.8
Germany	232.0	30.0	4.8	5.6	7.6	8.8	125.1	109.0	0.76	1.5	-13.9	-12.9
Italy	280910	45000	6.0	7.2	3.0	3.6	155.1	130.3	1.44	2.6	-13.7	-13.2
Spain	22452	2150	5.1	5.7	10.9	12.2	143.5	129.7	0.73	1.3	-11.0	-9.9
UK	88.31	20.20	7.1	9.4	1.1	-1.4	141.3	109.0	2.15	4.4	4.4	1.7
Japan	22989	1095	0.0	0.0	17.8	15.5	195.3	186.0	-2.63	-2.6	7.9	5.8
Canada	..	..	..	..	..	..	..	..	..	..	..	..
USA	..	..	..	..	..	..	..	..	..	..	..	..

1 Mid-Month Prices

2 Premium leaded gasoline for France, Italy, Spain, UK; regular unleaded gasoline for Canada, Germany, Japan and USA

3 Estimated

4 VAT excluded where it is refundable: HFO for Industry, Automotive Diesel for Industry

5 Kerosene

6 Previous month data

7 High sulphur fuel oil price for France, Spain, UK and Japan; low sulphur fuel oil price for Germany and Italy

## Oil Market Report Contacts

### OECD Stocks (and Editor)

David Knapp  
(+33 1) 40 57 65 90  
e-mail: david.knapp@iea.org

### Demand

Gareth Lewis-Davies  
(+33 1) 40 57 65 92  
e-mail: gareth.lewis-davies@iea.org

### Supply

Michael Wittner  
(+33 1) 40 57 65 91  
e-mail: mike.wittner@iea.org

### Oil Prices and Refinery Activity

Roberto M. Sieber  
(+33 1) 40 57 65 93  
e-mail: roberto.sieber@iea.org

### Statistical Support

Isabelle Allanos Ynesta  
(+33 1) 40 57 65 95  
e-mail: isabelle.allanos@iea.org

Fax: (+33 1) 40 57 65 99/40 57 65 09

### Editorial Enquiries

Oil Industry and Markets Division  
International Energy Agency (IEA)  
9 rue de la Fédération  
75739 PARIS Cedex 15, FRANCE

Tel. (+33 1) 40 57 65 90

### Subscription and Delivery Enquiries

FT Energy Publishing  
Maple House  
149 Tottenham Court Road  
LONDON W1P 9LL, UK

Roberto Chiarotti  
Tel. (+44 (0)171) 896 2241  
Fax. (+44 (0)171) 896 2275  
robertoc@pearson-pro.com

## Users' Guide to the IEA Oil Market Report

Readers are referred to the Users' Guide, that was published in conjunction with the Annual Statistical Supplement on 6 September 1996, for information on the data sources, definitions, technical terms and general approach used in preparing the Report. It should be noted that the spot crude and product price assessments are based on daily Platt's prices, converted when appropriate to \$US per barrel according to the Platt's specification of products (© 1996 Platt's a division of McGraw-Hill Inc.).

Pending submission of the detailed historical data needed to incorporate them into the OECD, the following OECD countries continue to be shown in the relevant non-OECD regions: the Czech Republic, Hungary and Poland in Non-OECD Europe, Korea in Other Asia and Mexico in Latin America.

The monthly Oil Market Report is published on the responsibility of the Executive Director and Secretariat of the International Energy Agency. Although some of the data are supplied by Member Governments, largely on the basis of information received from oil companies, neither governments nor companies necessarily share the Secretariat's views of conclusions as expressed therein. © OECD/IEA 1997