

8 October 1996

## HIGHLIGHTS

- Global demand in 4Q96 has been revised upwards from last month's Report by 0.1 mb/d to 73.7 mb/d, due to small increases in both OECD and non-OECD demand. Global demand in 1Q97 has been revised downwards by 0.1 mb/d to 74.7 mb/d, with a downward revision to FSU demand more than offsetting an upward adjustment to Chinese demand.
- Global oil demand in 1996 and 1997 remain essentially unchanged at 71.8 mb/d and 73.6 mb/d respectively. The projection of global demand growth in 1997 is marginally higher than in last month's Report, due to the combination of a minor downward adjustment to demand in 1996 and slightly higher demand projections for China in 1997 and the OECD in the latter half of 1997.
- A strong recovery in non-OPEC supply in September, following maintenance in the North Sea and Alaska in August, far exceeded a modest increase in OPEC crude oil, resulting in an increase in world oil supply of 0.9 mb/d to 72.6 mb/d. The non-OPEC supply growth was concentrated in the UK, Norway and the US, but significant gains also occurred in China, Brazil, Canada and Mexico. OPEC production rose by about 75 kb/d to 25.88 mb/d.
- With the September recovery, 3Q96 non-OPEC supply is estimated to have risen 0.3 mb/d from 2Q96 despite heavier Alaskan and North Sea maintenance in August. Production in 3Q96 exceeded 3Q95 levels by over 1.0 mb/d, setting the scene for a year-on-year increase of 2.3 mb/d in 4Q96.
- Primarily as a result of downward revisions to non-OPEC supplies, the call on OPEC crude plus stock change has increased by 0.3 mb/d in 3Q96 and 4Q96 to 24.5 mb/d and 25.9 mb/d respectively, while it is unchanged in 1Q97 at 26.7 mb/d.
- With the August OECD industry stockbuild being provisionally assessed at 0.9 mb/d compared with a 1.3 mb/d decrease in August 1995, the stock shortfall versus last year decreased from 128 mb at the end of July to 62 mb at the end of August. Almost all the shortfall was in North America. In both Europe and North America, crude oil and gasoline stocks were above last year's level but distillate stocks were lower by 10% and 11% respectively. In the Pacific, crude and distillate stocks were essentially unchanged from a year earlier while gasoline stocks were somewhat lower.
- Benchmark crude oil prices increased sharply during September, boosted in the first half of the month by the events concerning Iraq and in the second half of the month by higher gasoil prices in the Atlantic Basin. WTI peaked at \$25.15/bbl, the highest level since April, and front-month Brent at \$24.21/bbl, the highest level since the Gulf War.
- As a result of low stocks and firm demand ahead of the winter heating season, middle distillate prices increased significantly in Europe and the US, rising by appreciably more than those of crude. Gasoline prices came under strong downward pressure, particularly in Europe, in line with seasonally declining demand and ample supplies. HSFO prices increased notably in Europe and in Singapore, consistent with firm demand, in particular, for bunker fuel.
- In September, refining margins increased in the Mediterranean and in Singapore, mainly supported by firm middle distillate and fuel oil prices. However, margins decreased in the US and Europe, consistent with weakening gasoline prices, which more than offset the strength in middle distillate and fuel oil prices.
- In August, the aggregate refinery throughputs in OECD countries increased by 0.4 mb/d to 33.5 mb/d. Increases in Japanese and, to a lesser extent, US and Australasian throughputs were partly offset by a decrease in Europe. Preliminary indications for September suggest that throughputs were slightly higher in the US and lower in Japan and Europe.
- Refinery maintenance shutdowns in the US and Europe are expected to be at significantly lower levels this autumn compared to last year but an estimated 1 mb/d of refining capacity in Asia is scheduled to shut down for turnaround during October.

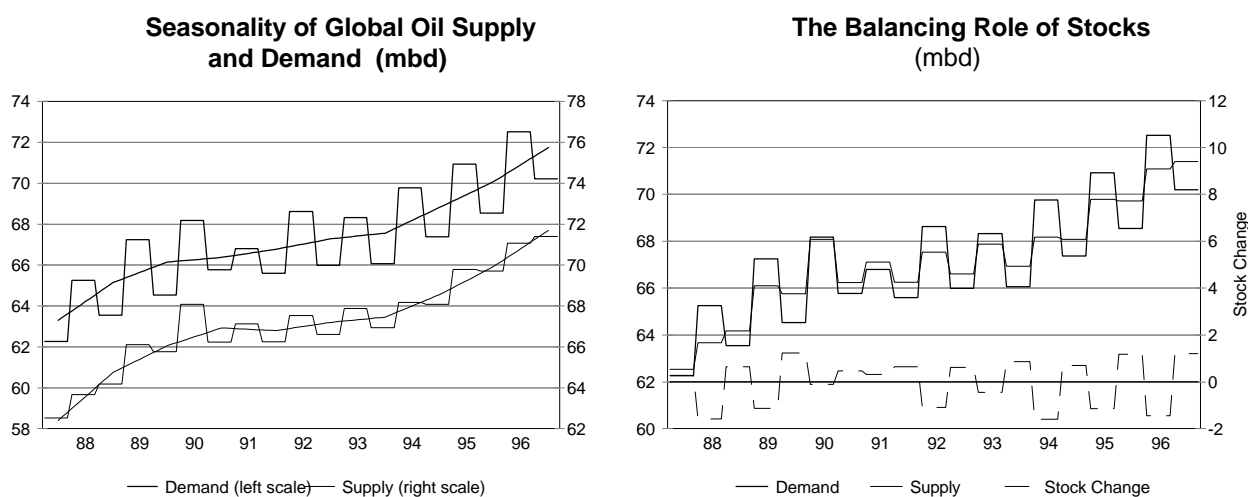
## CONTENTS

HIGHLIGHTS .....	1
GLOBAL SUPPLY/DEMAND SEASONALITY AND THE ROLE OF STOCKS .....	3
Prospects for the Coming Winter .....	4
DEMAND .....	6
Summary .....	6
OECD .....	8
Demand in August 1996 .....	8
Demand in 3Q96 .....	10
European Demand 1991-1995 .....	11
Demand in 1996 and 1997 .....	13
Non-OECD .....	14
Other Asian Demand in 2Q96 .....	14
Mexican Demand in August 1996 .....	14
Brazilian Demand in July 1996 .....	15
Indian Demand in July 1996 .....	15
Non-OECD Demand in 1996 and 1997 .....	16
Global Demand in 1996 and 1997 .....	16
SUPPLY .....	17
Summary .....	17
Overview of Supply Developments and Revisions .....	18
Review of 3Q96 and Outlook for 4Q96 .....	18
OECD .....	19
North America .....	19
North Sea .....	21
Pacific .....	23
OPEC .....	24
Former Soviet Union (FSU) .....	25
Production .....	25
Net Exports .....	26
Other Non-OPEC .....	27
Latin America .....	27
Asia .....	28
Africa and Other Middle East .....	30
OECD STOCKS .....	32
Industry Stock Changes in 2Q96 and August .....	32
Industry Stock Levels at the End of August .....	32
Regional Stock Developments in August .....	32
OIL PRICES AND REFINERY ACTIVITY .....	38
Summary .....	38
CIF Crude Import Costs .....	39
Spot Crude Oil Prices .....	39
Spot Product Prices in September .....	41
End-User Product Prices .....	45
Refining Margins in September .....	45
Refinery Crude Throughputs in August .....	46
Refinery Maintenance Shutdowns .....	47
Industry Developments .....	47
TABLES .....	50
OIL MARKET REPORT CONTACTS .....	62

## GLOBAL SUPPLY/DEMAND SEASONALITY AND THE ROLE OF STOCKS

The discussion below briefly analyses the changes in both the seasonality of global oil demand and supply, and the balancing role of stocks during recent years. With this as background, the prospects for the coming winter are considered.

The left-hand graph below shows growth in global oil supply and demand averaged for successive northern summer and winter periods. (Note that the scale is the same for both demand and supply but the axis has been shifted to ensure visibility of each.) The difference between a summer's demand and the succeeding winter's demand is a combination of the underlying growth (represented by the trend line) and the seasonality of demand. The decreasing share of total OECD oil use dedicated to winter heating and the growing share used for transportation and summer air-conditioning is contributing to a slow reduction in seasonality of demand. However, the effect is small and masked in the graph by other events, particularly the variations in weather compared with a year earlier. The effects of higher prices resulting from the Gulf Crisis and of the mild weather in 4Q90 can be seen in the low seasonality in SY90. (For the purposes of this discussion, we define, for example, the northern hemisphere's summer period (2Q94 and 3Q94) as S94, the winter period (4Q94 and 1Q95) as W94/95 and the seasonal year (S94 plus W94/95) as SY94.)



The seasonality of oil production is clearly less than that of demand. As a result, during periods of higher production growth such as in 1987-89 and 1994-96, the seasonality is seen in larger production increases in the winter periods than in the summer, as opposed to the seasonal rise and fall around a slight upward trend seen in the 1990-1993 period (and throughout the demand graph). In many countries that are maximising economic production, supply is non-seasonal. However, production outages for planned maintenance tend to be concentrated in the summer months, particularly where good weather is an important consideration, as is the case in the North Sea and North America (the Gulf of Mexico, Alaska and Western Canada). Before the current OPEC quotas were established about three years ago, OPEC production was varied in response to changes in perceived demand for crude and this contributed to the seasonality of supply shown in the left-hand graph. In the late 1980s, seasonality was complicated by the sharp decline in OECD production which occurred from W87/88 to S89 (as a result of the Piper Alpha disaster and its aftermath) and the higher seasonality seen in the graph in SY89 and SY90 reflect the return to seasonal increases in OECD supply, coupled with strong seasonality in OPEC production. Since the current quotas were established, OPEC production has edged up slowly but, with no discernible seasonal pattern (see graph on page 18). Hence, the seasonality of global supply has been primarily due to the seasonality of North Sea and North American production.

The balancing of supply and demand that is not done by OPEC is achieved through changes in global oil stock levels. The seasonal stock changes shown in the bottom right-hand graph above include changes in OECD stocks, floating storage and oil-in-transit and the "Other and Miscellaneous to Balance" category included in Table 1. The latter category includes both non-OECD and unreported OECD stock changes and any additional factor needed to balance supply and demand. In practice, although the "Floating

Storage/Oil in Transit” and “Other & Miscellaneous to Balance” vary significantly over time, the semester aggregates of these two factors show very little seasonality over the time period reviewed except in SY90, SY93 and SY95. As a result, it has been changes in OECD stocks that absorb most of the seasonal differences between supply and demand (detailed historical data can be found on page 18 of the 6 September 1996 Annual Statistical Supplement). As seen in the graphs on page 37, crude stocks show an irregular seasonal pattern but have a tendency to reach a trough at the end of February (associated with refinery turnarounds in North America and Europe) and show a slight peak in mid-summer. In contrast, the seasonality of product stocks is much more pronounced, reflecting the strong seasonality of heating oil and kerosene demand.

### Seasonality of Demand, Supply and Stocks

Seasonal Year	(mb/d)										
	Demand			Non OPEC Supply			OPEC Supply			Contribution from Stocks <sup>2</sup>	
	Summer	Winter	Increase <sup>1</sup>	Summer	Winter	Increase <sup>1</sup>	Summer	Winter	Increase <sup>1</sup>	OECD	Other <sup>3</sup>
1987	62.25	65.25	3.00	44.34	45.20	0.86	18.19	18.46	0.28	1.65	0.21
1988	63.54	67.24	3.70	44.79	44.77	-0.02	19.39	21.33	1.95	1.77	0.01
1989	64.53	68.14	3.61	44.18	44.42	0.24	21.59	23.66	2.07	1.14	0.15
1990	65.70	66.81	1.11	43.58	44.07	0.50	22.66	23.04	0.38	1.32	-1.10
1991	65.60	68.63	3.02	43.20	43.42	0.22	23.04	24.04	1.00	1.84	-0.04
1992	65.99	68.33	2.34	42.45	42.65	0.19	24.08	25.16	1.08	1.10	-0.03
1993	66.06	69.86	3.80	42.47	43.52	1.05	24.45	24.74	0.28	1.85	0.61
1994	67.43	70.92	3.49	43.54	44.91	1.36	24.59	24.84	0.25	1.89	-0.02
1995	68.55	72.45	3.90	44.61	45.47	0.86	25.06	25.48	0.43	1.78	0.84
1996	70.16	74.22	4.07	45.99	47.90	1.91					
1997	72.08	75.75	3.67	47.76	49.78	2.03					
Average	66.53	69.78	3.25	44.26	45.10	0.84	22.56	23.42	0.86	1.60	0.07
Average without 1990	66.62	70.08	3.46	44.33	45.20	0.87	22.55	23.46	0.92	1.63	0.22

1 Winter increase over previous Summer

2 Summer inventory build plus winter inventory draw

3 Floating storage/oil in transit plus Miscellaneous to Balance

The slight reduction in the seasonality of crude supply in the last three years has led inevitably to a compensating increase in the seasonality of global oil stocks. Since OPEC initially set the current production quotas there has been essentially no balancing mechanism for global supply and demand except for stock changes. With changes in total global stocks being an outcome of the shifting balance between supply and demand, the only real flexibility has been where the oil is held. For example, the shift to lower industry stocks in S95, particularly in the US, appears in our balances to have led to a build-up of non-OECD stocks included in the “Miscellaneous to Balance” item.

### Prospects for the Coming Winter

Looking at seasonal years rather than calendar years in the way discussed above can be helpful. Thus, for planning purposes, one critical point is when global stocks would normally next reach their lowest level, namely the end of W96/97. Ongoing pressures to improve downstream profitability, together with the experience of last winter, when product supplies were maintained despite historically low stocks and an unprecedentedly severe combination of weather effects on both supply and demand, suggest that the oil industry will not aim for higher OECD inventories at the end of this winter, providing, of course, that the market remains in backwardation. Assuming the same level of OECD industry inventories are held at the end of W96/97 as a year earlier and making the arbitrary assumptions that Iraqi exports do not return during the winter and that OPEC’s production does not increase further above the 25.9 mb/d reached in September, the average W96/97 supply exceeds demand by 0.6 mb/d in our balances and the average OECD stockdraw would be 1.0 mb/d (by definition, equal to our preliminary estimates for the S96 industry stock increase).

These calculations do not take into account the “Miscellaneous to Balance” volumes in 2Q96 and 3Q96. These latter volumes may decrease as better data become available but, to the extent that they represent a genuine build in non-OECD stock (similar to that discussed above for S95) and one that is greater than needed to service new refineries and the underlying growth in non-OECD demand, a winter non-OECD stockdraw could contribute additional supplies.

There are clearly major sensitivities surrounding this projection. Some of these sensitivities are symmetrical. For example, we assume normal weather in developing our forecasts and deviations from this norm could lead to higher or lower demand and supply. Similarly, as demonstrated in recent months, new oil production fields can start up earlier or later and at higher or lower rates than expected. There are also asymmetrical sensitivities. For example, political events or labour difficulties could only lead to unforeseen reductions in supply, while the return of Iraqi exports or higher production from OPEC could only lead to increased supply.

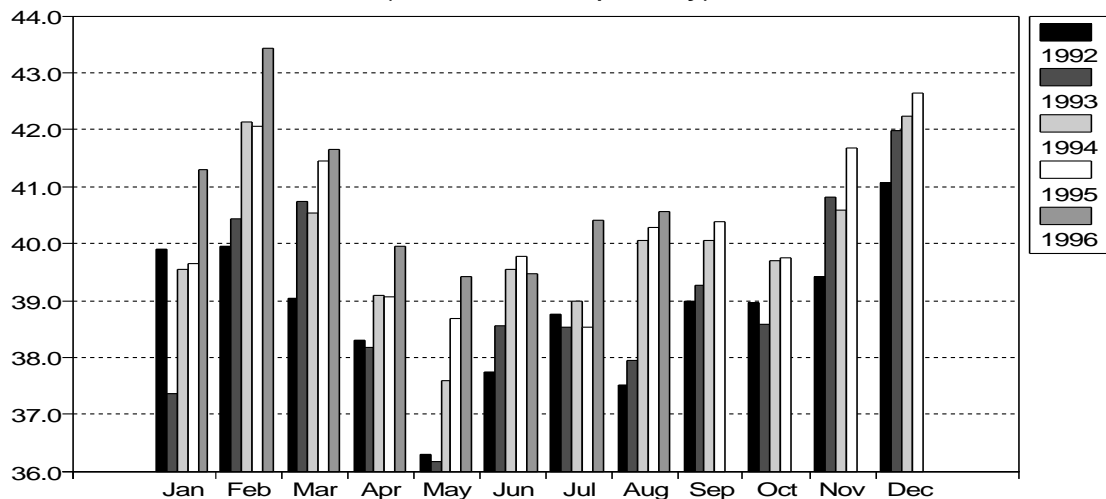
A final area of uncertainty is the possibility that global oil demand is continuing to be understated. As discussed in the *Users' Guide to the IEA Oil Market Report*, issued on 6 September 1996, there is a considerable time delay in obtaining final annual data for many countries, indeed complete data for 1994 were only incorporated into the Report issued on 8 August 1996. Thus our forecasts for 1996 and 1997 are based on estimates for 1995 and to the extent that 1995 data are revised subsequently so will the 1996 and 1997 projections. Historically, there has been a consistent pattern of upward revisions in demand and some commentators have indicated to us that they are routinely revising our forecasts upwards, based on analysis of previous adjustments. There are two weaknesses in this approach; it assumes that the timeliness of our data collection and our projection methodology are not improving and that the "final" supply/demand balances are accurate. In practice, there has been some improvement in data timeliness, and this year we have made changes to our methodology for projecting missing data, which in total have led to an upward revision of 0.25 mb/d in our non-OECD projections in 1996. More importantly, the generally negative "Miscellaneous to Balance" line in Table 1 indicates that our final supply/demand balances either *overestimate* demand or *underestimate* supply. The Miscellaneous to Balance data include changes in non-OECD stocks and the factor needed to adjust for errors in the supply/demand and OECD stock data. Allowing for the increase in stocks needed to service the rapidly-increasing demand, the Miscellaneous to Balance should average about 0.1 mb/d. In practice, it was *minus* 0.4 mb/d in 1993 and minus 0.3 mb/d in 1994 (the last two years for which we have final data) suggesting an inherent error in our balances of 0.4-0.5 mb/d. It should be noted that having negative Miscellaneous to Balance figures is not a temporary phenomenon restricted to 1993 and 1994. As seen in Table 1 of the *Annual Statistical Supplement*, while the Other and Miscellaneous to Balance numbers (including Floating Storage/Oil in Transit) were positive throughout the 1970s, over the 1981-1994 period they average minus 0.3 mb/d. Whether this is due to an underestimate of historical demand or to an overestimate of supply, or some combination of the two, does not matter in our projections of call on OPEC crude plus stock change. In summary, while our current estimates of demand data may subsequently be revised upwards, it is unclear whether this will lead to a more accurate representation of the "call".

## DEMAND

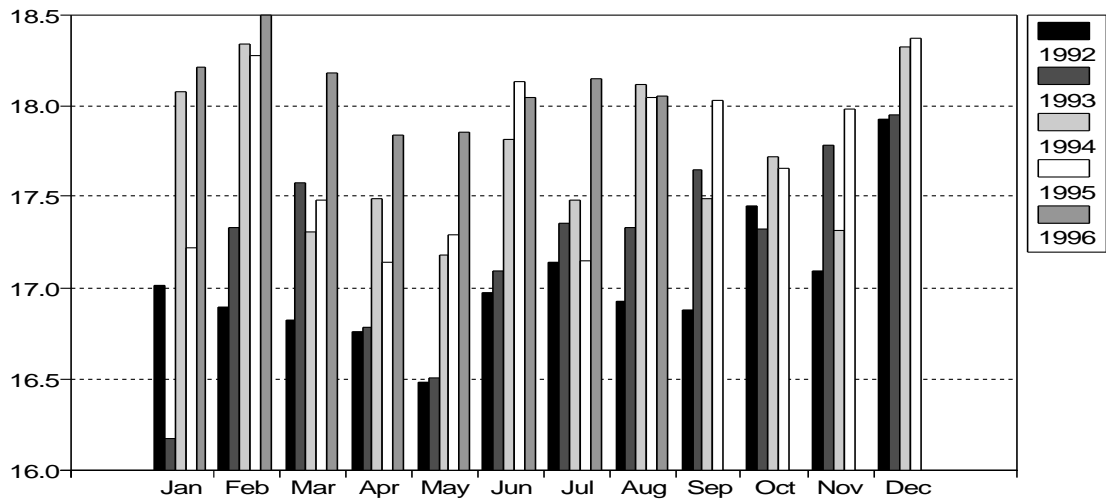
### Summary

- In August, US oil demand was essentially unchanged from a year earlier, with declines in gasoline and residual fuel oil offset by increases for most other products. In Europe, oil use in the four largest oil-consuming countries increased by 1.9%, with particularly strong heating oil demand growth somewhat dampened by reductions in residual fuel oil and gasoline deliveries. In Japan, oil demand declined marginally, with strong petrochemical feedstock demand offset by weak deliveries of residual fuel oil and crude oil to the power generation sector.
- OECD demand in 3Q96 remains essentially unchanged from last month's Report at 40.7 mb/d, with a downward revision to North American demand largely offset by upward revisions to European demand. Pacific demand remains unchanged, although the projection is sensitive to revision as the level of oil deliveries to the Japanese power generation sector in September remains very uncertain.
- Global demand in 4Q96 has been revised upwards by 0.1 mb/d to 73.7 mb/d, an annual increase of 2.5% or 1.8 mb/d, due to higher projections of both OECD and non-OECD demand. Global demand in 1Q97 has been revised downwards by 0.1 mb/d to 74.7 mb/d with a downward revision to FSU demand more than offsetting an upward adjustment to Chinese demand.
- OECD demand in 1996 is projected to increase by 0.8 mb/d or 1.9% to 41.1 mb/d, almost unchanged from last month's Report. Demand in 1997 is forecast to increase by 0.6 mb/d or 1.5% to 41.7 mb/d, also unchanged from last month's Report. Demand in the second half of 1997 has been revised upwards by less than 0.1 mb/d, predominantly reflecting minor adjustments resulting from changes to historical and projected data for 1996.
- Non-OECD oil demand in 1996 is projected to increase by 0.9 mb/d or 3.1% to 30.7 mb/d, unchanged from the last Report, with upward revisions to Chinese and Latin American demand counterbalanced by downward adjustments to FSU and Other Asian demand. Non-OECD demand in 1997 is projected to increase by 4.2% or 1.3 mb/d to 32.0 mb/d, primarily due to the assumed ending of the decline in FSU apparent demand.
- Global oil demand is projected to increase by 1.7 mb/d or 2.4% to 71.8 mb/d in 1996 and by 1.9 mb/d or 2.6% to 73.6 mb/d in 1997. Although the projection of absolute demand in 1997 is unchanged, the incremental demand is marginally higher, at 1.9 mb/d, due to the combination of a minor downward adjustment to demand in 1996 and slightly higher demand projections for China in 1997 and the OECD in the latter half of 1997.

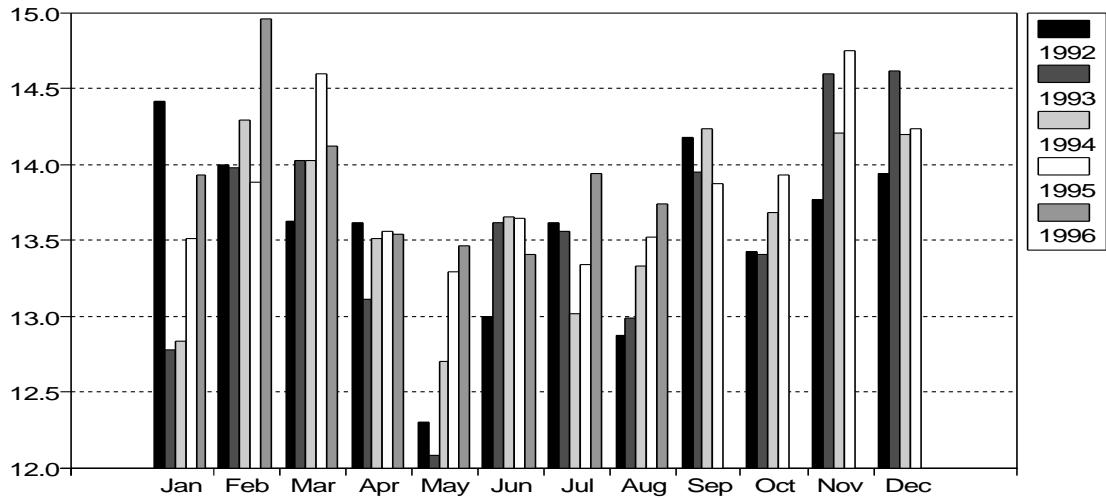
**OECD Oil Demand 1992-1996**  
(million barrels per day)



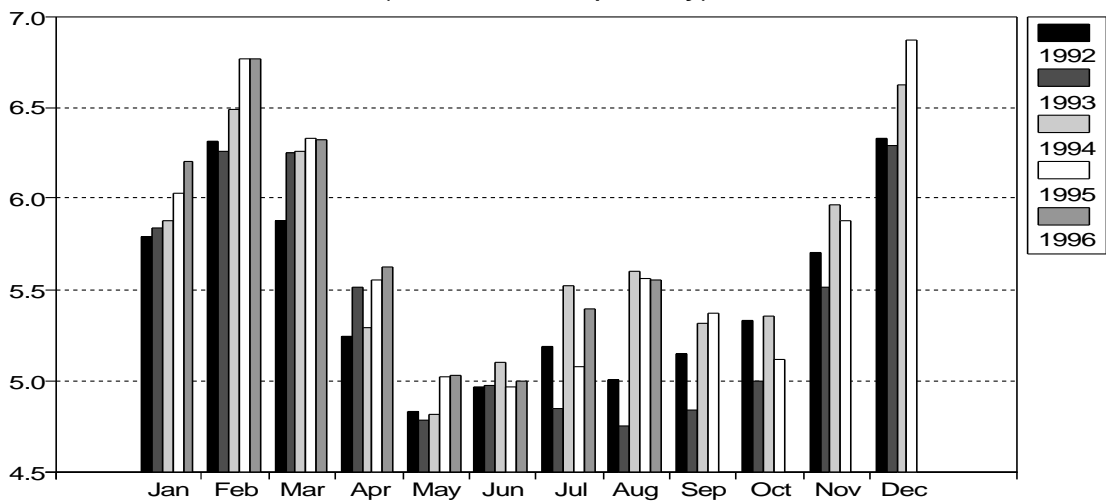
### US Oil Demand 1992-1996 (million barrels per day)



### European Oil Demand 1992-1996 (million barrels per day)



### Japanese Oil Demand 1992-1996 (million barrels per day)



## OECD

## Demand in August 1996

Table 2 at the back of the Report shows total oil demand in June, while Table 3 gives demand in July for the seven largest OECD countries. The table below provides preliminary estimates for inland deliveries for those countries in August.

Preliminary Inland Deliveries - August 1996<sup>1</sup>

	Motor 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>	8.08	-0.9	1.61	+6.1	2.13	+3.2	0.98	+0.7	0.82	-0.6	18.00	+0.0
Canada	0.67	-0.1	0.12	+11.1	0.37	+4.5	0.03	+0.0	0.10	-11.5	1.60	+2.1
Japan	1.03	+1.0	0.31	+2.3	0.79	-1.3	0.40	+1.5	0.67	-11.5	5.09	-0.2
France	0.37	-2.8	0.12	+4.3	0.45	+3.7	0.28	+36.8	0.05	-18.5	1.72	+4.3
Germany	0.71	-1.9	0.14	+1.9	0.54	-5.2	0.85	+24.6	0.12	-13.6	2.84	+3.0
Italy	0.42	-1.4	0.07	+9.1	0.25	-5.8	0.07	-10.0	0.38	+4.3	1.54	-0.6
UK	0.52	-0.7	0.24	+4.8	0.29	+6.1	0.15	-1.8	0.10	-31.0	1.58	-0.1
European Four	2.02	-1.7	0.57	+4.5	1.53	-0.8	1.36	+20.9	0.64	-8.2	7.66	+1.9
Total	11.80	-0.8	2.61	+5.5	4.81	+1.3	2.76	+9.8	2.23	-6.8	32.34	+0.5

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

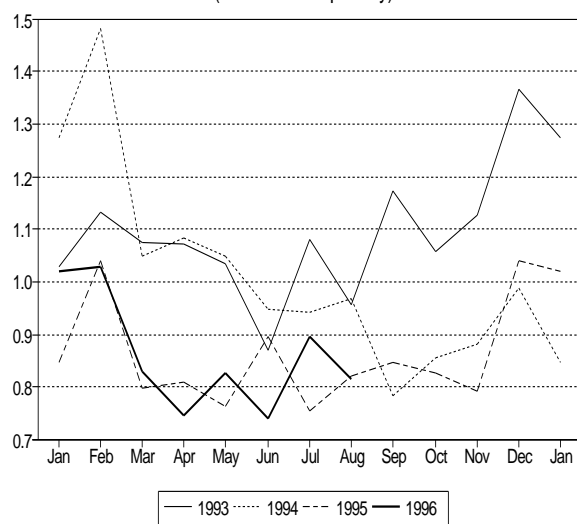
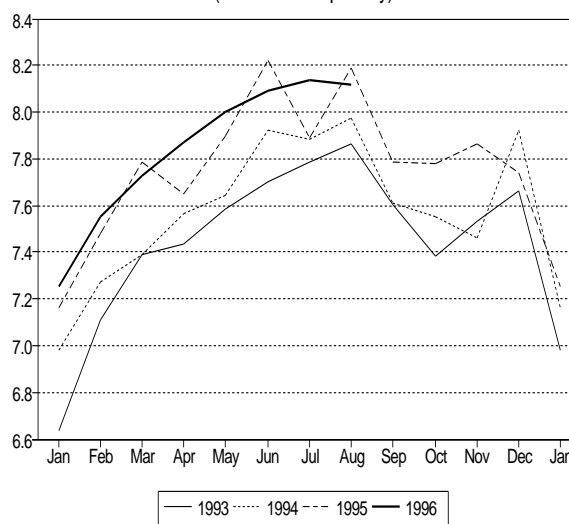
<sup>1</sup> excludes refinery fuel and bunkers (except US)

<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 August 1995

In August, total US deliveries were essentially unchanged from a year earlier with increases in jet/kerosene and gasoil offset by declines for all other major oil products. Motor gasoline deliveries decreased by some 80 kb/d, mainly due to the combined effect of one less working day, retail prices that were 11.8% higher than a year earlier and particularly strong demand last August. Gasoline deliveries have increased by 0.7% in the year-to-date, with the impact of economic growth on increased vehicle miles driven somewhat offset by higher consumer prices. Jet/kerosene deliveries increased by over 90 kb/d or 6.1%, slightly lower than the rate experienced in the year-to-date. The robust increase is consistent with weak demand a year earlier and economic growth and lower airfares this year that have contributed to greater commercial air traffic.

US Residual Fuel Oil Demand  
(million barrels per day)US Gasoline Demand  
(million barrels per day)

Diesel deliveries increased more slowly than the 8.6% experienced in the year-to-date, partly due to one less working day. The growth so far this year has been far higher than indicators such as manufacturing output and construction activity would suggest, and the API has suggested that diesel or low-sulphur gasoil has been increasingly used for non-transport purposes. Residual fuel oil deliveries decreased only marginally but consumption by electricity utilities is thought to have declined by a far greater amount as

mild weather is believed to have dampened electricity demand for air conditioning. On average, the US experienced 3.5% fewer cooling degree days than normal and 23.3% fewer than last August, but the difference was significantly more marked in the fuel oil-sensitive regions along the eastern seaboard of the United States. Higher hydroelectric availability and an unfavourable price differential to natural gas are believed to have also contributed to a reduction in residual fuel oil's share of the generation mix. (The price of 1% sulphur residual fuel oil averaged some \$0.47/mmBtu higher than natural gas).

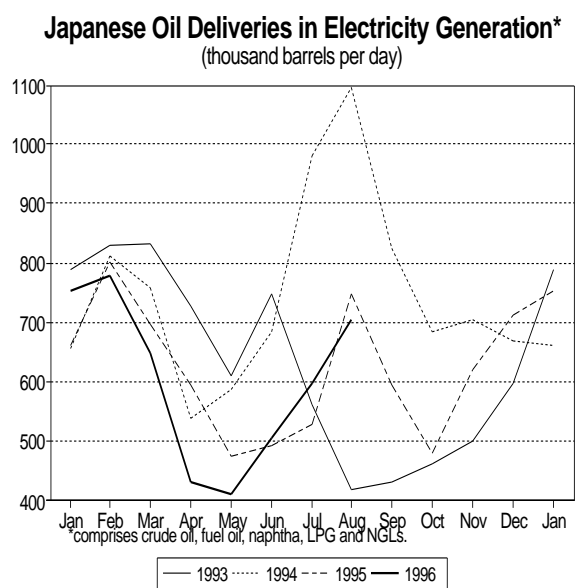
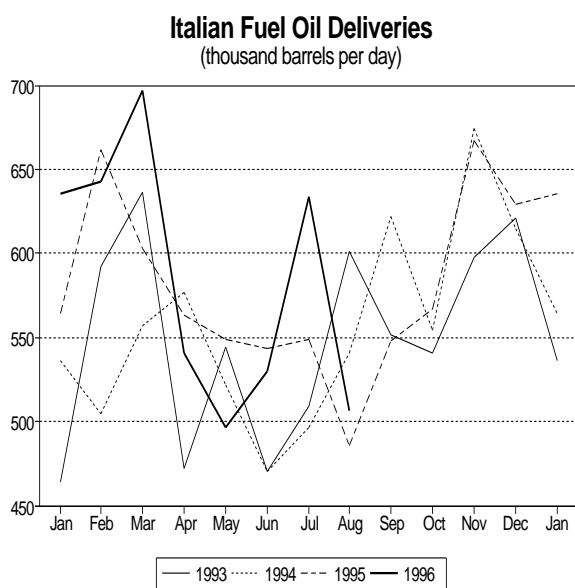
**In Europe**, heating oil deliveries in the four largest European oil-consuming countries increased by 235 kb/d or 20.9%, primarily due to strong demand in Germany. This was partly offset by weak gasoline and diesel deliveries, which declined partly due to one less working day. In addition, diesel deliveries may have been weak due to wholesalers running down stocks ahead of the introduction of 0.05% sulphur specification at the start of October. Jet/kerosene deliveries continued to increase strongly while in Italy, increased purchases of residual fuel oil were insufficient to offset declines in residual fuel oil deliveries in other countries.

**In France**, demand increased by the greatest proportion since February, primarily due to weak demand last August when a pre-announced tax increase led to pre-buying in July. This feature was most noticeable for heating oil last July as many consumers purchased deliveries earlier than normal to avoid a 2% increase in tax. Consequently, deliveries of heating oil in August 1995 declined by 17.0%, following a 31.8% increase in the previous month. (Combined deliveries of heating oil in July and August this year have increased by 14.9% compared with the same period last year). Gasoline deliveries declined by less than the year-to-date reduction of 4.2%, primarily due to weak demand last August. Similarly, diesel deliveries increased but by less than the year-to-date growth of 5.3%. Despite a 49.6% increase in deliveries last August, naphtha deliveries declined by only 1.8%, compared with a 14.8% decrease in the year-to-date. Residual fuel oil deliveries decreased with a 6.5% decrease in deliveries to the power generation sector more than offsetting a 4.6% increase in deliveries to industry.

**In Germany**, heating oil deliveries increased by 24.6% or 170 kb/d, with a large part of the increase being due to a greater consumer stockbuild than last year. Despite the higher build, consumer stocks at the end of the month are believed to have been some 17 million barrels lower than last year. Demand was weak for all other oil products except naphtha and jet/kerosene which contributed only 10 kb/d to incremental demand. Gasoline and diesel deliveries declined by a combined 44 kb/d, in part due to one less working day, and economic growth that was insufficient to offset efficiency gains. Residual fuel oil deliveries declined for the eleventh successive month, consistent with continuing substitution in the industrial and power generation sectors, but the decrease was more marked in August due to a combination of prices that were 14.2% higher than a year ago and strong demand last August.

**UK** oil demand remained essentially constant, with strong growth for a number of products counterbalanced by a 31.0% decrease in residual fuel oil deliveries and small declines in gasoline and heating oil demand. The 43 kb/d decline in residual fuel oil deliveries was mainly attributable to an atypically large increase a year earlier and to higher prices. Some underlying demand weakness was expected, however, due to continuing substitution by natural gas in the industrial and power generation sectors that has contributed to a 15.2% decline in demand in the year-to-date. Given one less working day, the decline in gasoline deliveries was expected but the 6.1% increase in diesel deliveries was unexpectedly large, possibly indicating greater demand from the road haulage sector, consistent with recent indications of higher manufacturing output. In contrast to the other leading oil-consuming countries in Europe, deliveries of LPG and naphtha increased strongly, by 9.5% and 8.5% respectively.

The decline in **Italian** oil demand was largely attributable to a 6.8% or 23 kb/d reduction in gasoil deliveries, although smaller decreases in LPG and gasoline demand also occurred. Part of the weakness in LPG deliveries was offset by fuel switching from LPG to naphtha in the petrochemical sector. A strengthening of the lira (particularly against the deutschmark) is thought to have been partly responsible for a decline in tourism this summer and the resulting slowdown in road transport fuel demand may have been made worse in August by particularly inclement weather. Jet/kerosene demand increased by a greater rate than the 6.0% experienced in the year-to-date but was consistent with unusually weak demand last August. The 4.3% or 16 kb/d increase in residual fuel oil deliveries was in line with the year-to-date increase of 3.8%, given weak deliveries last year. Electricity consumption declined by 1.0% and, with hydroelectric output and electricity imports increasing by 3.3% and 4.6% respectively, residual fuel oil use by utilities is believed to have fallen.



In **Japan**, oil demand was essentially constant, decreasing by only 11 kb/d or 0.2% and leaving year-to-date growth at 1.4%. Strong demand growth for many products was slightly more than offset by significant declines in demand for residual fuel oil and crude for direct use in power generation. Deliveries of residual fuel oil and crude for direct use decreased by 11.5% and 7.7% respectively, resulting in a combined reduction of 119 kb/d. In the power generation sector, the decline in the consumption of residual fuel oil and crude oil exceeded the decrease in deliveries and the resulting stockbuild contributed to stocks being higher at the end of the month than a year earlier. Electricity consumption decreased by 5.5%, partly due to one less working day and lower-than-normal temperatures compared with atypically hot weather last year. Moreover, oil's share of the generation mix declined, partly due to increased use of LNG, nuclear and hydro facilities. Road transport oil demand was constant, with the increase in gasoline deliveries offset by a decline in diesel deliveries. The weakness in diesel use may be attributable to one less working day and retail prices that were more than 10% higher than a year earlier.

### Demand in 3Q96

OECD demand in 3Q96 remains essentially unchanged from last month's Report at 40.7 mb/d, with a 0.1 mb/d downward revision to North American demand largely offset by upward revisions to European demand. (Due to rounding, however, the projection of European demand remains unchanged from last month's Report at 13.9 mb/d). Pacific demand remains unchanged at 6.4 mb/d, although the projection is sensitive to revision as oil deliveries to the Japanese power generation sector in September remain highly uncertain.

**Third Quarter OECD Oil Demand by Region**  
(million barrels per day)

	3Q95	3Q96	Change	
			mb/d	%
North America	19.8 <sup>r</sup>	20.3 <sup>r</sup>	0.4	2.2
Europe	13.6	13.9	0.4	2.7
Pacific	6.3	6.4	0.1	2.2
<b>Total</b>	<b>39.7</b>	<b>40.7</b>	<b>1.0</b>	<b>2.4</b>

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

**North American** demand has been revised downwards by 0.1 mb/d due to a downward revision to Canadian demand in July, lower-than-expected demand in the US in August and indications of continuing demand weakness in the US in September. According to preliminary data for the four weeks up to 27 September, **US** demand decreased by 0.8%, with decreases in deliveries for gasoline, residual fuel oil and other products more than offsetting moderate growth in gasoil demand and strong growth in jet/kerosene deliveries. A 0.8% decline in gasoline deliveries may be partly attributable to retail prices that are estimated to have been some 12.2% higher than a year earlier. Gasoil deliveries increased by 2.2%,

consistent with recent trends. Residual fuel oil deliveries decreased by 2.5%, most likely due to lower use by the power generation sector. According to preliminary data, the US experienced 8.5% fewer cooling degree days than last year and this is believed to have dampened electricity demand and possibly use of residual fuel oil in the generation mix. Moreover, residual fuel oil prices remained higher than those of natural gas, although the price differential between residual fuel oil and natural gas was less than in September 1995. The latest US demand data for September have not been fully incorporated into the projection of North American demand in 3Q96, as preliminary data are known to be often subject to significant revision and the reported 3.9% decline in other product demand, in particular, may be sensitive to upward revision. (If fully incorporated, the estimate of North American demand would be reduced by a further 0.1 mb/d).

**European** demand in 3Q96 has been revised upwards by some 75 kb/d although, due to rounding, demand appears unchanged in Table 1 at 13.9 mb/d. Preliminary demand data for the four largest European oil-consuming countries in July have been revised upwards by 180 b/d of which 110 kb/d was attributable to adjustments to Italian data; Italian residual fuel oil deliveries are now estimated to have increased by 15.3%, not 2.3% as originally reported. While August demand data for the four largest European oil-consuming countries were essentially in line with expectations, there are indications of demand weakness in Iberia, due to lower requirements for residual fuel oil from the power generation sector. (Higher river levels and hydroelectric output are believed to have reduced oil's share of the generation mix). In September, total EU diesel deliveries are expected to have increased more strongly as wholesalers built stocks of the 0.05% sulphur diesel ahead of its introduction at the start of October.

In the **Pacific** Region, oil demand in 3Q96 is estimated to have increased by 2.2%, essentially unchanged from last month's Report. A downward revision to Japanese demand in July has more than offset an upward revision to Australian demand. The projection of Japanese oil demand in September has been revised upwards marginally due to comparatively high petrochemical demand in the earlier part of the quarter, although these data appear inconsistent with indications of a slowdown in the Japanese economy. Considerable uncertainty surrounds the projected demand for crude and oil products in the Japanese power generation sector in September.

### **European Demand 1991-1995**

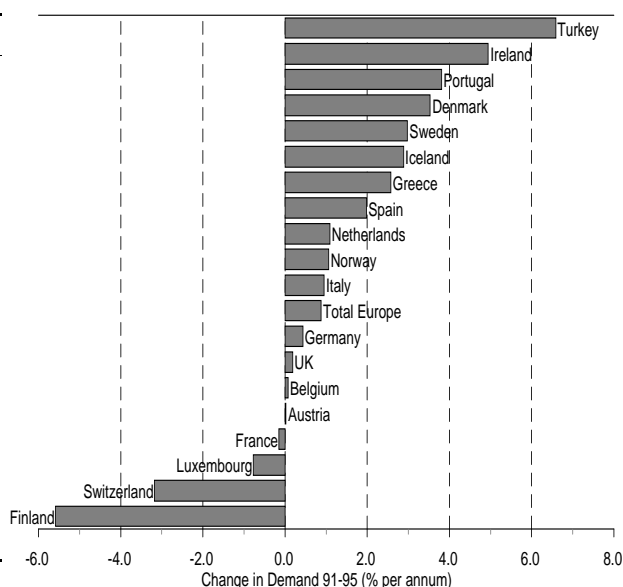
In order to examine European oil demand, some commentators restrict their analysis to the four largest oil-consuming countries, perhaps on the basis that these countries represent some 60% of total European demand, the data are more timely, and the countries represent a wide geographical area. However, by examining oil demand from 1991 to 1995 by individual country and product, it can be seen that oil demand changes in the four leading countries have not been typical of the rest of Europe and that the combined effect of the smaller nations on incremental European oil demand has been significant. Moreover, within the group of smaller countries, there is a wide range of demand patterns. Thus, a projection of European oil demand based on an analysis for the four leading oil-consuming countries alone would be misleading and could lead to an understatement of overall demand growth.

European oil demand increased by 0.9% per annum or 0.47 mb/d between 1991 and 1995, with almost 75% of incremental demand taking place outside the four largest oil-consuming countries (defined for purposes of this discussion as the E4 countries). Oil demand in the rest of Europe increased by more than four times the rate experienced in the E4 countries combined (see table below). Demand increased by a greater rate than the E4 average in ten of the fifteen countries that comprise the rest of Europe with higher growth rates achieved not only in the southern European countries that have relatively low GDP per capita but also in a number of northern European countries (see chart below).

## European Oil Demand Change 1991-1995

(% per annum)

	LPG	Gasoline	Jet/Kero	Gasoil	Fuel Oil	Other	Total
Turkey	8.4	8.7	16.8	4.6	5.9	5.7	6.6
Ireland	3.0	3.3	13.8	6.2	4.0	-12.2	4.9
Portugal	6.5	6.0	-0.1	4.4	-0.8	8.3	3.8
Denmark	-1.7	3.0	3.7	0.3	3.8	21.5	3.5
Sweden	1.9	0.0	8.8	2.2	7.7	4.5	3.0
Iceland	0.0	-2.2	1.2	3.0	5.6	11.5	2.9
Greece	7.6	2.6	-3.6	2.4	3.3	4.1	2.6
Spain	-3.8	0.3	5.4	3.5	2.4	2.2	2.0
Netherlands	-8.2	3.9	10.3	0.6	-0.6	3.4	1.1
Norway	-1.6	-1.2	3.2	3.7	4.2	-1.4	1.1
Italy	2.4	4.1	0.5	-2.5	2.1	0.6	0.9
Germany	5.6	-1.0	4.6	0.2	-2.1	2.3	0.4
UK	6.3	-2.5	5.5	2.3	-8.8	2.7	0.2
Belgium	1.5	0.9	0.9	1.8	-2.9	-1.4	0.1
Austria	-1.5	-3.8	4.2	1.9	-2.6	4.1	0.0
France	-2.8	-3.3	5.5	1.7	-6.6	1.9	-0.1
Luxembourg	-4.9	1.9	8.6	-0.3	-21.5	0.8	-0.8
Switzerland	-4.0	-1.8	4.6	-6.0	-0.7	-0.4	-3.2
Finland	1.8	-0.4	-33.6	-0.1	-10.2	-18.5	-5.6
<b>E4</b>	<b>3.0</b>	<b>-0.9</b>	<b>4.6</b>	<b>0.4</b>	<b>-2.1</b>	<b>2.0</b>	<b>0.4</b>
<b>Rest of Europe</b>	<b>-0.4</b>	<b>1.4</b>	<b>5.0</b>	<b>1.8</b>	<b>1.2</b>	<b>2.4</b>	<b>1.7</b>
<b>Total Europe</b>	<b>1.5</b>	<b>-0.2</b>	<b>4.7</b>	<b>0.9</b>	<b>-0.6</b>	<b>2.1</b>	<b>0.9</b>

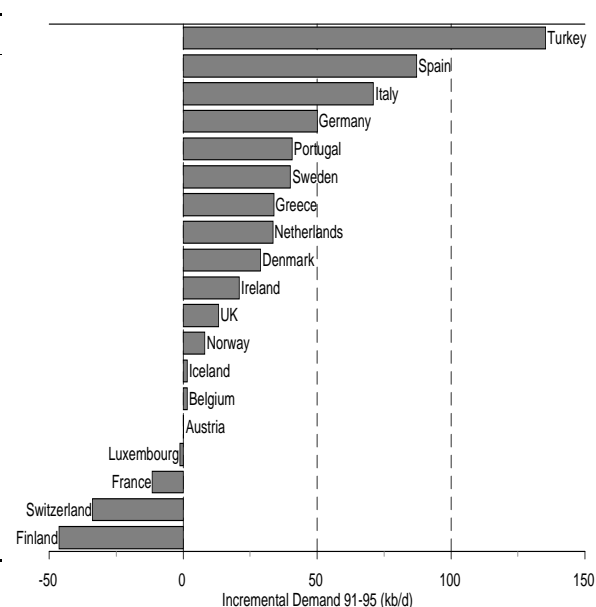


Although the rate of growth of demand in the E4 countries has been significantly lower than the average in the rest of Europe, the high absolute level of demand in Italy and Germany resulted in them being the third and fourth largest sources of incremental demand (see chart below). However, the increase in demand in these two countries was exceeded by Turkey and Spain, which together were responsible for some 47% of total European incremental demand. The modest increase in UK demand was exceeded in a number of substantially smaller oil-consuming countries, including Denmark and Ireland, while the 12 kb/d decline in French demand was only exceeded by Switzerland and Finland.

## Incremental European Oil Demand 1991-1995

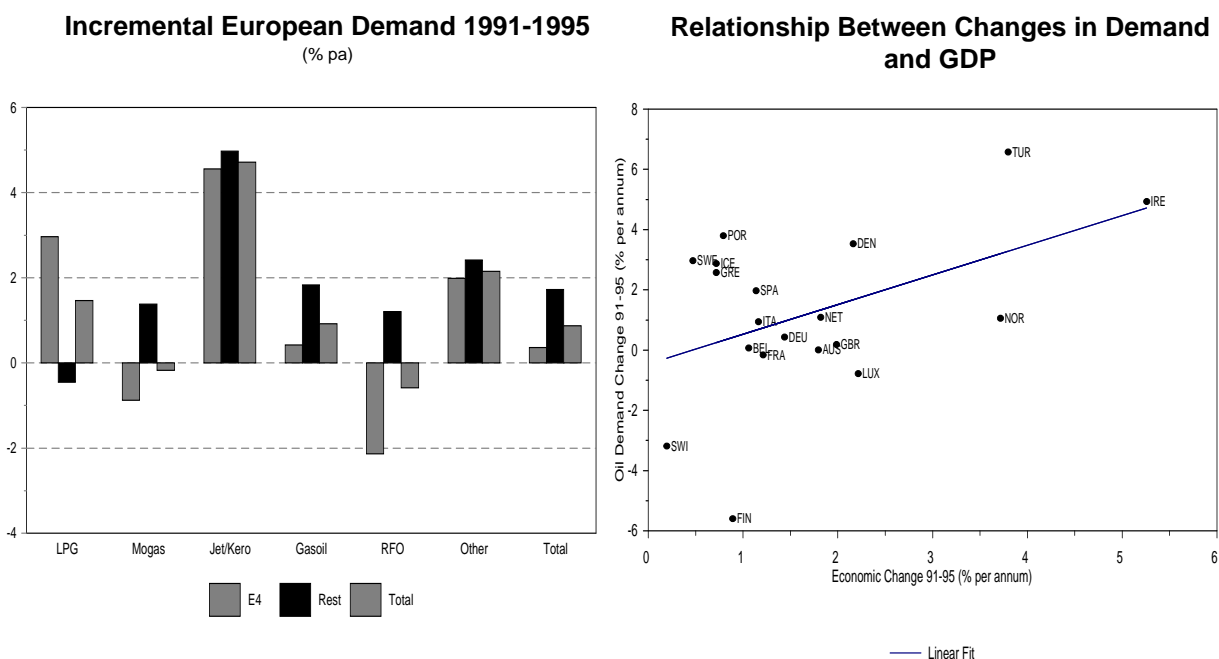
(kb/d)

	LPG	Gasoline	Jet/Kero	Gasoil	Fuel Oil	Other	Total
Turkey	21	28	12	29	29	16	135
Spain	-13	2	12	48	20	17	87
Italy	10	62	1	-54	46	6	71
Germany	23	-29	21	10	-18	43	50
Portugal	8	9	-0	11	-2	16	41
Sweden	2	0	5	9	17	6	40
Greece	3	6	-3	11	13	4	34
Netherlands	-25	13	18	4	-5	28	34
Denmark	-0	5	2	1	5	16	29
Ireland	1	3	7	10	4	-3	21
UK	36	-53	44	40	-82	27	13
Norway	-2	-2	2	10	2	-2	8
Iceland	0	-0	0	1	0	1	2
Belgium	1	2	1	15	-13	-5	2
Austria	-0	-9	2	6	-4	6	0
Luxembourg	-0	1	1	-0	-3	0	-1
France	-13	-51	19	55	-47	26	-12
Switzerland	-1	-6	5	-31	-0	-0	-34
Finland	0	-1	-8	-0	-14	-24	-46
<b>E4</b>	<b>55</b>	<b>-71</b>	<b>85</b>	<b>51</b>	<b>-100</b>	<b>102</b>	<b>123</b>
<b>Rest of Europe</b>	<b>-7</b>	<b>52</b>	<b>56</b>	<b>123</b>	<b>49</b>	<b>78</b>	<b>350</b>
<b>Total Europe</b>	<b>49</b>	<b>-19</b>	<b>141</b>	<b>174</b>	<b>-51</b>	<b>180</b>	<b>473</b>



The mix of oil products that comprise total incremental demand varies between the E4 group and the rest of Europe on the basis of different product growth rates and the overall mix of products in total demand. The chart below on the left and the two tables above show that the declines in gasoline and residual fuel oil demand in the E4 group were not mirrored in the rest of Europe. In addition, gasoil demand increased by a substantially greater rate in the rest of Europe than in the E4 countries. The differences in the rates

of oil demand growth among products and between the two groups can be explained mainly by the combination of differences in economic growth, the intensity of oil use per unit of GDP, varying opportunities for oil substitution and marked differences in the growth of the transport sector.



The correlation between oil demand growth and economic growth is illustrated in the above chart on the right. A number of the countries above the average line shown in the chart have passenger car per capita ratios lower than the European average and have experienced greater growth in this ratio compared with the E4 countries. Moreover, the countries located above the line also tend to represent countries where oil substitution has been limited. Conversely, many countries below the line have experienced a decline in residual fuel oil or heating oil deliveries, generally through substitution by natural gas.

### Demand in 1996 and 1997

OECD demand in 1996 is projected to increase by 0.8 mb/d or 1.9% to 41.1 mb/d, almost unchanged from last month's Report. Demand in 1997 is forecast to increase by 0.6 mb/d or 1.5% to 41.7 mb/d, also unchanged from last month's Report. The slowdown in the rate of demand growth, despite an expectation of higher economic growth, is primarily due to an assumed return to normal weather, following the abnormally cold weather in 1Q96. Demand in the second half of 1997 has been revised upwards by less than 0.1 mb/d from last month's Report, reflecting minor adjustments that resulted from changes to historical and projected data for 1996.

#### OECD Oil Demand in 1996 & 1997

	North America		Europe		Pacific		Total	
	mb/d	change *	mb/d	change *	mb/d	change *	mb/d	change *
1Q96	20.4	0.7	14.3	0.3	7.4	0.1	42.1	1.1
2Q96	20.0	0.5	13.5 <sup>r</sup>	0.0	6.2	0.0	39.6 <sup>r</sup>	0.5
3Q96	20.3 <sup>r</sup>	0.4	13.9	0.4	6.4	0.1	40.7	1.0
4Q96	20.4	0.3	14.5	0.2	7.0	0.1	41.9	0.6
1996	20.3	0.5	14.1	0.2	6.8	0.1	41.1	0.8
1Q97	20.5	0.1	14.5	0.1	7.6	0.2	42.5	0.4
2Q97	20.1	0.2	13.8 <sup>r</sup>	0.3	6.3	0.1	40.3	0.6
3Q97	20.7	0.4	14.1 <sup>r</sup>	0.1	6.5	0.1	41.3 <sup>r</sup>	0.7
4Q97	20.8	0.4	14.7	0.3	7.1	0.1	42.7 <sup>r</sup>	0.7
1997	20.5	0.3	14.3	0.2	6.9	0.1	41.7	0.6

<sup>r</sup> revised since last Report  
\* mb/d year-on-year change

## Non-OECD

### Other Asian Demand in 2Q96

Other Asian demand in 2Q96 increased by 6.3% or 0.5 mb/d to 8.3 mb/d, a 0.1 mb/d downward adjustment from last month's Report. The data for 2Q96 remain subject to revision, particularly as Indonesian demand (which represent some 11% of regional demand) has been estimated. Although a slowdown in demand growth compared with the recent trend was anticipated due to particularly strong growth in 2Q95 in a number of countries, the extent of the slowdown was underestimated, mainly due to weaker-than-expected demand growth in South Korea and Taiwan. Bunker demand in Hong Kong was also lower than had been assumed.

#### Other Asian Demand 1991-2Q96

(million barrels per day)

	1991	1992	1993	1994	1995	2Q95	2Q96	Change	
								mb/d	%
Hong Kong	130	166	170	188	193	203	207	4	2.0
India	1233	1309	1328	1429	1592	1571	1705	134	8.5
Indonesia	701	758	815	826	865	847	898	51	6.0
Pakistan	220	229	265	292	324	331	332	1	0.3
Philippines	226	260	271	279	316	331	340	9	2.8
Singapore	448	510	508	535	555	573	627	54	9.4
South Korea	1269	1536	1687	1851	2014	1805	1919	114	6.3
Taiwan	587	602	639	687	736	745	775	30	4.0
Thailand	444	488	553	604	667	729	746	17	2.3
Others	552	573	646	681	740	718	799	82	11.4
Total	5811	6430	6882	7375	8001	7853	8348	495	6.3
% Change	5.5	10.7	7.0	7.2	8.5				

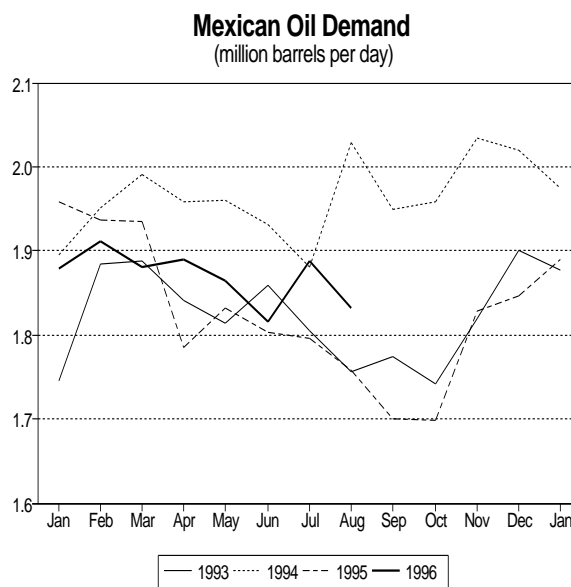
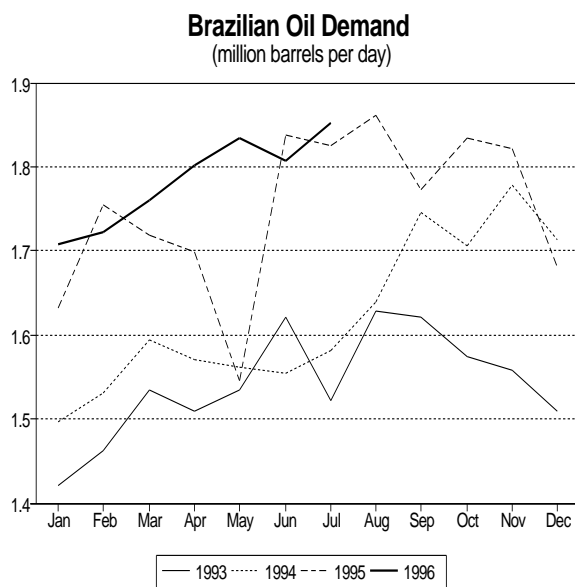
Incremental **South Korean** demand represented some 23% of the region's demand growth. While gasoline demand increased by 26.9%, significantly greater than in recent quarters, deliveries of residual fuel oil declined by 0.2%, despite weak demand in the same period last year. Residual fuel oil normally represents one quarter of total inland deliveries of oil, and the demand weakness, which occurred primarily due to fuel switching in the power generation sector, dampened overall demand growth. In addition, naphtha deliveries increased by only 2.0%, partly due to strong growth last year and a slowdown in the growth of production capacity in the petrochemical sector. **Indian** demand increased by the lowest rate since 1Q94, with residual fuel oil deliveries increasing by only 1.3% and naphtha demand declining by 10.8%, following strong growth last year. Demand increased strongly for all remaining products, particularly gasoil which increased by 11.4% and contributed more than 60% of total incremental Indian demand.

**Pakistani** oil demand increased by 0.3%, the slowest rate since 3Q91, despite comparatively modest growth a year earlier. Gasoline and gasoil deliveries declined by 4.3% and 5.0% respectively, although demand for other products increased strongly. The comparatively modest growth in **Thai** demand was primarily due to strong demand in 2Q95 when a 29% increase in gasoil deliveries and a marked growth in bunker fuel use contributed to a 22.2% increase in total oil demand. In 2Q96, demand for most products rose moderately, although bunker fuel use and aviation fuel deliveries both declined. In the **Philippines**, strong demand growth in 2Q95 also contributed to comparatively weak demand growth in 2Q96. Despite demand growth of 32% in 2Q95, demand increased in 2Q96 for most products, although gasoil declined by 2.8%. LPG demand continued to increase strongly, consistent with greater residential use.

### Mexican Demand in August 1996

Preliminary data published by PEMEX indicate that inland oil deliveries (excluding refinery fuels) increased by 5.2% in August, the fifth successive month of demand growth. Including estimates of bunkers and refinery fuel use and an adjustment to calibrate the monthly data to the historical series, Mexican demand in August is estimated to have grown slightly more slowly than inland deliveries, increasing by 75 kb/d to 1.8 mb/d. Demand growth in the year-to-date has been only 1.1%, mainly due to a 3.8% decline in 1Q96. In August, demand grew for all products and most significantly for residual fuel oil which increased by 11.5% and represented almost 60% of incremental inland deliveries. The strong growth was caused primarily by weak demand from the power generation sector last year, when higher hydroelectric

output and weak electricity demand combined to limit residual fuel oil use. Gasoil deliveries increased by 6.6%, consistent with weak demand last year and indications of increased manufacturing output. In contrast, motor gasoline demand increased by only 1.1%, reflecting continuing constraints on discretionary private income.

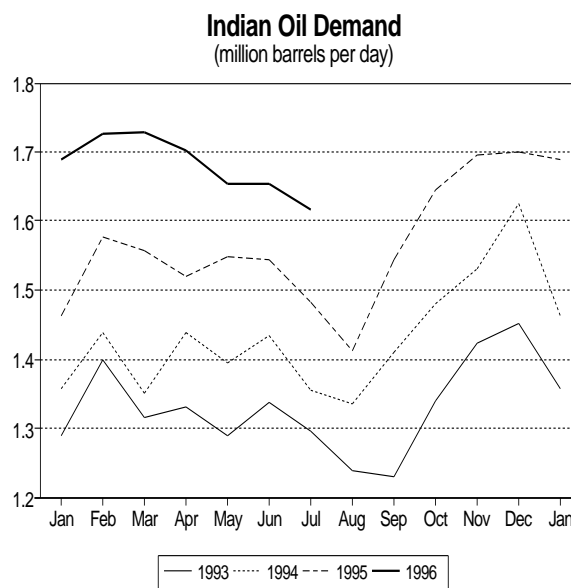


### Brazilian Demand in July 1996

Preliminary data published by *Brazil Energy* indicate that inland oil deliveries increased by 1.0% in July, reversing the minor decline experienced in June. Demand growth in the year-to-date has averaged 3.8%, with the weak demand in recent months largely attributable to particularly strong growth last year (demand increased by 15.9% last July). This July, demand increased for all products except naphtha, deliveries of which declined by 27.4%, following a 25.2% increase a year earlier. Motor gasoline deliveries increased by 23.6% or 56 kb/d, despite strong growth last July. However, alcohol used as a substitute for gasoline was essentially unchanged. Residual fuel oil deliveries increased by 5.2%, the fifth successive month of annual growth, although at a more modest rate than experienced recently. The continuing demand strength for residual fuel oil may reflect greater deliveries to the power generation sector. Brazilian demand growth in 3Q96 is expected to be weaker than in 2Q96, mainly due to particularly strong demand in 3Q95, but then to accelerate in 4Q96.

### Indian Demand in July 1996

Data published by the Indian Ministry of Petroleum and Natural Gas indicate that Indian inland deliveries increased in July by 8.9%. Including estimates of bunkers and refinery fuel use, Indian demand in July is estimated to have increased by just over 130 kb/d to 1.6 mb/d. Demand has increased by some 10.1% in the year-to-date, with the more modest rates of growth in the most recent months primarily attributable to strong growth last year. This July, residual fuel oil deliveries increased by 11.2% or 20 kb/d, reversing demand weakness experienced in recent months. Motor gasoline and high speed diesel deliveries increased by 6.1% and 10.5% respectively and represented some 55% of total incremental demand. LPG deliveries increased, by 10.6%, a rate similar to the growth experienced in the year-to-date. The demand strength is consistent with price subsidies and increased availability which have encouraged LPG's increased use, particularly in urban areas.



### Non-OECD Demand in 1996 and 1997

Non-OECD oil demand in 1996 is projected to increase by 0.9 mb/d or 3.1% to 30.7 mb/d, unchanged from last month's Report. Chinese apparent demand has been revised upwards following the receipt of trade data that indicate higher-than-expected net imports. Latin American demand has also been revised upwards due to greater-than-expected demand in 2Q96 and a reassessment of projected demand in the second half of the year. However, these upward adjustments have been slightly more than offset by downward revisions to FSU and Other Asian demand. A reassessment of joint-venture production in the FSU in the first half of 1996 plus receipt of recent net trade data has led to a 0.1 mb/d downward adjustment to FSU apparent demand in 1Q96 and 2Q96. Due to changes to the projection of joint-venture production (see Supply section), anticipated net imports have been amended to retain a coherent forecast of apparent demand. A reduction in the rate of decline in apparent demand is still assumed, but is now lower from 3Q96 onwards consistent with the lower-than-expected absolute levels experienced in the first half of 1996. Other Asian demand in 2Q96 was weaker than expected but no significant changes have been made to the projection of demand in the second half of the year.

**Non-OECD Oil Demand in 1996 & 1997**

	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*
1Q96	4.6 <sup>r</sup>	-0.5	1.5	0.1	3.4	0.2	8.7	0.6	6.2	0.0	4.1	0.0	2.2	0.1	30.8 <sup>r</sup>	0.6
2Q96	4.1 <sup>r</sup>	-0.3	1.4	0.1	3.6 <sup>r</sup>	0.3	8.3 <sup>r</sup>	0.5	6.3	0.3	4.0	0.1	2.2	0.1	30.0 <sup>r</sup>	0.9
3Q96	4.3	-0.3	1.3	0.1	3.6	0.2	8.1	0.5	6.4	0.2	4.2	0.1	2.1	0.1	30.0	0.9
4Q96	4.8 <sup>r</sup>	-0.0	1.4	0.1	3.7 <sup>r</sup>	0.2	9.0	0.6	6.4	0.2	4.2	0.1	2.2	0.1	31.8	1.2
1996	4.5	-0.3	1.4	0.1	3.6 <sup>r</sup>	0.3	8.6	0.6	6.3	0.2	4.1	0.1	2.2	0.1	30.7	0.9
1Q97	4.7 <sup>r</sup>	0.0	1.6	0.1	3.6	0.2	9.3	0.6	6.5	0.3	4.2	0.1	2.3	0.1	32.2	1.3
2Q97	4.2	0.0	1.5	0.1	3.8 <sup>r</sup>	0.2	9.0	0.7 <sup>r</sup>	6.5	0.2	4.1	0.1	2.3	0.1	31.4	1.4
3Q97	4.3	0.0	1.4	0.1	3.8	0.2	8.7	0.5 <sup>r</sup>	6.6	0.2	4.3	0.1	2.2	0.1	31.2 <sup>r</sup>	1.2
4Q97	4.8	-0.0	1.5	0.1	3.9	0.2	9.7	0.7	6.6	0.2	4.3	0.1	2.3	0.1	33.1	1.3
1997	4.5	0.0	1.5	0.1	3.8 <sup>r</sup>	0.2	9.2	0.6	6.6 <sup>r</sup>	0.2	4.2	0.1	2.3	0.1	32.0	1.3

<sup>r</sup> revised since last Report  
\* mb/d year-on-year change

Non-OECD demand in 1997 is projected to increase by 4.2% or 1.3 mb/d to 32.0 mb/d, compared with the increase of 3.1% or 0.9 mb/d expected in 1996, primarily due to the assumed ending of the decline in FSU apparent demand. Demand is unchanged from last month's Report, with upward revisions to Chinese and Latin American demand offset by downward adjustments to FSU and Other Asian demand. The revisions to 1997 demand (shown in Table 1A) are predominantly due to changes to historical and projected demand in 1996 and growth rates for most non-OECD regions are essentially unchanged from last month's Report. The underlying assumptions affecting the projection of non-OECD demand in 1997 remain unchanged, with the expected acceleration in the rate of demand growth in 1997 largely attributable to the assumed slowdown in the decline in FSU demand.

### Global Demand in 1996 and 1997

Global oil demand in 1996 is projected to increase by 1.7 mb/d or 2.4% to 71.8 mb/d, essentially unchanged from last month's Report. Global oil demand in 1997 is expected to increase by 1.9 mb/d or 2.6% to 73.6 mb/d. Although the projection of absolute demand in 1997 is unchanged, the incremental demand is marginally higher, at 1.9 mb/d, due to the combination of a minor downward adjustment to demand in 1996 and slightly higher growth projections for China in 1997 and the OECD in the latter half of 1997. While OECD demand growth is still expected to slow in 1997, primarily due to an assumed return to normal weather, non-OECD growth is forecast to accelerate, mainly due to the assumed ending of the decline in FSU apparent demand.

## SUPPLY

### Summary

- OPEC crude oil production averaged an estimated 25.88 mb/d in September, 75 kb/d higher than in August. Production increased in eight countries and decreased in three others, with returns from maintenance in the Neutral Zone and the UAE, new field developments and old field workovers in Algeria, Venezuela, and Qatar accounting for much of the increases. Normal monthly fluctuations around relatively flat trend lines were apparent for Saudi Arabia, Kuwait, Iran, Libya and Indonesia, whereas deteriorating business conditions in Nigeria are thought to be inhibiting production.
- Non-OPEC production expanded by 805 kb/d in September, about half in the North Sea and half elsewhere. The recovery from unexpectedly large August maintenance outages in the UK sector was augmented by new field developments in both the UK and Norway. Higher offshore production from Brazil, West Africa and East Asia and increases in onshore China and Mexican NGLs, after problems in August, led growth in the developing regions.
- Net FSU exports declined from 2.81 mb/d in August to 2.75 mb/d in September.
- Non-OPEC supply gains in 3Q96 are expected to be substantially increased to 45 mb/d in 4Q96 due to new field developments and lower levels of maintenance activities in the North Sea and Alaska.

### Non-OPEC Oil Supply

(million barrels per day)

	1995	1996	1997 <sup>f</sup>	3Q95	4Q95	1Q96	2Q96	3Q96 <sup>p</sup>	4Q96 <sup>f</sup>
<b>CRUDE OIL</b>									
North America	8.06	8.04	7.96	7.98	8.04	8.05	7.97	8.02	8.11
United States	6.54	6.48	6.39	6.44	6.51	6.51	6.47	6.43	6.53
Canada	1.52	1.55	1.57	1.54	1.52	1.54	1.50	1.58	1.59
Europe	5.84	6.34	6.94	5.75	6.23	6.17	6.12	6.20	6.86
North Sea	5.42	5.91	6.49	5.33	5.81	5.76	5.70	5.77	6.41
UK*	2.41	2.52	2.91	2.39	2.53	2.45	2.37	2.39	2.85
Norway	2.77	3.14	3.31	2.71	3.04	3.07	3.09	3.12	3.29
Other North Sea**	0.23	0.25	0.27	0.23	0.23	0.24	0.23	0.26	0.27
Other Europe	0.42	0.43	0.45	0.42	0.42	0.41	0.43	0.43	0.45
Pacific	0.56	0.63	0.71	0.58	0.53	0.56	0.60	0.68	0.67
Australia	0.51	0.58	0.66	0.53	0.48	0.52	0.55	0.63	0.62
Other Pacific	0.04	0.05	0.05	0.05	0.04	0.04	0.05	0.05	0.05
<b>Total OECD</b>	14.46	15.00	15.61	14.31	14.79	14.78	14.69	14.89	15.64
Latin America	5.31	5.76	6.12	5.51	5.17	5.69	5.73	5.75	5.88
Asia (inc. China)	4.92	4.96	5.02	4.95	4.99	4.93	4.93	4.94	5.02
Africa (inc. Gabon)	2.33	2.47	2.69	2.35	2.36	2.37	2.42	2.48	2.59
Other Middle East	1.84	1.86	1.94	1.85	1.85	1.84	1.85	1.86	1.89
Central and Eastern Europe	0.24	0.24	0.25	0.24	0.24	0.24	0.24	0.24	0.24
<b>Total Non-OECD (ex. FSU)</b>	14.64	15.28	16.01	14.89	14.60	15.07	15.17	15.27	15.62
Russia	5.98	5.85	5.86	5.99	5.87	5.83	5.83	5.89	5.83
Other Republics	0.82	0.90	0.98	0.84	0.85	0.87	0.87	0.90	0.94
<b>Total FSU</b>	6.79	6.74	6.84	6.83	6.72	6.70	6.71	6.79	6.77
<b>NGLS &amp; OTHER</b>									
United States	2.07	2.09	2.14	2.06	2.05	2.03	2.12	2.04	2.16
Canada	0.87	0.92	0.94	0.83	0.91	0.91	0.87	0.91	0.97
North Sea	0.42	0.44	0.48	0.38	0.45	0.43	0.39	0.40	0.52
Russia	0.18	0.17	0.20	0.17	0.20	0.18	0.16	0.16	0.18
Other Non-OPEC	1.52	1.59	1.73	1.53	1.55	1.59	1.60	1.53	1.65
<b>Total NGLs and Other</b>	5.05	5.20	5.49	4.96	5.16	5.14	5.14	5.03	5.47
Processing Gains	1.46	1.52	1.57	1.44	1.49	1.52	1.50	1.50	1.55
<b>Total Non-OPEC Supply</b>	<b>42.40</b>	<b>43.74</b>	<b>45.51</b>	<b>42.43</b>	<b>42.75</b>	<b>43.20</b>	<b>43.21</b>	<b>43.49</b>	<b>45.04</b>

p preliminary

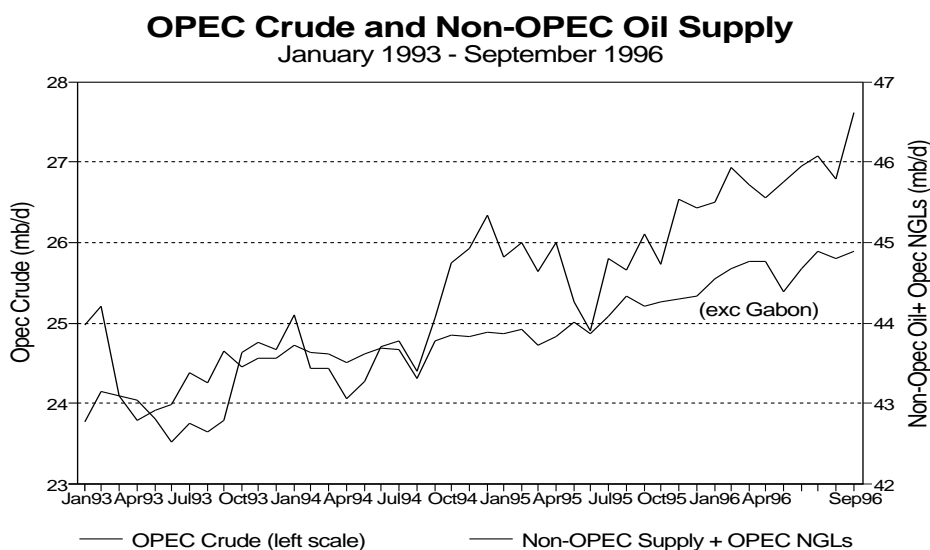
f forecast

\* excluding on-shore production

\*\* Denmark, offshore Netherlands and offshore Germany

## Overview of Supply Developments and Revisions

World oil supply is estimated to have risen by nearly 900 kb/d in September to a record of 72.53 mb/d. Most of the gain was attributable to non-OPEC supply growth, which had been inhibited by summer maintenance in the North Sea and on the Alaskan North Slope in August. About 30% of the September increase came from the developing countries and 70% from the OECD, with over 80% of the OECD rise occurring in the North Sea. North American production rose by about 135 kb/d in September, with the US up by around 95 kb/d and Canada up by about 40 kb/d. Conversely, Australian production appears to have fallen by more than 25 kb/d due to a pipeline problem at the Wanaea-Cossack field and the beginning of a prolonged maintenance period for the Jabiru field production vessel. Among the developing regions, Latin America and Asia were each up by over 100 kb/d, with Brazil and China showing the largest increases. September production from the FSU was about equal to the August level as a decline in Russia was balanced by an estimated gain in Kazakhstan.



The August production estimate for non-OPEC supply has been revised downwards by about 0.3 mb/d due to larger than expected maintenance outages in the UK North Sea (-120 kb/d), a variety of weather problems in China (-100 kb/d) and a greater-than-anticipated loss of both Mexican crude oil and NGL production (-80 kb/d) related to the explosion at the Cactus gas processing plant. Partially offsetting the downward revisions were gains in US production (+90 kb/d, split between Alaska and Lower 48 onshore) and Other Africa (+50 kb/d) due to faster escalation of West African offshore production. A much smaller revision (-40 kb/d) was made to July non-OPEC supply, with downward adjustments to Australian, Syrian and Omani output exceeding upward revisions for West Africa, Argentina and Colombia.

### Review of 3Q96 and Outlook for 4Q96

Non-OPEC oil supply increased by 0.3 mb/d in 3Q96 based on preliminary data for September, despite seasonal maintenance activities in the North Sea and Alaska. About two-thirds of the increase occurred in the OECD, with rounded gains of 0.1 mb/d in the FSU. Production levels were 1.0 mb/d above 3Q95 with about half of the year-on-year increase coming in the North Sea. Latin America and Africa were each about 0.2 mb/d above last year's levels, while the FSU was 0.1 mb/d below.

The non-OPEC supply growth is much more evident in the 4Q96 projections, as new fields in the North Sea, offshore Brazil and West Africa and lower maintenance in the North Sea and Alaska add 1.6 mb/d versus 3Q96 and 2.3 mb/d to 4Q95 levels. The year-on-year comparison is strongly impacted by depressed 4Q95 levels due to hurricanes in the Gulf of Mexico, which results in a Latin American increment of 0.8 mb/d, slightly exceeding the North Sea gain. North American, African and Other OECD production each are expected to be 0.2 mb/d higher than 4Q95. US Gulf of Mexico production will benefit from new field production, primarily from the Mars and Mahogany fields, as well as an assumption of a more benign hurricane season. Continuing small Russian production declines are expected to be offset by increases from the non-Russian Republics, mostly from the Kazakhstan's Tengizchevroil and Karachaganak fields.

**Summary of 3Q96 Non-OPEC Supply Changes and 4Q96 Prospects**

(million barrels per day)

	3Q96	vs. 2Q96	vs. 3Q95	4Q96	vs. 3Q96	vs. 4Q95
OECD	18.4	0.2	0.7	19.5	1.1	1.1
North Sea	6.2	0.1	0.5	6.9	0.8	0.7
North America	11.0	0.0	0.1	11.2	0.3	0.2
Other	1.3	0.1	0.1	1.3	0.0	0.2
FSU-CEE	7.3	0.1	-0.1	7.4	0.0	0.0
Russia	6.1	0.1	-0.1	6.0	-0.1	-0.1
Other	1.3	0.0	0.1	1.4	0.1	0.1
Developing Countries	16.2	0.1	0.4	16.6	0.4	1.1
Latin America	6.5	-0.1	0.2	6.7	0.2	0.8
Africa	2.7	0.1	0.2	2.8	0.1	0.2
Other	7.0	0.0	0.1	7.1	0.1	0.1
Processing Gain	1.5	0.0	0.1	1.6	0.1	0.1
<b>Total Non-OPEC</b>	<b>43.4</b>	<b>0.3</b>	<b>1.0</b>	<b>45.0</b>	<b>1.6</b>	<b>2.3</b>

**OECD***North America*

In 3Q96, oil production in North America was constrained by maintenance and production difficulties in Alaska and seasonal declines in NGL production in the US and Canada which added to the natural declines in Lower 48 onshore crude oil fields. As shown in the table below, Canadian gains from higher crude and synthetics production were almost enough to compensate for US declines, leaving the average for 3Q96 only 1 kb/d below 2Q96. Within the US, growth in Gulf of Mexico production nearly equalled the onshore declines and the year-on-year growth rate for the Gulf, primarily from new fields, was 17%. Even larger growth is expected in 4Q96, as the Mars field rises towards its 100 kb/d initial peak and the Mahogany field starts up. The Gulf of Mexico growth along with a seasonal increase of 120 kb/d in NGLs & Other production result in a 4Q96 quarterly US increase of about 215 kb/d, as an expected recovery in Alaska nearly offsets the decline in other Lower 48 crude oil. Canada is projected to add another 65 kb/d in 4Q96 versus 3Q96, primarily due to higher NGL production.

**Summary of 3Q96 North American Supply Changes and 4Q96 Prospects**

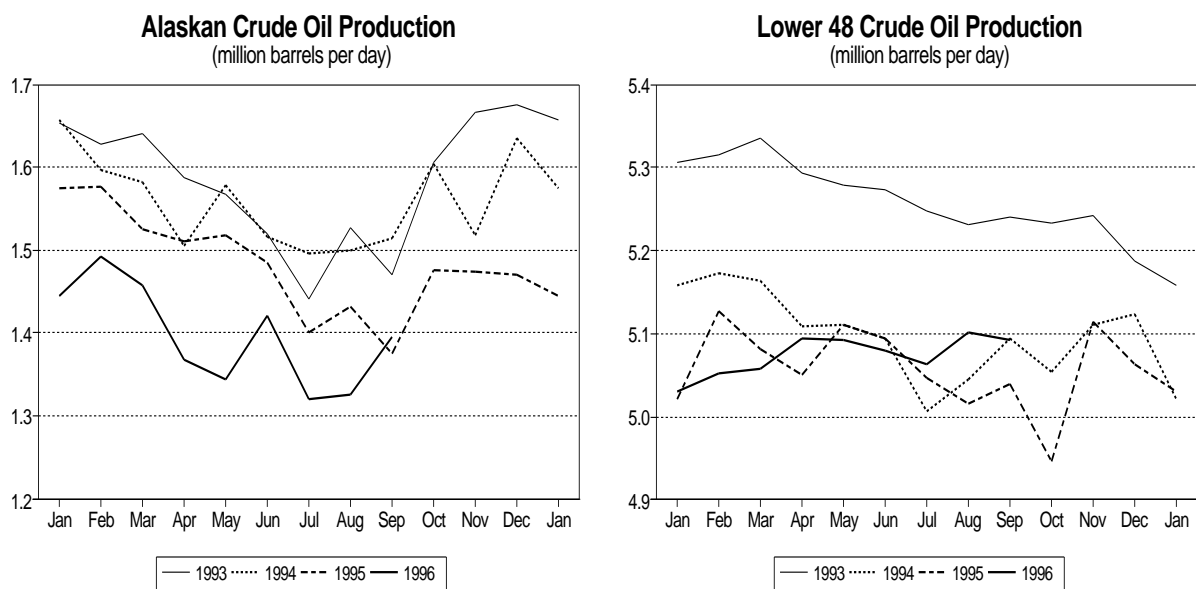
(thousand barrels per day)

	3Q96	vs. 2Q96	vs. 3Q95	4Q96	vs. 3Q96	vs. 4Q95
United States	8469	-119	-29	8685	215	118
Alaska	1347	-31	-56	1475	128	3
Gulf of Mexico	1196	83	172	1292	99	296
Other L48 Crude	3892	-87	-120	3761	-131	-284
NGLs & Other	2037	-84	-25	2157	120	103
Canada	2491	118	118	2557	65	130
Crude Oil	1584	80	44	1586	2	63
NGLs	595	-13	48	647	52	33
Synthetics	312	51	26	324	12	34
<b>Total North America</b>	<b>10960</b>	<b>-1</b>	<b>89</b>	<b>11242</b>	<b>282</b>	<b>248</b>

Total US oil production averaged an estimated 8547 kb/d in September, based on data from the US Department of Energy for the first 20 days of the month, an increase of 94 kb/d from August. A majority of the increase occurred in Alaskan production, which rose by 69 kb/d, while Lower 48 crude oil production fell by around 10 kb/d but was more than offset by growth in NGLs and "Other Hydrocarbons".

Alaskan crude oil production increased to 1395 kb/d in a relatively event-free September, following maintenance activities at the Prudhoe Bay and Kuparuk fields in August. The two fields added 41 kb/d and 28 kb/d respectively, accounting for all of the increase. As shown in the left-hand graph below, September is the first month this year in which the monthly level exceeded year earlier production. An even larger increase had been anticipated, but the Endicott field did not recover as expected due to an extension of the work on the NGL-injection facility, resulting in output decreasing by 4 kb/d to 69 kb/d versus an expected gain of almost 20 kb/d. The September level for the field was almost 30% below the February yearly high of 95 kb/d. A drilling rig that had been shut down for the last six months was brought back into service on 25 September, suggesting some improvement in October, despite the field's relative maturity. The September Endicott decline and a small drop from the Lisburne Production Center were offset by a 5 kb/d gain at the Point McIntyre field.

A seasonal increase is expected in the main North Slope fields in 4Q96, leading to the quarterly gain of 128 kb/d shown in the table above. Nearly 60% of the increase occurs at the Prudhoe Bay field, but production in 4Q96 will also be aided by production from the recently completed 4,500 b/d 2 West Niakuk well and by continued increases from the Northwest Milne satellite and a new well at the main Milne field. Production from Milne Point area is expected to average 60 kb/d in 4Q96 versus 20 kb/d in 1Q96. Sometime next year, the Kuparuk field will begin to benefit from a new enhanced recovery project using injection of Prudhoe Bay field gas liquids to raise Kuparuk flows. About 200 mb of additional reserves are expected to be made recoverable by the project with a peak increment of 36 kb/d in 1999.



Aggregate data for the first 20 days of the month from the US DOE imply that Lower 48 crude oil production averaged just under 5.1 mb/d in September versus just over 5.1 mb/d in August. Production has been surprisingly stable throughout the year, varying from 5.03 mb/d in January to a high of 5.10 mb/d in August. As expected, higher Gulf of Mexico production is offsetting some of the normal decline in onshore Lower 48 production, but there is growing evidence of substantially-reduced decline rates in mature fields due to technological advances, higher prices and improved fiscal terms for marginal fields, such as the California San Joaquin "huff and puff" steamflood production of extra-heavy crude oils. NGL production is estimated to have begun a seasonal rise in September, increasing by 15 kb/d to 1765 kb/d, with further gains in 4Q96, to an average of over 1850 kb/d versus 1757 kb/d in 3Q96 and 1748 kb/d in 4Q95. Production of "Other Hydrocarbon and Alcohol Fuels" is also seen increasing in September (by 20 kb/d to 295 kb/d) and 4Q96 (25 kb/d from 280 kb/d average in 3Q96).

Total oil production from **Canada** reached 2444 kb/d in July, an increase of 57 kb/d from June and 94 kb/d above July 1995, according to data from Statistics Canada. Crude production in Alberta, Saskatchewan and the other five producing Provinces increased by 21 kb/d, 24 kb/d and 21 kb/d respectively. Among the other Provinces, the Atlantic Offshore accounted for most of the gain (+17 kb/d)

following a decline of 12 kb/d in June. Northwest Territories production, primarily from the Norman Wells area, also increased modestly. Within Alberta, production of bitumen is reported to have declined by about 10 kb/d and it is thought that heavy oil production was down by a similar amount, with light and medium crudes more than making up the difference. Output of NGLs was about equal to June levels, but maintenance at the Syncrude plant reduced synfuels production by 11 kb/d.

August production is estimated to have increased by an additional 51 kb/d to around 2496 kb/d, with higher NGL production and a recovery in synfuels output each adding about 20 kb/d and Alberta light and medium production showing a similar rise. The estimated August level matched the yearly high seen in February. Additional increases are anticipated for the remainder of the year due to seasonal gains in NGL production and higher crude oil output for export to the US. Some of the NGL increase is related to expanding exports of natural gas to the US to meet both the summer electricity generation peak and the winter heating load. It is noteworthy that natural gas exports increased this summer despite cool weather in the US Midwest.

### North Sea

As shown in the table above, the North Sea and Latin America are the major sources of non-OPEC oil supply growth in 4Q96. The details of the North Sea production increase are shown in the table below. The largest quarterly gains were in the Norwegian Oseberg-Troll area, the UK offshore-loaded fields and the Danish North Sea, with smaller increases occurring in the Norwegian Sleipner-Frigg, Ekofisk and Haltenbanken areas. Larger maintenance outages for Statfjord-Gullfaks and technical problems in the Ninian system Magnus field led to declines for those areas versus 2Q96.

### Summary of 3Q96 North Sea Supply Changes and 4Q96 Prospects

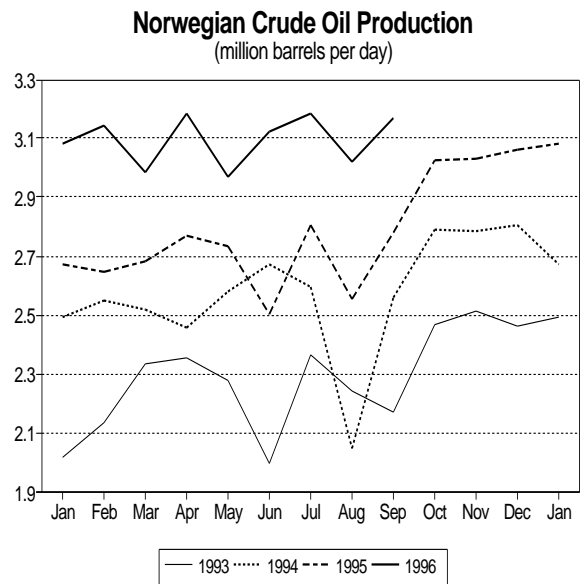
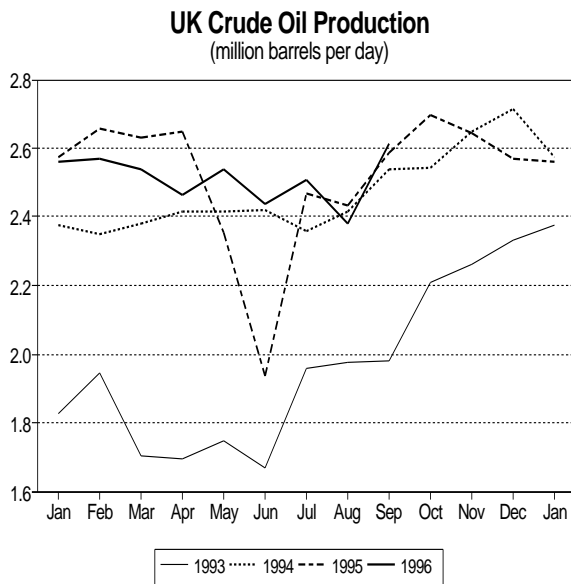
(thousand barrels per day)

	3Q96	vs. 2Q96	vs. 3Q95	4Q96	vs. 3Q96	vs. 4Q95
United Kingdom	2636	14	-4	3197	561	372
Brent System	464	1	-7	521	57	28
Forties System	881	-2	-60	1035	154	51
Ninian System	296	-17	13	326	30	2
Other Systems *	430	5	8	474	44	65
Offshore Loaded **	315	27	40	494	179	174
NGLs	250	0	2	347	97	52
Norway	3265	40	433	3449	184	261
Ekofisk & Southern Area	514	7	25	557	43	49
Sleipner-Frigg Area	127	19	31	155	28	40
Statfjord-Gullfaks Area	1200	-32	-67	1237	37	-101
Oseberg-Troll Area	936	38	215	968	32	89
Haltenbanken	347	1	210	375	28	174
NGLs	141	7	19	157	16	10
Other North Sea	266	24	29	280	14	36
Denmark	214	23	28	223	9	38
Dutch & German Offshore	52	1	1	57	5	-2
Total North Sea	6167	78	458	6926	759	669

\* Flotta, Beryl, Fulmar, Teal, M-Block, Liverpool Bay, West of Shetlands, and Nigg Bay (Beatrice); including NGL adjustment

\*\* Alba, Statfjord UK, Fife-Fergus, Donan, Blenheim, Kittiwake, Gryphon, Harding and Captain Offshore loaded volumes include extended wells tests for Machar, Barif, Clair and Pierce-Medan

The Norwegian year-on-year comparisons for 3Q96 are more striking, with gains in excess of 200 kb/d occurring in the Haltenbanken and Oseberg-Troll areas, where the Heidrun and West Troll fields were not yet operating last year. The start-ups of Heidrun and West Troll in 4Q96 reduced the year-on-year growth somewhat, especially for the latter, but 4Q96 Norwegian production is still 261 kb/d above 4Q95 and 184 kb/d higher than in 3Q96. The largest increase remains the 561 kb/d quarterly gain in UK production in 4Q96. The major factor is new offshore-loaded fields (Captain, Fergus, Teal-Guillemot, and Alba South), along with initial production from the Forties system Thelma and Arkwright fields, Beryl's Nevis satellite, Ninian's Columba B and Flotta's MacCulloch field. The new field production adds to production gains at Andrew/Cyrus and Harding and the expected return in mid-4Q96 of the Brent Charlie platform.



August was an unusual month in the **UK** sector of the North Sea. More than a quarter of the fields were 10 kb/d or more away from initial estimates and although the number of underperformers and overperformers were split about 60%-40%, the net effect was a large downward revision. Revised total offshore oil production from the UK sector declined by 161 kb/d to 2.49 mb/d (versus an expected decline of only 21 kb/d), as maintenance activities in the Ninian system were much more severe than anticipated and several Forties system fields failed to meet expectation. Some offshore-loaded fields also were below expected production levels. Conversely, the expected maintenance impacts in the Flotta system were less than anticipated and output from the Brent system, and from the Brent field in particular, exceeded expectation. The largest maintenance impact occurred in the Alwyn North area of the Ninian system where Dunbar field production fell by 36 kb/d, or more than 50%, and the Alwyn North field was 11 kb/d lower. Additional work at the Magnus field reduced output by 17 kb/d to a three-year low of 93 kb/d, even including the new Magnus South satellite. Performance in the Forties system was mixed, with significant increases for the Scott/South Scott and Andrew/Cyrus fields, but with unexpected declines for the Nelson and Forties fields, whereas expected maintenance at the Miller field failed to materialise. The net result was a 9 kb/d increase for the system versus an expected gain of 74 kb/d. Among the offshore-loaded fields, work at the Alba and Fife fields to tie in a satellite field caused larger than anticipated reductions, the former by 28 kb/d (about 20 kb/d more than projected) and the latter by 5 kb/d (a small gain had been expected since the Fergus satellite tie-in was not expected until mid-September). A monthly decline of 8 kb/d in the UK share of the Statfjord field was in line with estimates of Norwegian maintenance, but an expected increase from the Blenheim field did not occur. Partially offsetting the underperformance was record output of 57 kb/d from the Harding field and an incremental 17 kb/d from extended well tests at the central North Sea Pierce-Medan and Banff fields and the West of Shetlands Clair field.

In contrast to the Forties system, the Flotta system maintenance had a smaller than anticipated impact, reducing output by 46 kb/d against an expectation of over 70 kb/d. The maintenance appears to have been restricted to the Piper/Chanter and Saltire fields, as work on the Claymore, Ivanhoe/Rob Roy and Tartan areas was evidently completed in May. Similarly the Brent system output rose unexpectedly by about 20 kb/d, as the Brent and Cormorant fields each increased by 15 kb/d, more than offsetting small declines in seven other Brent system fields.

The larger-than-expected August production decline is believed to reflect primarily temporary factors. Consequently a large increase is assumed to have occurred in September, with total offshore oil production increasing 268 kb/d (+233 kb/d for crude oil and +35 kb/d for NGLs) to 2.76 mb/d. A full recovery of Ninian and Flotta system production from the August maintenance and better performance of Forties system fields add an estimated 86 kb/d, 56 kb/d and 48 kb/d respectively. Production from offshore-loaded fields (aided by output from the new Fergus and Alba South satellite fields and continuation of extended well tests at Banff and Pierce-Medan) is seen rising by 75 kb/d. Only the Brent system is thought to have declined, assuming maintenance at the Pelican and South Cormorant fields, and that the unexpected August increase at the Brent field did not hold.

**Norwegian** production decreased by 173 kb/d in August (about 35 kb/d more than expected), as the result of scheduled maintenance at the Stafjord C platform, which also affected two satellite fields, and at the Veslefrikk and Brage fields in the Oseberg system. Crude oil production, including 69 kb/d of Sleipner condensates, averaged 3022 kb/d, while NGL production was 131 kb/d, 11 kb/d below the July level. Production from the main Stafjord field was reduced by 45 kb/d, while the Stafjord East and Stafjord North satellites were down by 49 kb/d and 42 kb/d respectively. Because of the unexpectedly large reductions in the satellite fields, production from the Stafjord-Gullfaks area was about 15 kb/d below expectations. The Veslefrikk and Brage work caused decreases of 22 kb/d and 10 kb/d respectively, but the Oseberg area produced about 10 kb/d more than anticipated. Haltenbanken area output also exceeded expectation, by 5 kb/d, due to a 12 kb/d increase in Heidrun production to 232 kb/d. A similar increase at the Yme/Yme Beta East complex in the southeastern portion of the Norwegian North Sea raised production to 34 kb/d, a new high but still below estimated capacity of close to 50 kb/d. As discussed in the OECD Stocks section, some of the production capacity is probably being used to fill of storage tanks on the platform.

September production is estimated to have recovered most of the August declines, averaging 3.32 mb/d despite a ten-day maintenance outage for the Heidrun field beginning 2 September. The return of Stafjord C to regular operations increased Stafjord-Gullfaks area production by 140 kb/d, almost matching August's 148 kb/d decrease. Production from Sleipner West began on 29/30 August and added about 10 kb/d to September production. The East Troll platform added a similar monthly increment. In both cases, the liquids streams are evidently being mixed with output from sister fields (Sleipner East and West Troll respectively) making it difficult to attribute output to the individual fields. There may also be some processing limitations whereby increased output from the new fields will mean a reduction in the older fields. For September, it is assumed that the Sleipner East production was unchanged and West Troll declined slightly, but future increases in Sleipner West and East Troll could come at the expense of production from Sleipner East and West Troll.

**Danish** oil production achieved record levels in August, reaching almost 215 kb/d versus 208 kb/d in July. Production escalation at the new Svend field raised output by 9 kb/d. The field was originally expected to peak at around 15 kb/d, but averaged over 23 kb/d in August. Svend production is now expected to average 25 kb/d for the remainder of the year. Output from the Dan also exceeded expectations with a record 70 kb/d monthly average. The Skjold, Gorm, Kraka and Tyra fields each recorded a small decline for the month, while production increased at the Valdemar, Rolf and Roar fields.

The **Netherlands** produced only 28 kb/d of offshore crude oil in August, together with about 8 kb/d of offshore NGLs. There was no output from the Logger field during the month as a pipeline leak forced production to be shut in. Four of the seven Dutch offshore producing oil fields (including the P18 condensate field) declined for the month while the other three were unchanged from July.

### *Pacific*

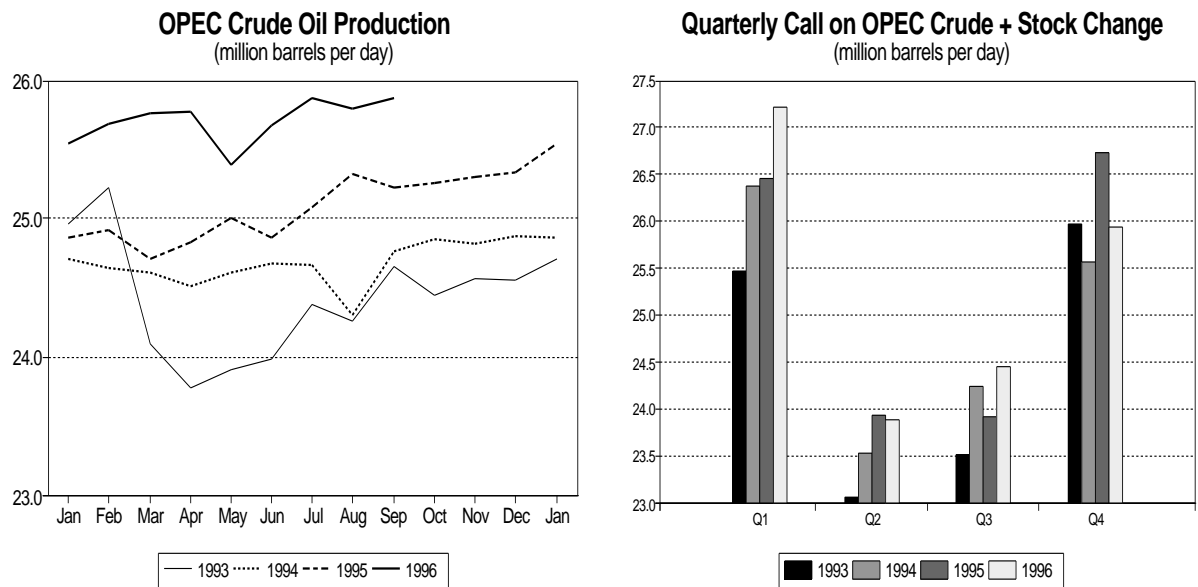
Data from the **Australian** government and the Australian Petroleum Production and Exploration Association for July indicate a record oil production level of 657 kb/d (591 kb/d of crude oil and condensates, and 66 kb/d of NGLs) a modest gain from 655 kb/d in June. Gippsland Basin production increased by 12 kb/d. Higher condensate production from the Northwest Shelf Development Project (NWSDP) and crude oil from the Griffen field were offset by lower output from Thevenard Island fields and the Wanaea-Cossack complex, leaving Carnarvon Basin production essentially unchanged. Similarly, a small decline in onshore Cooper Basin production roughly matched the gain in offshore Browse-Bonaparte Basin fields. August production is estimated to have surged to 725 kb/d due to bigger gains in Griffen and the NWSDP, a modest recovery in Thevenard Island production and an additional increase of 5 kb/d in the Gippsland Basin. Output from the Wanaea-Cossack fields is estimated to have averaged just under 100 kb/d in August, about 10 kb/d lower than in July. Production had dropped to 80 kb/d by the end of the month as operations had to be reduced to avoid a broken subsea pipeline.

Lower estimated Australian oil production levels for September (-25 kb/d) and October (-32 kb/d) were primarily related to the difficulties at Wanaea-Cossack. Production from the two-field complex is reported to have varied in the 70-90 kb/d range in September. Assuming an average September production from Wanaea-Cossack of just over 80 kb/d implies a monthly decline of close to 20 kb/d, accounting for most of the aggregate Australian production decrease. The beginning of prolonged maintenance on the Jabiru field production vessel in mid-month resulted in monthly average output being cut in half, from 12 kb/d to 6 kb/d. The vessel is now in Singapore for refitting and is not expected back on the field until

mid-to-late December. Assuming the Wanaea-Cossack maintenance work and repairs to the subsea pipeline are undertaken in October, output from the field would have to be reduced to between 50-55 kb/d, using unaffected equipment, for about three weeks. It is conservatively assumed that Wanaea-Cossack production will average 57 kb/d in October, a decrease of 25 kb/d. The complete absence of Jabiru production accounts for the rest of the projected monthly decline. The return of Wanaea-Cossack in late October and Jabiru in December is expected to result in gains of 15-20 kb/d in each of the last two months of the year, again raising Australian production to over 700 kb/d.

## OPEC

OPEC crude oil production is estimated to have increased by 75 kb/d in September to 25.88 mb/d, essentially reversing August's decline. Production from eight of the OPEC countries increased by amounts ranging from 5 kb/d to 65 kb/d, while output from three OPEC countries decreased. The largest production gains occurred in the Neutral Zone (+65 kb/d), Saudi Arabia (+50 kb/d), the UAE (+23 kb/d) and Qatar (+25 kb/d). Smaller monthly increases of 15 kb/d or less are indicated for Venezuela, Indonesia, Libya and Algeria. An 80 kb/d drop for Iran and a 45 kb/d reduction in Nigerian output moderated the overall OPEC increase. Kuwaiti production (excluding its Neutral Zone share) is also believed to have declined marginally in September.



Market indications supported by reports of increased availability in September and October suggest a sizeable rise in **Saudi Arabian** crude exports in September. However, just as the decreases in export availability during the summer months were partly due to increased seasonal demand by electric utilities, some of the current export increases are probably merely a reversal of domestic demand growth. There is, however, an unusually wide range of opinion about the level and even the direction of change in Saudi crude oil production.

**Kuwaiti** customers are also believed to have been offered more crude for October delivery, although estimated output in September was 5 kb/d below August levels. However, adding the Kuwaiti Neutral Zone share, total output rose by about 60 kb/d. The 65 kb/d **Neutral Zone** increase represents a return to full capacity of the Khafji field, following work on the gas-lift facilities in August. Khafji production reached a two year high of 273 kb/d. The other offshore field, Hout, produced 39 kb/d in September versus 37 kb/d in August. Onshore production continued around 200 kb/d, although the start-up of production from the Eocene deposits late in the month should add to production in 4Q96.

Maintenance in August is also thought to be responsible for the increase in **UAE** production, as Abu Dhabi's Umm Shaif field output rose by about 35 kb/d. About 15 kb/d of the increase was compensated for by a restriction on production from the Lower Zakum field. A 5 kb/d estimated increase in the Upper Zakum field and a small decline in Dubai's output resulted in a net gain of just under 25 kb/d. A similar gain is indicated for **Qatar**, despite the delayed start-up of the 35 kb/d al-Rayyan field that had been

expected early in the month but is now slated to produce its first oil on 10 October. Higher output from currently producing fields as a result of workovers and increased gas injection is believed to account for the increase.

Tanker-tracking data indicate a fairly large decline in **Iranian** production following three months of increasing production. An 80 kb/d decrease is estimated to have occurred, compared with gains of 30 kb/d in August and 65 kb/d in July. Other estimates generally show larger previous increases and a larger decline in September. The estimated September level of 3.665 mb/d is still above the average of 3.65 mb/d in the first half of the year. Iranian production capacity is thought to be somewhere between 3.65 mb/d and 4.2 mb/d, with Iranian government estimates at the high end of the range. Declining onshore capacity is being roughly balanced by increases in offshore capacity with repair of some fields damaged in the Iran-Iraq War and some new field development.

The other noticeable decline occurred in **Nigeria**, where the volatile business environment is believed to have led to reductions of about 45 kb/d in onshore production, primarily in the Bonny and Forcados areas as well as a pause in the rapid growth in the Escravos area. It is reported that fluctuations in the government policy in relation to foreign companies is making it difficult to maintain routine maintenance and necessary workover activities. New developments seem to be more oriented towards offshore areas which avoid some of the problems that have occurred with local populations.

Small increases in **Venezuelan, Indonesian, Libyan** and **Algerian** crude oil production, with the first and last consistent with ongoing upward trends driven by foreign joint-ventures and the middle two reflecting the upside of recent up-and-down patterns associated with technical and trade factors. There is market speculation that the Venezuelan increases may moderate given the current and expected future price levels and the availability of money from a large IMF loan. To the extent that some fields may have been pushed to close to their physical limits, some restraint could be appropriate.

### **Former Soviet Union (FSU)**

#### *Production*

**Russian** production increased in both July and August according to data from the Russian government reported by Interfax. The July increase of 45 kb/d was concentrated in three companies, Gazprom (+25 kb/d), Komi-Tek (+15 kb/d) and Tatneft (+14 kb/d), with the rest of the new companies and regional associations showing small, mutually cancelling, increases and decreases. The August changes were much more dispersed. Eleven of the thirteen "new companies" reported declines in August with the three largest being Yukos (-12 kb/d), Sidanco (-10 kb/d) and Slavneft (-8 kb/d). Only the Siberian Oil Company's Noyabr'sk association and Lukoil increased production during the month and the latter by only 1 kb/d. However, an estimated increase in Joint-venture output of 43 kb/d more than compensated for the new company declines.

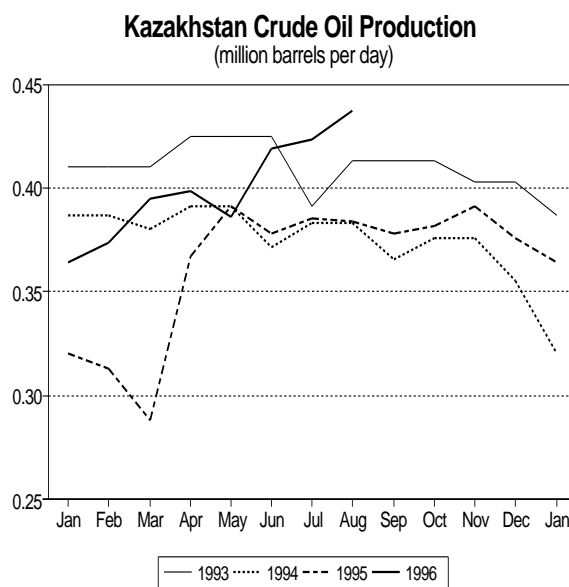
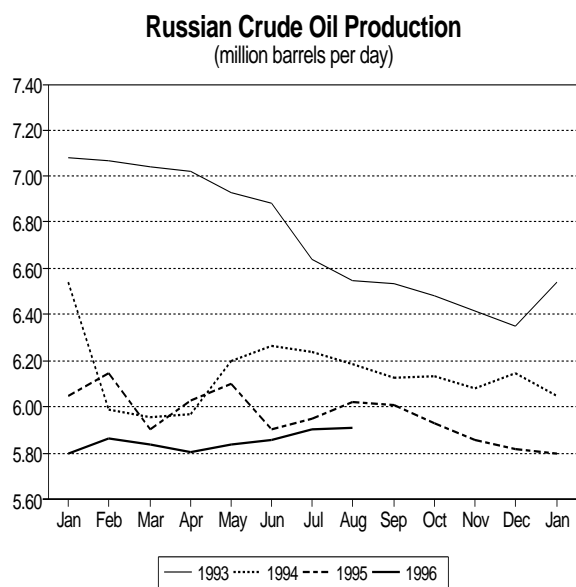
The financial difficulties evident over the last few months in some of the Sidanco production associations (Varyegan and Kond Petroleum), Lukoil's Permneft and Surgutneftegas are expected to continue to inhibit production. Most of these companies have very large tax arrears and very low cash flow, leading to increasing well shut-ins, lack of maintenance, and almost no exploration activity. Overall, Russian production is assumed to have fallen by about 45 kb/d in September as the new company declines were not offset by increases in JV output as they had been in August.

Russian production appears to be still in the process of bottoming out. Unresolved legislative issues surrounding the Production Sharing Law are limiting foreign financial commitments and domestic funds have not been sufficient to turn around the slide in production from the older Western Siberian fields.

Contrary to the Russian situation, **Kazakh's** production appears to be on a definitive upward trend. August production increased by 24 kb/d to 473 kb/d, including about 35 kb/d of condensates. The largest contributor to the gain was the Tengizchevroil joint-venture, which produced 104 kb/d versus 88 kb/d in July. More than half of the Tengizchevroil output was exported (through Odessa), while about 35 kb/d went to Russian and Ukrainian refineries. Additional increases from Tengizchevroil are expected, as well production capacities are brought up to the 130 kb/d capacity of the Tengiz Mercaptan plant. Some of the oil may be used in the oil swap deal with Iran that is expected to start in 4Q96. Kazakh crude will be shipped down the Caspian Sea from Aktau to an Iranian port for use in northern Iranian refineries, while an equivalent amount of Iranian crude will be exported from Kharg Island in the Persian Gulf in favour of the Kazakh venture. Further development of the Turgay Basin Kumkol crude oil field in central

Kazakhstan and the northern giant Karachaganak condensate field offer additional opportunities for near-term expansion of Kazakh's oil production, subject, of course, to pipeline logistics.

Pipeline logistics continue to frustrate **Azerbaijan** on the other side of the Caspian Sea. Without development of the large offshore fields, existing production has stagnated at around 180 kb/d of crude oil and a small amount of NGLs. Production in August averaged 180 kb/d, up 1 kb/d from July's level, as offshore output steady at 148 kb/d and onshore production up to 32 kb/d from 31 kb/d.



### Net Exports

In September, net FSU exports followed the typical seasonally-declining trend from the summer peak and are estimated at 2.75 mb/d, down from the previous month's 2.81 mb/d. Seaborne exports through both Black Sea and Baltic Sea ports decreased and the total seaborne export volume fell for the third successive month after the peak in June. The export volume through the Druzhba Pipeline in the 3Q96 is estimated to have been more than 100 kb/d higher than that in 2Q96. The increase offsets the decrease in seaborne exports and total net exports in 3Q96 are assessed to have been unchanged from the previous quarter.

Product imports jumped in June, primarily due to a sharp increase in gasoline imports when a government plan to introduce a temporary ban on gasoline imports was announced. Imports in later months are estimated to have been back to normal or lower than the average. The Russian government is still preparing the documents necessary to implement the collection of the new excise tax on exported oil (see Report dated 6 September 1996, page 20). Reportedly it may be introduced as early as October.

### 1994-1996 Net FSU Exports

(million barrels per day)

	1994	1995	1996 <sup>f</sup>	1Q96 <sup>r</sup>	2Q96 <sup>r</sup>	3Q96 <sup>p</sup>	May <sup>r</sup>	Jun <sup>r</sup>	Jul <sup>r</sup>	Aug <sup>r</sup>	Sep <sup>p</sup>
Black Sea Exports*	1.04	0.98	†	1.02	1.27	1.19	1.29	1.28	1.15	1.23	1.18
Baltic Exports	0.56	0.61	†	0.65	0.84	0.80	0.87	0.90	1.00	0.73	0.67
<b>Total Seaborne</b>	<b>1.60</b>	<b>1.59</b>	†	<b>1.67</b>	<b>2.11</b>	<b>1.99</b>	<b>2.17</b>	<b>2.18</b>	<b>2.16</b>	<b>1.96</b>	<b>1.84</b>
Druzhba Pipeline**	0.81	0.83	†	0.75	0.77	0.89	0.82	0.80	0.85	0.89	0.95
<b>Total Exports</b>	<b>2.41</b>	<b>2.42</b>	†	<b>2.43</b>	<b>2.88</b>	<b>2.88</b>	<b>2.99</b>	<b>2.98</b>	<b>3.00</b>	<b>2.85</b>	<b>2.79</b>
Imports	0.03	0.04	†	0.03	0.03	0.03	0.03	0.06	0.02	0.04	0.04
<b>Net FSU Exports</b>	<b>2.39</b>	<b>2.39</b>	<b>2.52</b>	<b>2.39</b>	<b>2.85</b>	<b>2.85</b>	<b>2.96</b>	<b>2.92</b>	<b>2.98</b>	<b>2.81</b>	<b>2.75</b>
NB: Crude Oil	1.91	1.91	†	1.92	2.12	2.20	2.20	2.13	2.23	2.18	2.17
Oil Products	0.47	0.48	†	0.48	0.74	0.65	0.77	0.80	0.75	0.63	0.58

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

† Data not available

f Forecast

\*\* Crude oil only

p Preliminary

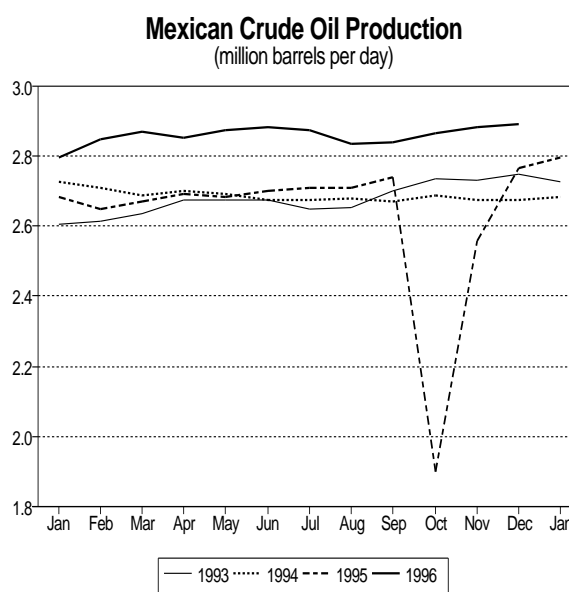
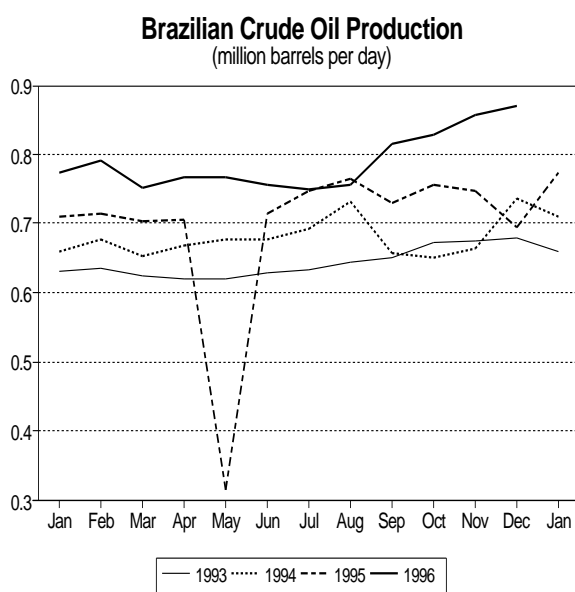
r Revised

## Other Non-OPEC

### Latin America

Data for August from the **Mexican** national oil company, PEMEX, confirm the expected sharp declines in both NGLs and crude oil production following the explosion at the Cactus natural gas processing plant. However, in both cases the impact was more severe than originally anticipated. A decline of less than 12% (to 140 kb/d) was expected for ethane production, whereas a fall of over 30% occurred, to 159 kb/d. For propane and heavier fractions, the actual 20% decline far exceeded the 7% expectation. Total NGL production decreased by nearly 25% to 335 kb/d, the lowest level since 1987. Crude oil production was also impacted due to lack of gas for injection in onshore wells along the Gulf littoral in the Tabasco State. Again the actual decrease of 42 kb/d to 2830 kb/d was almost double the expected drop of 22 kb/d. Exports of crude oil were apparently not affected by the onshore production decline, rising by 63 kb/d to 1525 kb/d. The largest increases were registered by Olmeca blend crude exports and exports to Europe each up by about 50 kb/d from July levels.

A strong recovery in both oil and NGL production is expected during the remainder of the year, following relatively small gains of 5 kb/d and 35 kb/d respectively in September. October crude oil production is projected at 2865 kb/d and November's at 2880 kb/d equalling June's yearly high. By December, additional production from Gulf of Campeche upgrading work and repairs of damage from last October's hurricanes are expected to result in record production of 2890 kb/d. NGL output is seen recovering to 480 kb/d by December, still 10 kb/d below February's peak. Restart of the undamaged units at the Cactus plant and increased utilisation of other processing plants is expected to compensate for most of the lost capacity at the Cactus # 1 unit.



**Brazilian** oil production averaged 784 kb/d in July down 5 kb/d from the June level, according to data from Petrobras, the Brazilian national oil company. Both months were negatively impacted by "operational problems" at the giant Marlim offshore field in the Campos Basin and low water levels in the key rivers that limited barge traffic, forcing shut-in of some oil production. Higher production from other Campos Basin fields appears to have compensated for some of the Marlim decline with total production from the area increasing slightly to 529 kb/d in July. However, output remained well below February's 550 kb/d. Offshore production from Bahia Santos waters was 5 kb/d lower in July than in June.

Reported production for August for both Colombia and Ecuador was above expectations, as the disruptions caused by the bombing of the TransAndino pipeline in southern Colombia were evidently less severe than originally thought. Data from Ecopetrol, **Colombia's** national oil company, put July crude oil production at 640 kb/d versus 618 kb/d in June and trade sources indicate an August level of 630 kb/d with a return to just under 640 kb/d indicated for September. The July increase was the result of 13 kb/d higher Cano Limon field production and a 10 kb/d increase from other areas covered by Association contracts with private companies. Cusiana-Cupiagua area output remained close to 175 kb/d. The August 10 kb/d decline is believed to have affected Ecopetrol production and the old Concession agreements as

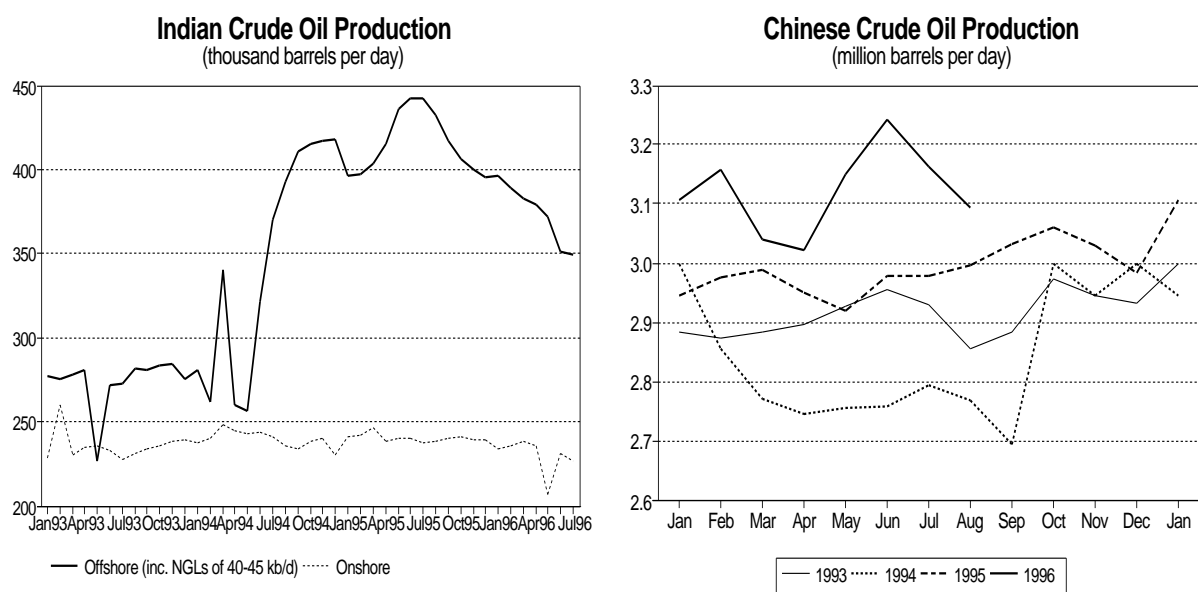
well as the Association contracts with estimated monthly decreases of 4 kb/d, 6 kb/d and 1 kb/d respectively. A rise of 8 kb/d in Colombian crude oil production is estimated for September, despite two bombings of the Cano Limon-Covenas pipeline and labour action by watchmen at the Cusiana complex. **Ecuador's** production in August is now estimated at 378 kb/d versus a previous estimate of 340 kb/d. Unavailability of the Colombian TransAndino pipeline used by Ecuadorean producers in the northeastern jungles was evidently offset by higher capacity utilisation (probably by state company PetroEcuador) on Ecuador's main TransAndean line. Estimates for September-December have been raised to 375 kb/d.

Recently received data from the **Argentine** government show much larger than expected crude oil production levels in 2Q96 that continued through July. Reported production in June and July exceeded 790 kb/d, nearly 50 kb/d above expectations. As a result of the upward revisions for the first seven months of the year estimates have been raised for 3Q96 and 4Q96, to 794 kb/d and 792 kb/d respectively, about 50 kb/d higher than previous estimates. The largest year-on-year gains have been in the Santa Cruz Province along the south central coast, in Nequen Province in the central Andean foothills and in northern Mendoza Province. The rapid increase due to workovers of old oil fields in Nequen had been expected to moderate early this year and to begin to decline, but the growth has continued.

### Asia

**Indian** oil production was reported to have been relatively steady in July at 632 kb/d versus 633 kb/d in June. Onshore production in July held most of the gains in June with Gujarat only down 2 kb/d and Nagaland 1 kb/d lower (both areas having experienced sharp declines in May). Offshore output fell by a rounded 2 kb/d to just under 350 kb/d due to bad weather as well as ongoing problems with increasing water cuts in the Bombay High fields. The Indian production decline may have ended, however, as production from the Ravva field is in the process of being expanded from July's 9 kb/d level to 30 kb/d and water-injection work at the Neelam field is expected to begin to bring positive results. Onshore production also remains below potential, with chronic power problems causing sporadic performance of the electrical pumps used in many of the onshore fields, and repeated labour difficulties, particularly in Arunachal. Only a limited improvement in the onshore situation is expected.

For the longer term, India recently expressed interest in developing oil shale and coal kerogen deposits in Assam, and in a major initiative in the Dhanbad belt coal-bed methane gas area. Exploration of some new onshore areas is beginning, with seismic and geophysical studies in the Ganges Basin and Bihar. A new group (the R-Group) has been set up to consider once again options for the restructuring of the oil sector and has already suggested some form of "soft loans" for oil exploration. Independently, the Indian Ministry of Petroleum and Natural Gas is trying to construct a fiscal regime with sufficient incentives for oil exploration to overcome the perceived difficulties for foreign companies doing business in India.

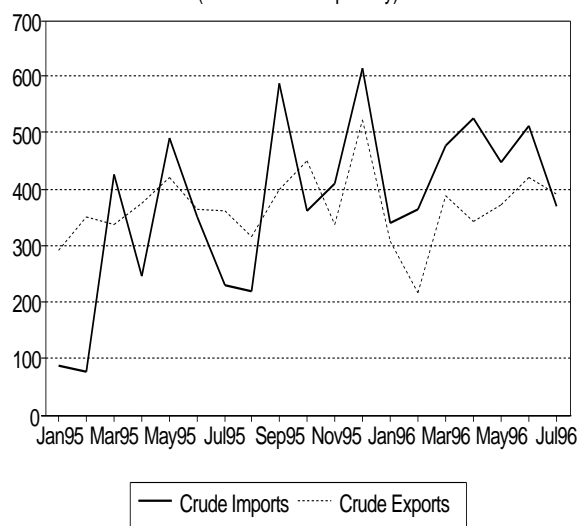


**Chinese** production continued to be affected by various weather problems throughout 3Q96, with offshore storms in the last half of the quarter compounding difficulties caused by flooding in the west and south and a drought in the north that has reduced water levels in some major rivers. According to data from the Chinese government oil companies, the problems in August appear to have primarily affected the west and offshore, with offshore output declining by 27 kb/d from the July 345 kb/d level and Tarim Basin production lower by 18 kb/d at 35 kb/d. Daqing, Huabei and Shengli were each down by 5-10 kb/d for the month, the latter due to flooding in late July and early August. The other onshore fields decreased by a net 10 kb/d due to the combination of the northern drought and southern floods, resulting in total Chinese crude oil output for August of 3094 kb/d.

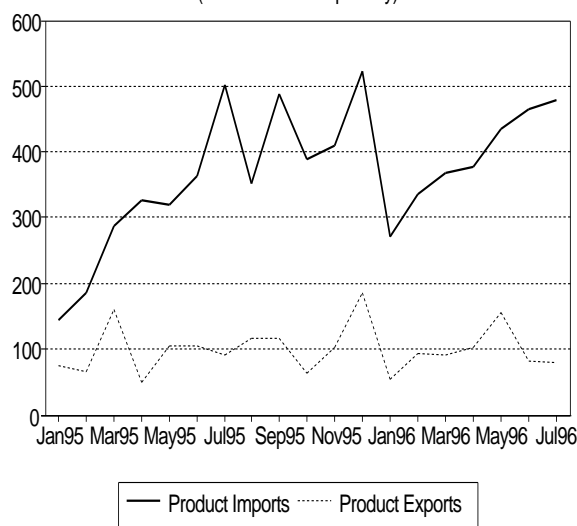
September production is estimated to have recovered to 3177 kb/d as onshore increases exceeded additional weather-related offshore declines. The August offshore difficulties continued with the shutdown of the two main Pearl River Mouth fields, Liuhua (Nanhai) and Xijiang, on 8 September for Typhoon Sally and a subsequent storm which prevented the reattachment of the two floating production vessels until the following week. The September decline in the Pearl River Mouth area, which normally produces over 80% of China's offshore oil, resulted in an estimated average for the month of 290 kb/d, 28 kb/d below August's already depressed level. Strong recoveries in onshore production are thought to have more than compensated for the offshore declines, however, with a Tarim Basin increase of 30 kb/d to 65 kb/d almost equalling the offshore decrease. The Tarim Basin had averaged over 60 kb/d for the first half of the year and has a current capacity of 90 kb/d from 115 producing wells. Capacity is being expanded to over 100 kb/d by year-end, primarily due to additional work at the Tazhong-4 field, but full utilisation is not expected because of transportation constraints. Other onshore increases of almost 20 kb/d for the Huabei field and just under 15 kb/d for the Daqing and Liaohe fields are thought to have added to the monthly rise, with smaller gains of 5-10 kb/d seen for Shengli, Zhongyuan and Turpan-Hami.

Chinese total net imports decreased from 480 kb/d in June to 380 kb/d in July. While product imports continued to rise, crude imports decreased and China became a net exporter of crude for the first time since October last year. Crude imports in the first seven months increased by 60 % compared to the same period last year and the July reduction is thought to be temporary. Chinese kerosene imports appear sensitive to market prices, rising when prices fall. Thus, in July prices decreased and imports rose from 14 kb/d to 73 kb/d, representing the largest contribution to the increase in total product imports.

**Chinese Crude Oil Trade Jan95-Jul96**  
(thousand barrels per day)



**Chinese Oil Product Trade Jan95-Jul96**  
(thousand barrels per day)



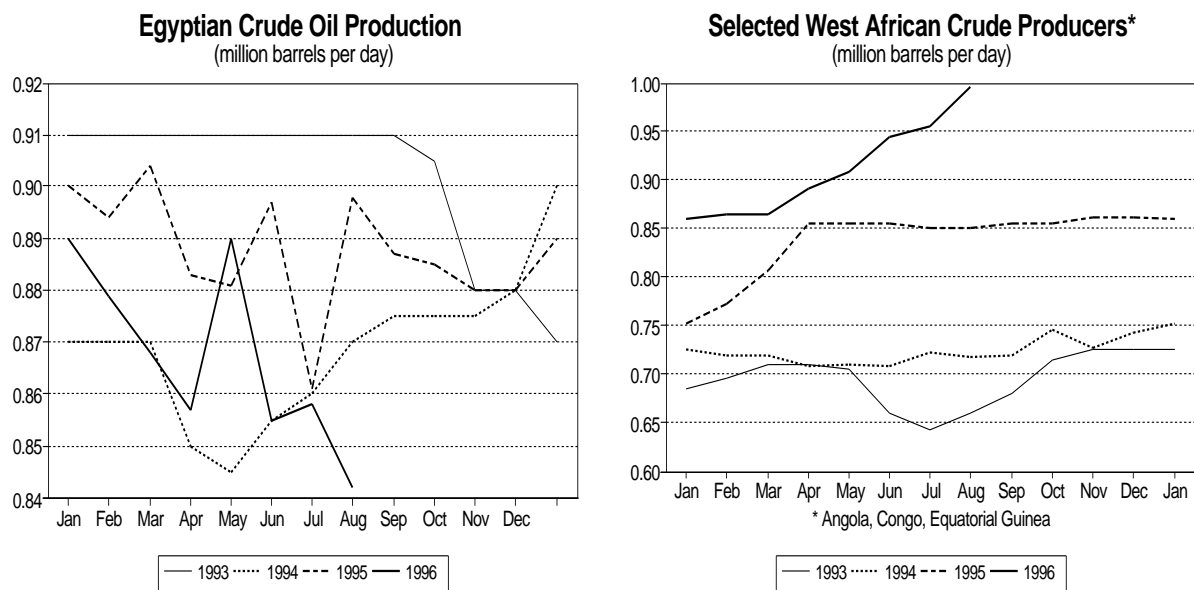
Elsewhere in East Asia, there has been some encouraging information related to offshore Vietnam and in the Malaysia/Thailand Joint Development Area (JDA). The Pearl discovery well, in **Vietnam's** Block 1 just east of the Ruby field, recorded a flow rate of 7,000 b/d, making it a likely candidate for development of the Ruby project that is slated for first oil in 1998. The surrounding Diamond, Emerald and Topaz discoveries are expected to be tied into the Ruby development before 2000. The Diamond discovery well, which was completed in mid-June, produced 1,200 b/d and 2,800 b/d from two of three zones. There were

two other potentially commercial discoveries off Vietnam in June, Dam Dong-1X in Malay Basin Block 46 and Rong Nai-1 in South Con Son Basin Block 11-2, and a successful third appraisal well at Rang Dong in Mekong Basin Block 15-2. Leasing of the adjacent highly regarded Block 15-1 is expected soon. In the Malaysia/Thailand JDA, the Bunga Raya-2 well in the PM-3 area of the Malay Basin yielded over 10,000 b/d of 39-40° API oil and 55° API condensate from three drill stem tests, assuring rapid development of the area. A full discussion of offshore prospects in East Asia and elsewhere is contained in a soon-to-be-published IEA study "Global Offshore Oil Prospects to 2000" (information on how to order the study will appear in next month's Report).

#### Africa and Other Middle East

**Egyptian** crude oil production declined unexpectedly in August to 842 kb/d versus 858 kb/d in July. Production of NGLs increased slightly from 65 kb/d to 68 kb/d. Egyptian production had been expected to begin to increase as the result of new fields being brought onstream in the Gulf of Suez and the Western Desert and, somewhat later, gas condensate fields in the Nile Delta offshore. The string of exploration successes continued in August-September with four discoveries announced, two in the northern part of the Western Desert, one in the Sinai and one in the southern Gulf of Suez. The Meleiha Deep-1 well had the highest flow rate with 9,800 b/d, confirming an earlier discovery. The Ashrafi SW-1 well and the Belayim 53 well each produced 4,000 b/d. The former is very close to the 20 kb/d Ashrafi field in the southern Gulf of Suez and the latter can be quickly tied into the Belayim production centre. The fourth well, a step-out from the successful Shams NE-1 well, produced 2,120 b/d.

Despite the Egyptian declines this summer, total African crude oil production continued to increase, and is expected to grow even faster during the remainder of the year as new output from West African producers such as **Angola**, the **Congo** and **Equatorial Guinea**, shown in the graph below, bring new offshore fields into production, once again underlining the expanding role of offshore production in non-OPEC supply growth.



**Omani** production growth appears to have stalled briefly at around 875 kb/d in 3Q96, below the level targeted by the state oil company PDO (Petroleum Directorate of Oman), which produces 95% of Oman's crude oil. Crude oil production levels of 900 kb/d had been anticipated as early as September, but the concurrence of a large number of small problems with rig deliveries, equipment performance, and drilling activity appear to have thwarted those efforts. The production gains, primarily from southern fields, are still expected but now later in the year. Conversely, success in the much-vaunted "inter-salt" plays (with thick salt deposits both above and below the hydrocarbon zones) is much less certain.

Estimates of **Syrian** crude oil production have been revised downwards by 10-20 kb/d for 1995 and 1996, based on recent statements from a senior Syrian Petroleum Company official and assessments from oil

trade journals. Regular, reliable data for Syria is generally not available. The 1995 average has been reduced from 610 kb/d to 590 kb/d and the 1996 average from 620 kb/d to 600 kb/d. Attempts to expand production of light crudes, primarily from the central and eastern foreign-operated Deir-ez-Zor (Euphrates) area, have only been sufficient to compensate for declines in heavy oil production from the 13 relatively mature fields (Soueddie being by far the largest) in the northern Hassakeh region run by the state oil company. Conversely, natural gas development is progressing well in the Palmyra region and oil production increases may come from expanding liquids output associated with the gas development.

The 4Q96 and 1997 estimates for **Yemen** have been raised slightly, to 360 kb/d and 390 kb/d, due to an upgrading and earlier start-up for the Jannah Block project that more than offset a rescheduling of the East Shabwa Block development from mid-1997 to 1998. The Kharir and Atuf Northwest fields are now expected to be developed along with Jannah, increasing expected peak output to 75 kb/d from the 50 kb/d originally anticipated. First oil is scheduled for 10 October and the area is now expected to reach about 50 kb/d by the end of 1997, more than double the earlier forecast.

## OECD STOCKS

### Industry Stock Changes in 2Q96 and August

As a result of downward revisions to preliminary estimates of June stock data and upward revisions to July data, the 2Q96 stockbuild has been reduced from 1.2 mb/d to 1.1 mb/d and, for July, the preliminary assessment of a stockdraw of 0.2 mb/d has been replaced by a stockbuild of 0.9 mb/d.

In August, total stocks continued to rise but, while Pacific stocks grew strongly, there was only a modest increase in North America, and European stocks decreased (see table below). The rate of the seasonal distillate stockbuild in the Pacific increased but the rate of build in Europe and North America was much less and, in Europe, was well below typical August levels (see graph on page 34).

#### Preliminary Industry Stock Changes in August

(million barrels per day)

	North America	Europe	Pacific	Total
Crude Oil	0.1	-0.4	0.3	0.1
Gasoline	-0.1	-0.1	0.0	-0.3
Distillates	0.2	0.1	0.3	0.6
Fuel Oil	0.0	0.1	0.0	0.2
Other Oil*	0.1	0.0	0.2	0.2
Total Oil	0.3	-0.3	0.8	0.9

\* includes other products, feedstocks, NGLS and other hydrocarbons

### Industry Stock Levels at the End of August

The 0.9 mb/d stockbuild in August compares with a 1.3 mb/d stock *decrease* in August 1995. As a result, the stock shortfall compared with the last year is estimated to have decreased from 128 mb at the end of July to 62 mb at the end of August. As shown in Table 5, the shortfall continues to be concentrated in North America, although it fell from 133 mb at the end of March to 58 mb as the comparison moves from a period of last year when stocks were above historical levels to one in which lower inventories had been adopted by industry. In contrast to the US, total European stocks at the end of August were only slightly below last year's level, while they were essentially unchanged in the Pacific.

As discussed in the Oil Prices and Refinery Activity section of this Report, the main area of market attention has been the low distillate stocks in the Atlantic Basin. Whereas distillate stocks in the Pacific were (marginally) above the previous year's level for the first time in more than a year, they were 26 mb (10%) lower in Europe and 23 mb (11%) lower in North America. In contrast, crude oil and gasoline stocks in both Europe and North America were above last year's levels.

### Regional Stock Developments in August

Following the fall in July, **North American** crude oil stock levels increased, reflecting higher imports. At the end of the month, they were above the historically low level reached a year earlier. SPR stocks fell by a further 5 mb and at the end of the month were 13 mb lower than a year earlier. Gasoline stocks continued to decline seasonally but ended the month almost 2% above the level of a year earlier. US distillate production increased in August and this contributed to the continuation of the seasonal stockbuild despite firm demand. US DOE weekly data indicate that almost 90% of the stock shortfall discussed above is concentrated in the East Coast (PADD I), the region with the highest demand for heating oil. Fuel oil stocks increased only marginally and continued to track below historical levels, consistent with the ongoing reduction in demand.

US DOE weekly statistics indicate that total stocks rose only marginally during the first 27 days of September, with both distillate and gasoline rising by 0.2 mb/d but crude oil decreasing by 0.3 mb/d. As a result, crude oil stocks were 1% lower while distillate stocks (including jet-kerosene) were 12% lower than a year earlier.

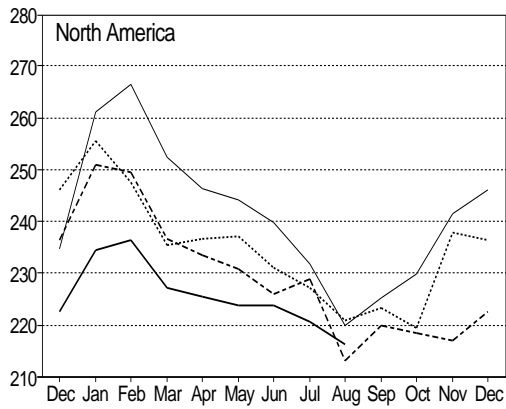
Following the sharp increase in July, **European** crude stocks decreased in line with lower North Sea production. It is important to note that the 33 mb increase in stocks versus a year earlier shown in Table 5 is primarily due to higher stock levels in Norway (for operational reasons) and in Turkey (to meet

emergency targets). For example, filling the tanks on the Yme field platform, which started operations in the Norwegian sector of the North Sea in July, raised stocks by 11 mb. In contrast to Norway and Turkey, stocks were lower than a year earlier in Italy, Germany and the Netherlands. As a result of ongoing gasoline exports and lower production, gasoline stock levels continued to fall, ending the month at typical levels. The relatively low rate of distillate stockbuild highlighted above was consistent with the strong August demand discussed in the Demand section of this Report. The only major country to see a stock decline was Germany, in line with the substantial increase in local demand. Compared with a year earlier, the largest decrease in distillate stocks was in the Netherlands, while Italian and UK stocks were little changed. Fuel oil stocks rose sharply, reflecting the unusually weak demand, but remained well below the previous year's levels.

Following the sharp decline during July, crude oil stock levels in the **Pacific** region rebounded in August, with a very substantial increase in imports exceeding the growth in refinery runs. At the end of the month, stocks were essentially unchanged from a year earlier. With higher production more than offsetting higher demand, gasoline stocks rose slightly but ended the month 6% lower than a year earlier. The rate of the seasonal distillate stockbuild increased significantly, reflecting higher production and lower demand. With the effect of higher production and lower stocks offset by higher net exports, fuel oil stock levels were unchanged and at the same level as a year earlier. It should be noted that the total Japanese industry stock level at the end of July (the latest date at which data is available) was equivalent to 77 days of the previous twelve month's demand. This was seven days lower than a year earlier but seven days above the minimum requirement of the Japanese government for emergency purposes.

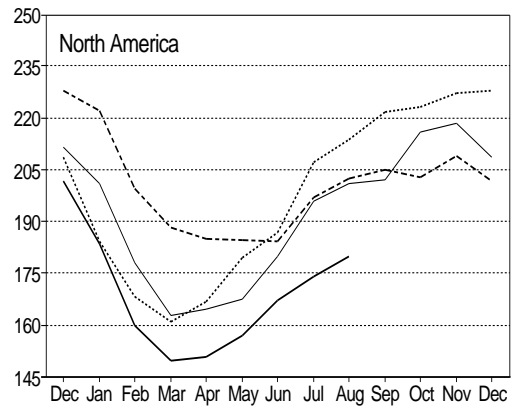
### OECD Industry End Month Stocks (Million barrels)

#### Gasoline



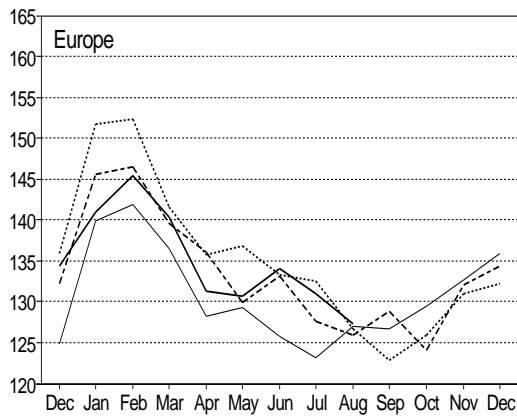
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#### Middle Distillates



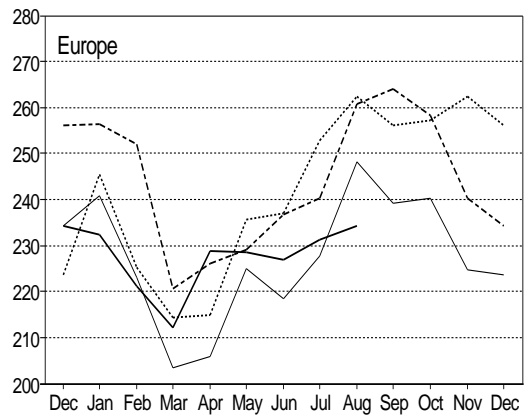
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#### Europe



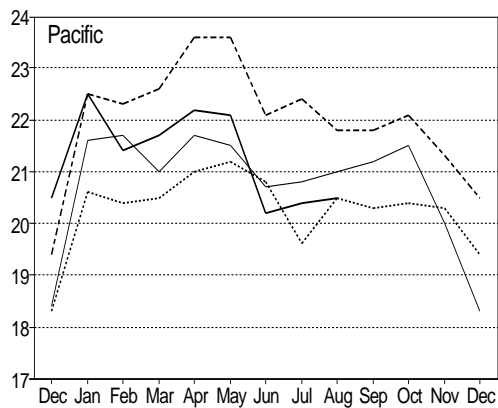
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#### Europe



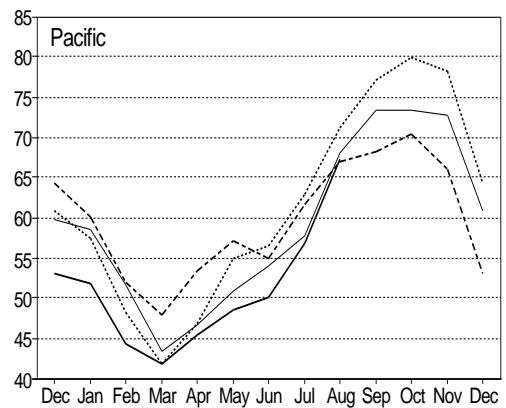
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#### Pacific



— 1993 ..... 1994 ---- 1995 -·- 1996

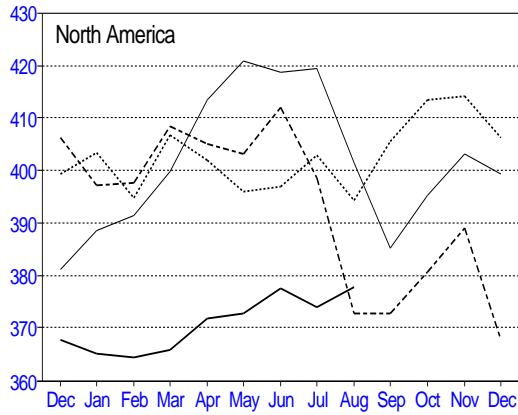
#### Pacific



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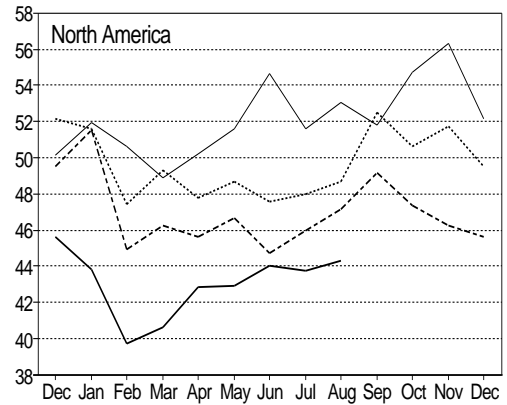
### OECD Industry End Month Stocks (Million barrels)

#### Crude Oil

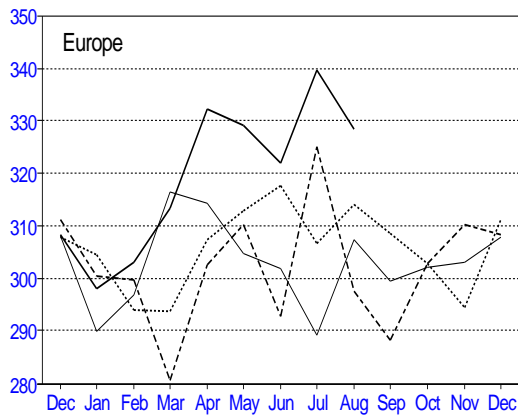


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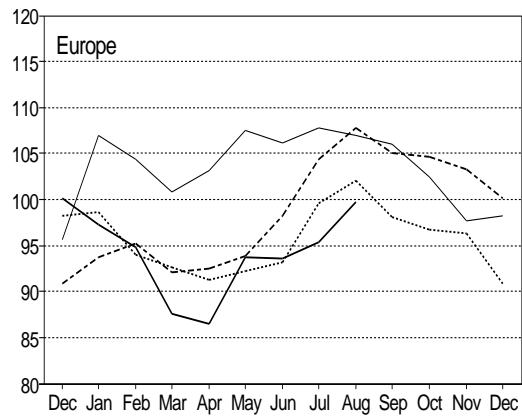
#### Fuel Oil



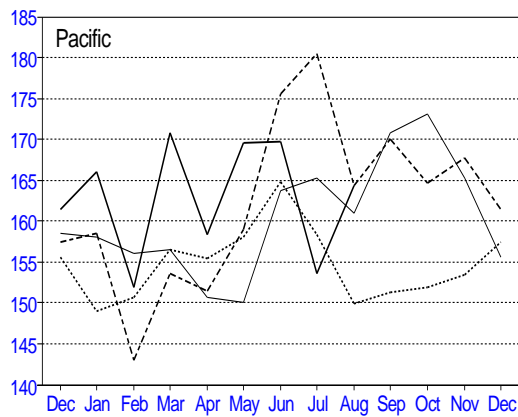
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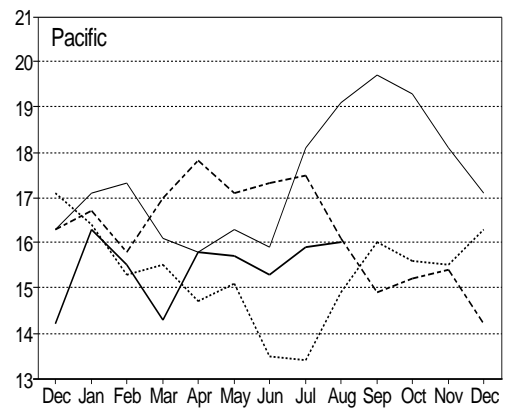
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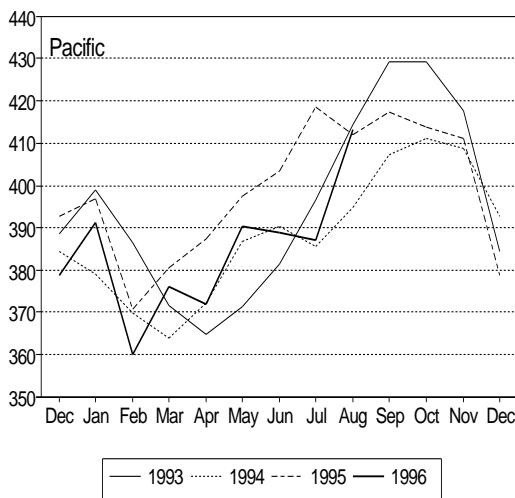
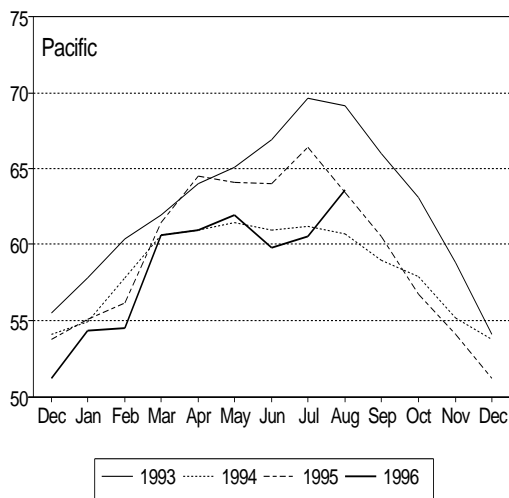
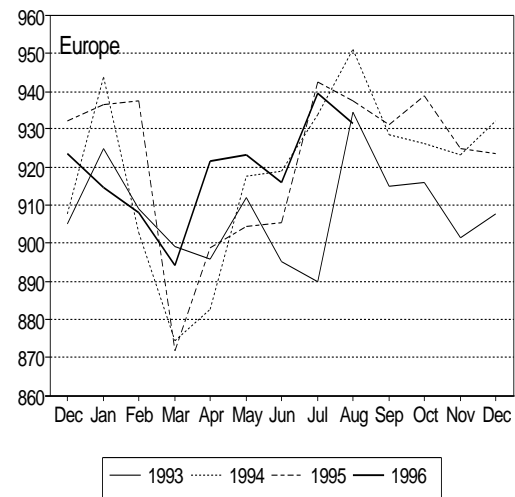
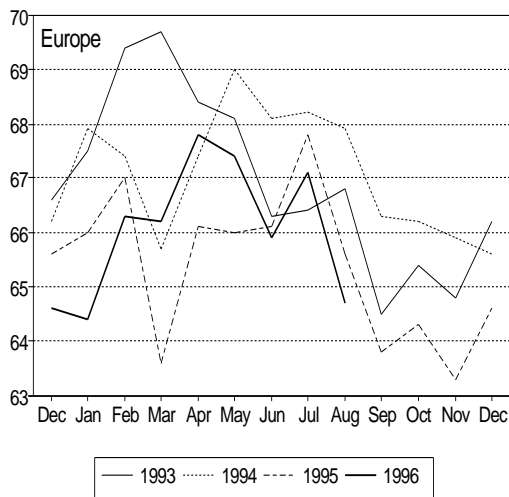
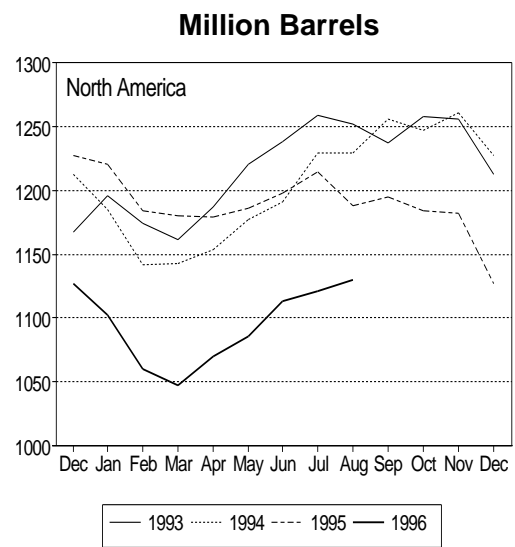
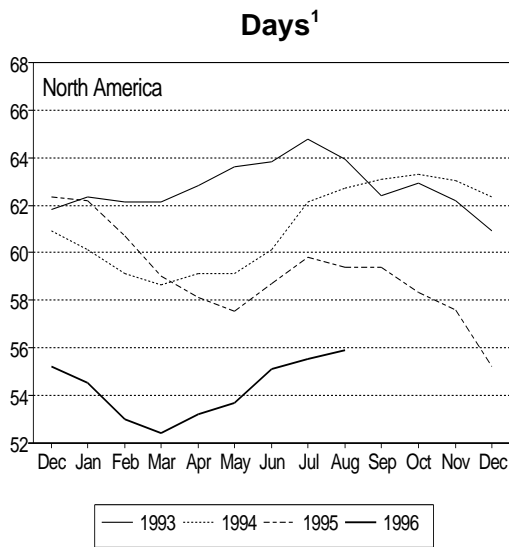


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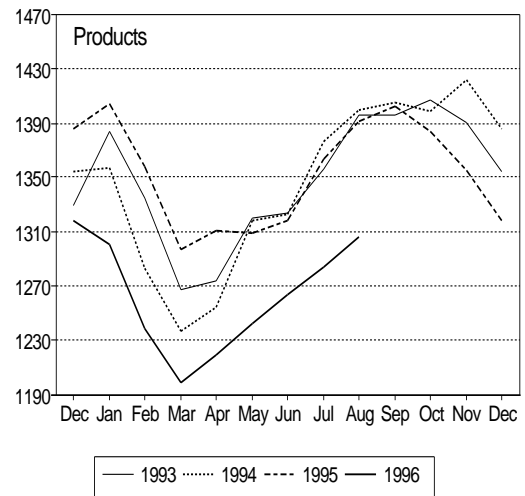
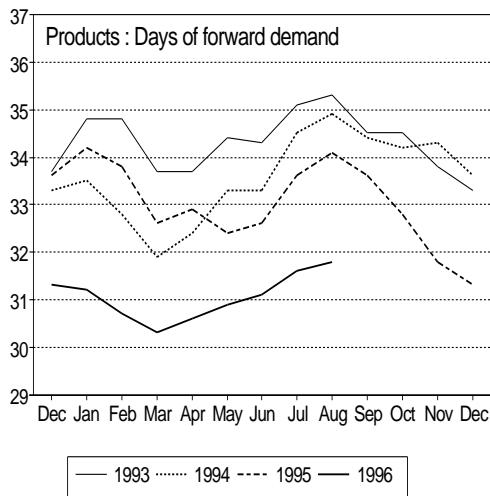
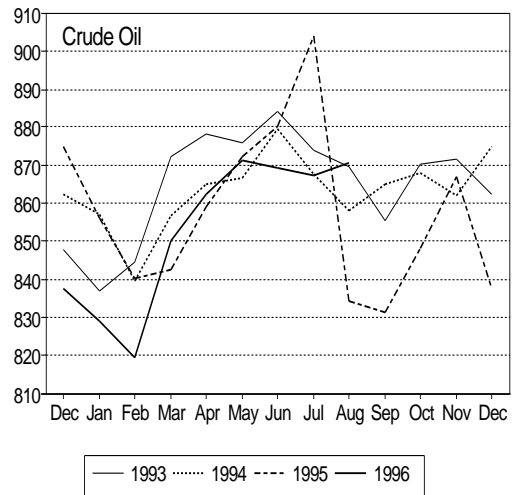
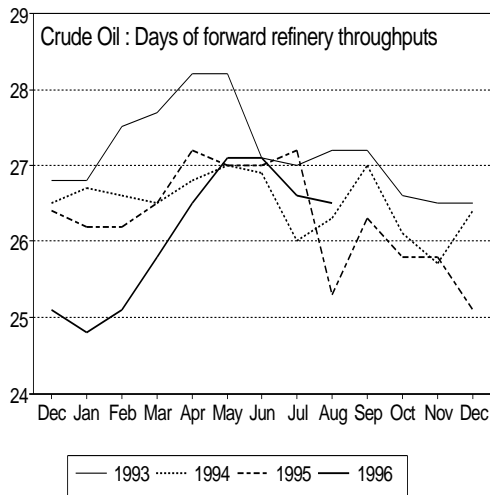
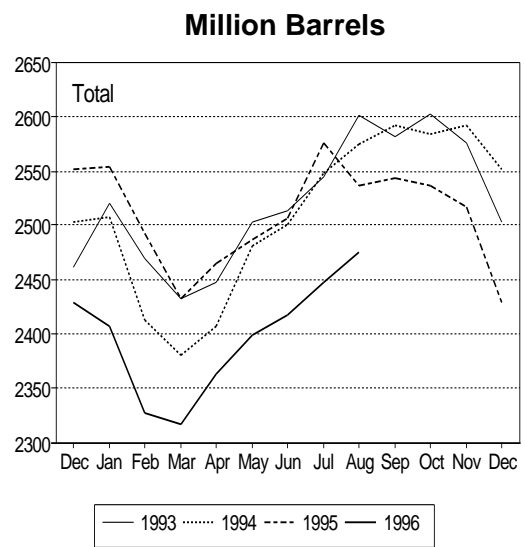
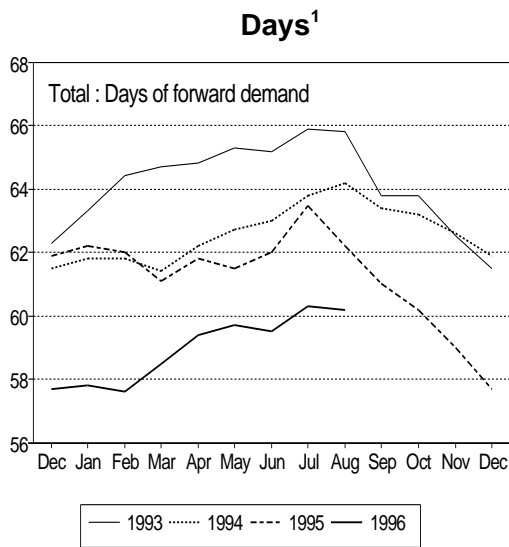
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### OECD End Month Industry Stocks



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

### OECD End Month Industry Stocks



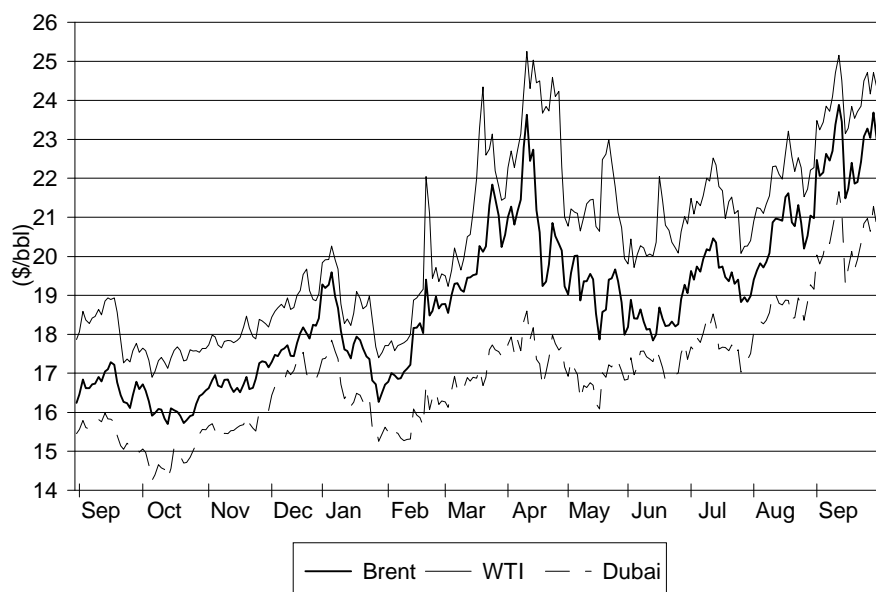
<sup>1</sup> Days of total and product stocks are based on demand for the next three months. Days of crude oil stocks are based on refinery throughputs for the next month

## OIL PRICES AND REFINERY ACTIVITY

### Summary

- Benchmark crude oil prices increased sharply in all markets in the first half of September, mainly as a result of the events surrounding Iraq. They decreased appreciably by mid-month as tensions in the Arabian Gulf receded and increased again in the last ten days of September, supported by soaring gasoil prices in the Atlantic Basin and the Israeli/Palestinian developments. WTI peaked at \$25.15/bbl, the highest level since April, and front-month Brent peaked at \$24.21/bbl, the highest value since the Gulf War. The backwardation for Brent and WTI eased during the month in line with good availability of spot barrels, in particular, in the North Sea. However, the transatlantic arbitrage possibility remained closed during most of the month. High WTI prices attracted export cargoes from Asia.
- Prices for sour crudes in the Mediterranean increased relative to those of Brent during the month as a result of steady demand, reduced supplies (pipeline maintenance at an export terminal) and the realisation that Iraqi crude will not be available in the Mediterranean in the near future. The Brent/Dubai differential widened during the month to more than \$2.00/bbl, reflecting ample supplies of Middle East crudes. This, together with the closed transatlantic arbitrage possibility, led to increased exports of West African grades into the Mediterranean. The price of sweet, heavy Minas remained under severe pressure in August, mainly as a result of weak demand from Japanese utilities.
- Middle distillate prices increased appreciably in Europe and the US, primarily as a result of firm demand and low stocks ahead of the approaching winter-heating season. The steepest increase occurred in Europe, where prices increased by about 20% and attracted export cargoes from North America. Gasoline prices did not follow the sharp rise in crude and heating oil prices and the gasoline/crude differential decreased appreciably in all major markets. The gasoline/naphtha differential became negative in Europe during the month. HSFO prices increased significantly in Europe and in Singapore in line with supply tightness and strong demand, in particular, for bunker fuel.
- Monthly average refining margins decreased in September in the US and Northwest Europe, mainly due to the relative weakness of gasoline prices, and increased in the Mediterranean and in Singapore, consistent with firm middle distillate and fuel oil prices.
- In Asia, more than 1 mb/d of crude distillation capacity is estimated to be in turnaround during October. In the US and Europe, shutdowns are expected to remain at significantly lower levels this autumn compared to last year. Major maintenance is planned in the Arabian Gulf during November.
- In August, the aggregate refinery throughputs in OECD countries increased by 0.4 mb/d to 33.5 mb/d from the downwardly revised July levels. Increases in Japanese and, to a lesser extent, US and Australasian throughputs were partly offset by a decrease in Europe. Throughput levels in September are thought to have declined slightly in Europe and, to a larger extent, in Japan and to have increased slightly in the US.

### Spot Crude Oil Prices



## CIF Crude Import Costs

Table 8 shows that the preliminary weighted average CIF cost for crude imported into IEA countries for July was \$19.49/bbl, \$0.67/bbl higher than in June. The corresponding estimates for August and September are \$20.50/bbl and \$22.40/bbl respectively.

## Spot Crude Oil Prices

During September, benchmark crude oil prices increased sharply, boosted in the first half of the month by the events surrounding Iraq, and in the second half of the month primarily due to increasing gasoil prices in the Atlantic Basin. Brent and WTI averaged more than \$2.00/bbl and Dubai some \$1.80/bbl higher than in August, representing an almost ten per cent month-on-month price increase.

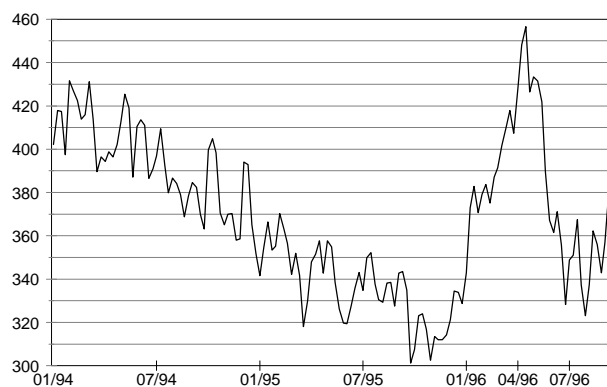
In the first week of September, spot prices for Brent and WTI increased by some \$1.50/bbl from end-August levels, mainly led by the futures markets, when it became clear that the start of Iraqi oil exports had been deferred indefinitely following Iraq's military assaults on Kurdish areas, which resulted in two US cruise missile attacks on Iraqi military installations and increasing political tension in the Arabian Gulf. The postponement of an anticipated 600-700 kb/d of Iraqi oil, which appears to have already been built into the global supply/demand balance for the coming winter, was perceived by the market as a loss of supplies.

In the second week of the month Brent and WTI prices increased by another \$1.50/bbl when US planes patrolling the no-fly zone were targeted by Iraqi missiles. Front-month Brent prices peaked at \$24.21/bbl, the highest level since the Gulf war and WTI peaked at \$25.15/bbl, the highest level since April. Prices decreased appreciably towards the end of the second week and early in the third week when tensions in the Gulf started to ease after Iraq announced its suspension of action against US planes in the no-fly zone. An unsubstantiated rumour that the US had asked Saudi Arabia to increase crude exports contributed to a decrease in crude prices of nearly \$2.00/bbl over two trading days.

In the second half of September, crude prices rose again, gaining support from sharply rising heating oil prices (in particular, in Europe) which surpassed post Gulf war highs on both sides of the Atlantic. The upward trend was further reinforced in the fourth week of the month by Israeli/Palestinian developments.

During most of the month non-commercials were active on the NYMEX, with strong buying activity when tensions were rising followed by the liquidation of positions when tensions eased (see graph to the right). The recurring brief decreases in WTI prices on the NYMEX, coinciding with the profit taking by non-commercials, was in all instances limited by firm support from low heating oil stocks in the US. The backwardation of both Brent and WTI eased appreciably, decreasing from some \$0.75/bbl at the start of the month to about \$0.25/bbl at the end of September (see right-hand graph on the following page). However, WTI's backwardation increased sharply in the last two trading days of the month.

**Volume of WTI Contracts on NYMEX**  
(Thousands of Contracts)



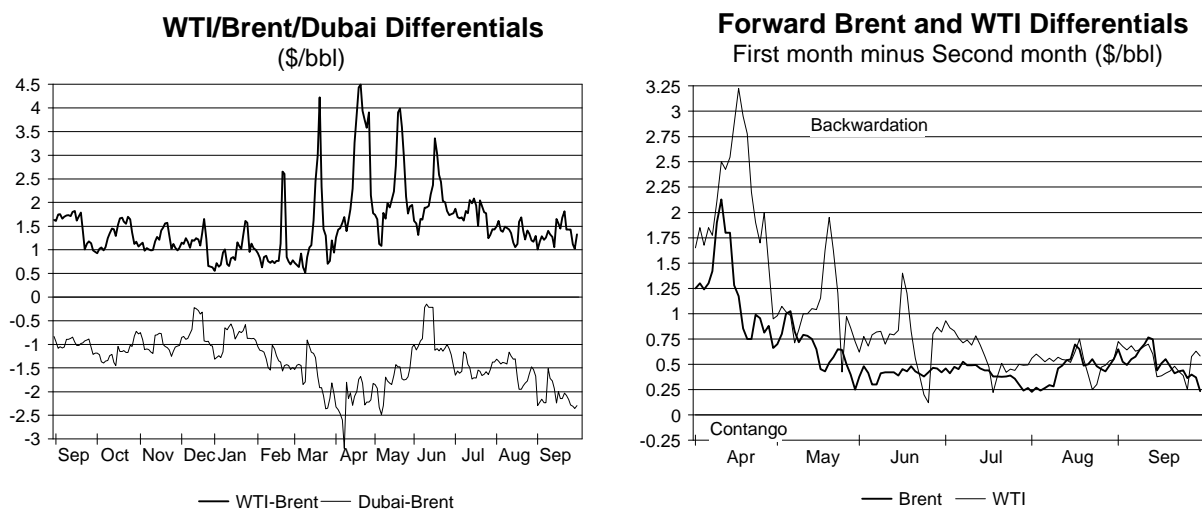
## Spot Crude Oil Prices and Differentials

(monthly and weekly averages, \$/bbl)

	July	Aug	Sept	Change	Week Ending:					
					23 Aug	30 Aug	06 Sept	13 Sept	20 Sept	27 Sept
Brent Dated	19.58	20.60	22.69	2.10	21.09	20.69	22.33	23.17	21.87	23.10
Dubai	17.74	18.66	20.47	1.80	18.68	18.91	20.08	20.99	19.69	20.81
WTI	21.31	21.96	24.01	2.05	22.55	21.94	23.50	24.44	23.45	24.39
Brent over Dubai	1.84	1.93	2.22		2.41	1.78	2.26	2.18	2.18	2.29
WTI over Brent	1.73	1.36	1.32		1.46	1.25	1.17	1.26	1.58	1.29
Brent 1st month minus 2nd month	0.41	0.44	0.52		0.53	0.48	0.55	0.69	0.49	0.40
WTI 1st month minus 2nd month	0.60	0.52	0.55		0.45	0.51	0.68	0.65	0.40	0.46

The transatlantic arbitrage possibility to move North Sea crudes to the US, which closed in late July and remained closed during August, continued to be shut for the first three weeks of September, when Brent prices rose by more than those of WTI. The WTI/Brent differential averaged \$1.32/bbl during this period, the lowest level for nine months. However, in the last week of the month the arbitrage possibility became marginally workable again, albeit briefly (see left-hand graph below).

In the physical market, activity was low early in the month, mainly due to the high volatility in prices. Once tensions in the Arabian Gulf eased, trading activity picked up. The tightness in North Sea crudes seen during August eased in early September and ample supplies during the month, combined with the closed transatlantic arbitrage possibility, contributed to a sustained discount of dated Brent to front-month Brent. In late September, consistent with the easing tightness of spot crude in the US Gulf due to the brief opening of the transatlantic arbitrage possibility for North Sea crudes, prices for sweet crudes decreased relative to those of WTI and the Light Louisiana Sweet price moved from a premium to WTI (which it gained in late July) back to a discount.



Sour crude prices in the Mediterranean gained strength relative to those of Brent during the month as a result of steady refiner demand, the realisation that Iraqi crude will not be available via Turkey in the near future and reduced supplies of Urals (consistent with maintenance on pipelines serving the main Urals Black Sea export port of Novorossiisk). The Brent/Urals spread narrowed from \$1.03/bbl at the end of August to about \$0.60/bbl at the end of September. The Brent/Iranian Heavy spread moved in line with that of Urals, narrowing from \$2.00/bbl at the end of August to \$1.60/bbl by the end of September.

Spot prices for Dubai, the Asian sour benchmark crude, increased by less than those in the Atlantic Basin, reflecting a supply overhang in the Arabian Gulf and stronger heating oil prices in the Atlantic Basin than in Asia. The Brent/Dubai differential, which briefly narrowed to \$1.50/bbl in early September, widened to more than \$2.00/bbl for the remainder of the month as shown in the left-hand graph above.

For most of the month, West African crude supplies were confined to Europe and Africa due to the wide Brent/Dubai differential, which discouraged exports to Asia, and the sharp rise in Brent prices causing the transatlantic arbitrage window to remain closed. However, firm demand for gasoil-rich, sweet crude from the Mediterranean (in order to facilitate the production of the new low sulphur diesel grade mandatory in the European Union by 1 October) provided an outlet for a number of Nigerian Forcados and Bonny-Medium cargoes. Towards the end of September some cargoes were reportedly traded into the US, when the arbitrage possibility became marginally workable again.

Prices for sweet Asian benchmark crudes, Tapis and Minas, increased during the first half of September by less than those of Brent and WTI. In spite of the firmly closed arbitrage window for West African crudes into Asia, regional crude prices remained under pressure from a supply overhang in the Arabian Gulf and weak demand, in particular, for heavy, sweet grades. This caused their relative value to Atlantic Basin benchmark crudes, which had already decreased during August, to decline further. The Tapis/Brent differential, normally positive, became negative for most of the first half of the month and the Brent/Minas

differential, which had become negative during August, widened further. The arbitrage incentive for Asian crude exports to the US, which had risen in the second half of August, increased further in September and a number of Chinese (Xijiang) and Indonesian (Bontang, Bintulu, Attaka) cargoes were reportedly traded to the US.

In the second half of the month, Asian crude prices gained support from firming interest in light, sweet grades and prices rose, generally in line with those of Brent. The differentials to Brent, which increased appreciably when Brent and WTI prices decreased sharply in mid-September, remained within a comparatively stable range for the second half of the month, averaging at a premium for Tapis over Brent of about \$0.90/bbl and a discount for Minas to Brent of about \$1.00/bbl during the second half of the month.

### Spot Product Prices in September

European spot **gasoline** prices came under increasing pressure during the month, mainly due to weak local demand in an increasingly well supplied market, where the transatlantic arbitrage possibility remained essentially closed, refiners maximised the intake of light, sweet crudes and maintenance shutdowns remained at lower-than-usual levels for the time of year. In the first half of the month, demand was subdued as a result of high freight rates on inland waterways and waning demand for summer grade material as the switch to winter specification gasoline on 1 October approached. In spite of the sharp rise in crude prices, spot gasoline prices stagnated during the first two weeks and decreased sharply when crude prices decreased appreciably for a brief period in the middle of the month. In the second half of September, spot prices increased by less than those of crude, remaining under firm supply pressure from high runs of light, sweet crude, which were mainly geared at maximising the production of profitable low sulphur gasoil but at the same time yielded high gasoline production rates.

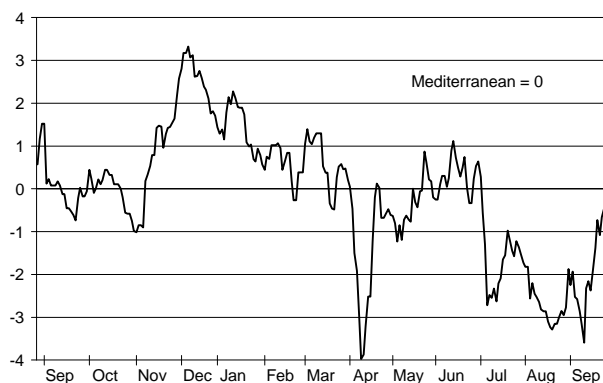
Despite unfavourable spot price-related economics, traders continued to export gasoline to the US and during the month, the economics gradually improved. In Rotterdam, the average gasoline/Brent differential decreased in September to about \$1.05/bbl and \$2.83/bbl for unleaded regular and premium gasoline respectively, the lowest September levels in more than eight years and levels typically seen in peak winter months.

Gasoline prices in the Mediterranean were under slightly less pressure than in Northwest Europe, to a large extent supported by demand from the eastern Mediterranean and more limited supplies. The average premium-gasoline/Urals differential decreased to about \$3.12/bbl, again a level typical for peak winter months.

Unlike in Europe, spot gasoline prices on the US East Coast increased in the first two weeks of the month in line with those of crude, to a large extent driven by the unleaded gasoline contract on the NYMEX. However, gasoline imports averaged more than 460 kb/d up to the third week of September at a time of seasonally-declining demand and higher-than-usual production due to lower-than-normal refinery maintenance. This exerted a firm downward pressure on spot gasoline prices and prices for prompt gasoline barges in New York Harbour consequently fell from the usual premium to the NYMEX unleaded gasoline contract to a discount in the last week of September. The average gasoline/WTI differential for regular gasoline in New York Harbour decreased to \$2.04/bbl, the lowest spread for more than two years.

The Asian gasoline market remained under firm pressure from regional oversupply throughout the month. Following a price spike in late August, spot prices in Singapore decreased in early September but gained some limited support in the second week of the month from the possibility to export gasoline cargoes to eastern and southern Africa, when the discount to Mediterranean grades had increased sufficiently (see graph to the right). In the last three weeks of September spot prices traded within a narrow band at notably higher levels than in August, almost unaffected by developments in crude oil markets. Average gasoline prices increased in Singapore by more than those in the US and

**Unleaded Gasoline Differential  
Singapore vs Mediterranean (\$/bbl)**



Europe (as shown in the table below). The gasoline/Dubai differential decreased to an average of \$2.38/bbl, the lowest monthly average value in more than eight years and almost \$3.00/bbl less than during the same month last year.

**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
Jul	22.94	24.19	25.89	22.55	24.16	22.56	23.35	24.39	15.91	16.24	17.90	16.68
Aug	23.09	24.28	25.64	21.59	24.93	23.88	25.35	25.32	15.82	15.42	17.35	17.43
Sept	23.91	24.66	26.10	22.83	30.14	28.74	28.37	27.86	17.33	17.66	18.54	18.59
Sept-Aug	0.81	0.38	0.46	1.24	5.21	4.86	3.03	2.53	1.52	2.24	1.19	1.16
Week ending:												
23 Aug	23.40	24.63	25.92	21.47	25.34	24.45	25.90	25.58	15.93	15.86	17.67	17.85
30 Aug	23.17	24.31	25.28	21.70	25.99	25.18	26.17	25.77	16.26	16.18	17.13	17.57
6 Sept	24.78	25.30	26.13	22.98	28.68	27.40	27.25	27.29	16.83	16.66	17.06	18.16
13 Sept	24.80	25.17	26.85	22.36	30.03	28.73	28.34	28.18	17.44	17.35	18.64	18.43
20 Sept	23.39	24.49	25.67	22.89	30.02	28.47	27.83	27.78	17.24	18.11	19.03	18.17
27 Sept	22.80	23.86	25.71	23.00	31.11	29.66	29.42	27.91	17.55	18.18	19.13	19.17

\* Gasolines are unleaded conventional regular in Rotterdam and New York Harbour and unleaded 95 in Singapore and Med. Low Sulphur Residual Fuel Oils are 1.0% LSFO in Rotterdam, Med and New York Harbour and, as from 1 April 1996, mixed/cracked low sulphur waxy residue fob Indonesia.

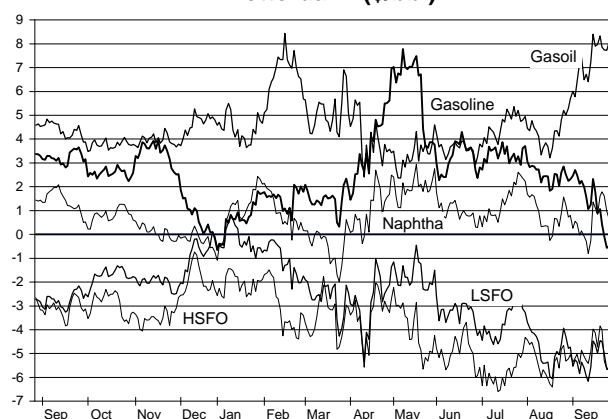
Spot **naphtha** prices in Northwest Europe and in the Mediterranean increased steadily during September, and the monthly averages rose by appreciably more than those of gasoline and by slightly less than those of crude. Prices rose mainly as a result of a tight supply/demand balance, in line with firm regional demand, a lack of suitable vessels early in the month and strong demand for transatlantic export cargoes. The increase in spot naphtha prices, in spite of the weakness of European gasoline prices, was to a large extent the result of the sharp increase in LPG prices on both sides of the Atlantic, which increased demand for naphtha as a cheaper alternative steam cracker feed. In addition, naphtha prices in the Mediterranean were supported by scarce supplies following the sale of a number of cargoes to the US and to South America and the planned maintenance shutdown of part of Algeria's Skikda refinery early in the month. The high naphtha prices in the Mediterranean reportedly started to attract arbitrage cargoes from the Middle East and Asia towards the end of the month.

Naphtha prices in Northwest Europe surpassed those of regular gasoline in the third week of the month, causing the **reforming margin** in the region to become negative during the last decade of September. Refineries consequently started to reduce reforming throughputs where reformer intake levels were not set by the refinery's hydrogen requirements.

Spot naphtha prices in Singapore drifted higher throughout the month, albeit rising by less than those in Europe and by less than crude prices. They were mainly supported by the rise in crude prices and re-emerging naphtha demand from northern Asia ahead of the start-up period of petrochemical plants in November. The gasoline/naphtha price differential in Singapore remained at the low, near break-even level it fell to during August, averaging some \$0.20/bbl higher than in August but \$2.71/bbl lower than during the same month last year. Monthly average naphtha prices increased by \$1.84/bbl in Northwest Europe, by \$1.59/bbl in the Mediterranean and by \$1.03/bbl in Singapore.

Spot **gasoil** prices increased sharply in all major markets, consistently rising by more than those of crude. The steepest average increase occurred in Europe, where spot barge prices increased on average by more than 20%. European gasoil prices rose more steeply than those of crude throughout the month due to strong, rising regional demand (Germany and France) combined with tightening supply fundamentals and low gasoil stocks ahead of the winter heating season.

**Product Differentials vs Brent in Rotterdam (\$/bbl)**



The increase in prices was largely led by the sharp price increase of the gasoil contract on the IPE. The steep rise in Rotterdam gasoil prices, reaching the highest levels in five years, caused the gasoil/Brent spread to average more than \$8.00/bbl for the second half of the month (see graph above), the highest differential since the Gulf war and some \$3.60/bbl higher than during the same month last year.

Supply tightness for heating oil was aggravated by the fact that refiners maximised the production of the new 0.05% sulphur diesel grade (mandatory in EU countries by 1 October), which, due to strong stock building demand ahead of its introduction, incurred high premia over normal heating oil. Northwest Europe's supply balance tightened as a result of the export possibility for the new 0.05% sulphur diesel grade to the Mediterranean, where premia for low sulphur diesel over gasoil were almost twice as high as in Northwest Europe. In September, the differential between gasoil (0.02% sulphur) and the new low sulphur diesel grade averaged about \$6.00/tonne (\$0.80/bbl) in Northwest Europe and about \$9.00/tonne (\$1.20/bbl) in the Mediterranean. The wider differential in the Mediterranean was the result of the current lack of necessary regional desulphurisation capacity, mainly in Portugal, Greece and, to a lesser extent, in Italy.

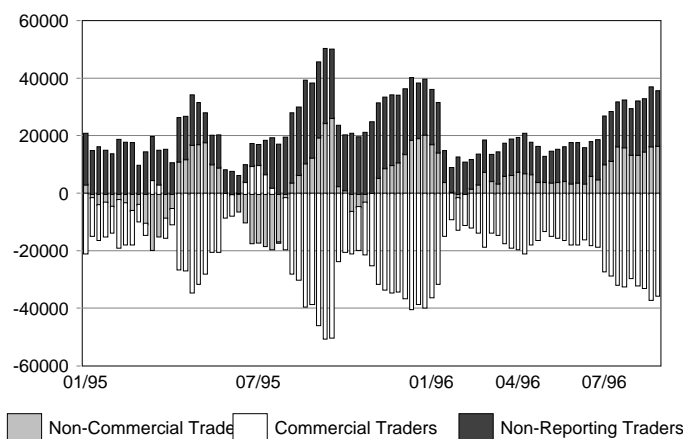
The gasoil contract on the IPE remained in steep backwardation in the front months throughout September, reflecting low stocks and growing concerns about the lack of seasonal gasoil stockbuild on both sides of the Atlantic in spite of less refinery outages for maintenance than last autumn.

Spot heating oil prices in the US continued to rise strongly as a result of a combination of strong demand and continuing historically low gasoil stocks, both in the US and in Europe, which again failed to build as much as was considered necessary by the market. Market concerns over a potential supply tightness during the forthcoming winter heating season continued to grow. The gasoil/WTI spread increased for the fourth successive month, widening from about \$4.00/bbl in late August to more than \$5.50/bbl by the end of September, compared to an average of \$2.80/bbl for the same month last year. Most of the gasoil stock shortfall is concentrated on the US East Coast, the main heating oil demand centre in the US and the delivery point for the heating oil contract on the NYMEX.

Despite the market's concerns about heating oil supply adequacy for the winter ahead and the limited seasonal stock build (even though refiners were maximising gasoil production), an estimated 3.7 mb of gasoil were exported from North America and the Caribbean to Europe and some 1.5 mb from the US Gulf Coast to Brazil, attracted by the opening of arbitrage possibilities.

The heating oil contract for the near-months on the NYMEX, which had alternated during August between a very shallow contango and a very shallow backwardation, remained in a steadily increasing backwardation throughout September and thus continued to discourage a seasonal stock-build of gasoil. The volume of heating oil contracts on the NYMEX continued to increase in September (as shown in the graph to the right), the average number of contracts in the first three weeks of September being some 18% higher than the August average. The share of non-reporting traders (those holding contract volumes below a certain threshold) in the total of net long positions held by non-commercial and non-reporting traders continued to decrease gradually during September.

**Volume and Distribution of Heating Oil Contracts on the NYMEX**



In September, the spot gasoil market in Singapore was characterised by weak regional demand. Prices mainly moved in line with those of crude in the first half of the month and gained limited support in the second half of the month from tightening supplies, when Middle Eastern gasoil cargoes were diverted from Asian destinations towards Africa and Brazil and spot gasoil prices remained within a narrow band in the last two weeks of the month. Average gasoil prices in Singapore increased by less than those in Europe and the US and the gasoil/Dubai spread decreased gradually in the second half of the month.

Spot **kerosene** prices moved primarily in line with those of gasoil in all major markets. On average, kerosene prices increased by \$5.03/bbl in Rotterdam and the Mediterranean, by \$2.86/bbl in New York Harbour and \$1.72/bbl in Singapore. The steep rise in kerosene prices in Europe was due to firm kerosene demand for gasoil blending, in particular for the new 0.05 % sulphur diesel grade, and tight availability, mainly due to refiners maintaining high gasoil yields. The wide kerosene/gasoil differential in New York Harbour, which built up in late July and remained at about \$2.00/bbl during August (following persistent refinery problems on the US West Coast that caused the diversion of Gulf Coast jet-kerosene volumes to the West Coast), decreased sharply to some \$0.10/bbl by the end of the month. The start-up of refining capacity from maintenance shutdowns on the Atlantic Coast and an end to the kerosene tightness on the West Coast contributed to an easing of local supply tightness and the sharp narrowing of the differential.

Kerosene prices in Singapore increased by less than those in Europe and the US, reflecting the relative weakness in Asian gasoil prices and the narrowing of the kerosene/gasoil differential in Asia. The kerosene/gasoil differential in Singapore narrowed from an average of \$2.78/bbl in August to \$1.95/bbl in September, consistent with ample regional supplies exceeding slightly decreasing regional demand.

In early September, spot **LSFO** prices in the Mediterranean continued to increase appreciably from their August low point, rising by more than \$2.00/bbl before remaining within a narrow band for the remainder of the month. The increase in prices was mainly a result of tightening supplies as LSFO arbitrage cargoes were moved across the Atlantic. LSFO prices in Northwest Europe increased by less than those in the Mediterranean but rose in line with those of crude. However, the average Brent/LSFO differential, which increased slightly in September, continued to be appreciably wider than during the same month last year. In the last week of September, spot LSFO prices rose, in line with short covering demand by traders into Italy's utility ENEL.

In the US, Atlantic Coast spot LSFO prices increased in early September, consistent with the rise in crude prices but remained almost unchanged for the remainder of the month, rising on average by less than crude prices. Prices remained under firm pressure from decreasing natural gas prices that provided an increasingly competitive fuel for utilities. These switched from fuel oil burning to cheaper natural gas wherever possible. The LSFO swaps market on the Atlantic Coast turned into contango for as far ahead as January. This encouraged LSFO stock-building, minimised trade and supported prices.

Asian **LSWR** prices continued to drift higher during September in a finely balanced market, closing the month some \$1.90/bbl higher than at the end of August. Prices were supported in the first half of September by export possibilities of LSWR to the US West Coast as a crude substitute when WTI prices increased appreciably. In mid-month, a lack of regional demand, due to cooler weather in Northern Asia, combined with the brief decrease in crude oil prices and the related closure of the transpacific arbitrage possibility and LSWR prices decreased briefly. However, they gained renewed support towards the end of the month as a result of a smaller-than-expected LSWR export allocation by Indonesia for November.

Average European **HSFO** prices increased appreciably, rising by \$2.79/bbl in the Mediterranean and \$2.38/bbl in Rotterdam, mainly as a result of supply tightness, strong HSFO and bunker fuel demand and firming sour crude prices in the Mediterranean. HSFO prices exceeded those of LSFO in Rotterdam in early September and the monthly average HSFO price was some \$0.32/bbl higher than LSFO.

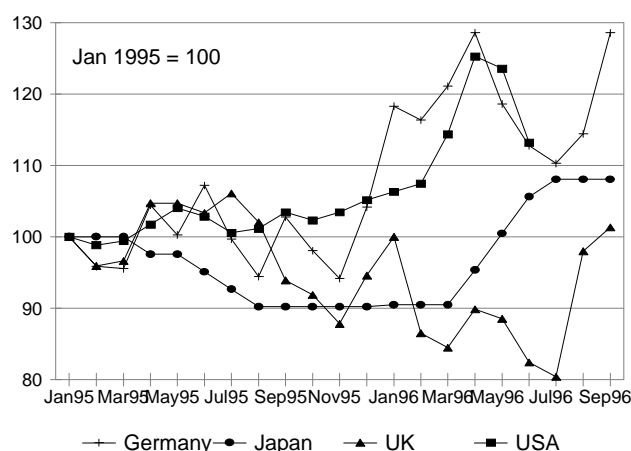
HSFO prices in Singapore averaged some \$2.43/bbl higher than in August, consistent with firm regional bunker fuel and HSFO demand and a tightening supply situation earlier in the month, caused by a lack of export cargoes from the Middle East. Increasing local supply and the arrival of export cargoes from the Middle East towards the end of the month began to alleviate the upward pressure on prices. Chinese and Indonesian demand increased in the second half of September, providing limited support to prices.

In early September, HSFO prices on the US East Coast increased by about \$1.50/bbl, in line with the rise in crude prices, but remained unchanged and unaffected by crude price developments for the remainder of the month. In the US Gulf, HSFO prices increased by almost \$2.80/bbl during the same period, gaining additional support from demand into Mexico (where natural gas supply was disrupted by an explosion at the country's main gas processing facility), firm Bunker demand and supply tightness due to Venezuelan exports into the Mediterranean. In New York Harbour, the average LSFO/HSFO differential increased slightly to \$2.27/bbl but decreased appreciably in the US Gulf, narrowing by some \$1.90/bbl to a mere \$0.53/bbl. In the Mediterranean the differential narrowed to \$1.10/bbl.

## End-User Product Prices

In September, mid-month end user prices for transportation fuels increased in almost all countries shown in Table 9, in line with the appreciable price increases in spot oil markets, in particular, in early September. The exception was in Japan, where gasoline and diesel prices remained unchanged and the US, where gasoline prices decreased. The largest increase in gasoline prices occurred in the UK, albeit from comparatively low, price-war-related levels, as companies continued to make efforts to increase weak retail margins. Automotive diesel prices increased in general by more than those of gasoline, reflecting the sharp rise in spot gasoil prices in all major markets. Prices increased appreciably on a pre-tax basis compared to last month's level and were more than 25% higher than a year earlier in France, Germany and Spain.

### End-User Automotive Diesel Prices Local Currency Basis - Excluding Tax



Heating oil prices for domestic consumers increased in all countries shown in Table 9. The exception was in the US, where prices decreased slightly. Heating oil prices increased by even more than those of diesel oil, with the sharpest increases occurring in Spain and France. Mid-month heavy fuel oil prices for industry increased in all five European countries, consistent with the firm increase in European spot fuel oil markets, but remained unchanged in Japan.

## Refining Margins in September

While average refining margins decreased in the US and in Northwest Europe in September, margins increased appreciably in the Mediterranean and, to a lesser extent, in Singapore. However, margins were volatile in all major markets during the month, to a large extent affected by the sharp changes in crude prices.

### Refining Margins in Major Refining Centres

(monthly and weekly averages, \$/bbl)

	July	Aug	Sept	Change	Week Ending:					
					23 Aug	30 Aug	06 Sept	13 Sept	20 Sept	27 Sept
<b>NW Europe</b>										
Brent (Hydroskimming)	0.65	-0.04	-0.20	-0.17	-0.11	0.41	-0.41	-0.84	0.61	-0.16
Brent (Cracking)	1.77	1.23	0.90	-0.33	1.15	1.65	0.92	0.36	1.61	0.78
<b>Mediterranean</b>										
Urals (Hydroskimming)	0.78	-0.02	0.95	0.97	0.19	1.19	0.75	0.66	2.05	1.17
Urals (Cracking)	2.00	1.31	2.10	0.79	1.40	2.32	1.99	1.80	2.99	2.06
<b>US Gulf Coast</b>										
Brent (Cracking)	1.38	0.59	-0.08	-0.67	0.41	0.35	-0.34	-0.19	0.43	-0.16
WTI (Cracking)	0.95	0.50	-0.23	-0.73	0.24	0.37	-0.25	-0.25	-0.07	-0.32
<b>Singapore</b>										
Dubai (Hydroskimming)	-0.40	-0.44	0.05	0.49	0.02	-0.01	0.10	-0.53	0.87	-0.08
Dubai (Cracking)	1.74	1.32	1.69	0.37	1.61	1.56	1.73	1.13	2.49	1.52

Sour crude refining margins in the Mediterranean, which had decreased in August to a level at which some refiners decided to reduce refinery throughputs, increased sharply in early September, mainly supported by strong middle distillate and fuel oil prices, which increased by appreciably more than those of crude. Margins decreased gradually during the second half of the month as a result of steadily increasing sour crude prices but still averaged well above the level in Northwest Europe. The average hydroskimming margin in the Mediterranean increased by slightly more than the cracking margin, consistent with the larger rises in gasoil and fuel oil prices relative to those of lighter products.

In contrast to the Mediterranean, monthly average Rotterdam refining margins decreased. They came under strong downward pressure from low and decreasing gasoline prices, which more than offset

strengthening middle distillate prices. This development was reflected in the cracking margin decreasing by more than the hydroskimming margin.

On the US Gulf Coast, average refining margins decreased appreciably, falling to the lowest level in eighteen months, as average product prices failed to rise by as much as crude prices. As in Europe, decreasing gasoline prices more than offset the appreciable rise in middle distillate prices. However, unlike in Europe, refining margins on the US Gulf Coast moved within a relatively narrow band of less than \$1.00/bbl.

The average Singapore Dubai hydroskimming and cracking margins increased, largely due to strong gasoil and fuel oil prices. The margins were also supported by a less pronounced decrease in gasoline prices in Singapore compared to those in Europe and the US. In the second half of the month margins decreased gradually as a result of rising crude prices combined with stagnating product prices for distillates and gasoline. The hydroskimming margin rose by more than the cracking margin, consistent with strengthening prices for gasoil and fuel oil.

### Refinery Crude Throughputs in August

The aggregate refinery throughputs for August in OECD countries increased by 0.4 mb/d to 33.5 mb/d from the downwardly-revised July levels. Increases of 0.4 mb/d in Japan and 0.05 mb/d in both the US and Australasia were partly offset by a 0.1 mb/d decrease in Europe. Throughputs for Canada are estimated to have remained unchanged. Total August throughputs were 0.6 mb/d or 1.7% higher than a year earlier.

#### Refinery Crude Throughput in OECD Countries

	million barrels per day						% change from previous year	
	Apr	May	Jun	Jul	Aug*	Jan-Aug 1996*	Aug	Jan-Aug
OECD Europe	12.22	12.32	12.42	12.73	12.65	12.52	0.7	3.5
France	1.66	1.71	1.61	1.64	1.66	1.67	0.2	6.8
Germany	2.01	2.08	2.13	2.17	2.14	2.09	-2.2	-0.8
Italy	1.41	1.36	1.42	1.60	1.59	1.57	-0.0	0.0
Netherlands	1.17	1.20	1.17	1.21	1.19	1.18	3.3	3.6
UK	1.76	1.78	1.78	1.77	1.77	1.75	5.0	6.6
US	14.26	14.32	14.50	14.35	14.40	14.10	0.8	0.9
Canada	1.23	1.31	1.42	1.46	1.45	1.37	10.4	6.2
Japan	4.37	3.58	3.28	3.98	4.38	4.18	4.8	-0.0
Australia/New Zealand	0.49	0.56	0.60	0.55	0.60	0.55	1.8	0.1
OECD Total	32.57	32.08	32.21	33.08	33.48	32.73	1.7	2.0

\* estimated

Preliminary data suggest that total crude throughputs in distillation units in Europe decreased by 0.1 mb/d to just below 12.7 mb/d, which nonetheless was the highest August throughput level for more than eight years. The slight decrease in throughputs was to a large extent due to a turnaround in an Austrian refinery, while throughputs in other European countries changed very little, with minor decreases offset by minor increases. European refinery utilisation decreased by 0.6% and total August throughputs were 0.9% or almost 0.1 mb/d higher than a year earlier.

Crude throughputs in the US increased by 0.05 mb/d to almost 14.40 mb/d, some 0.8% or 0.1 mb/d higher than a year earlier. Refinery utilisation, based on operating refinery capacity, is estimated to have increased by 0.2% from July levels to 96.9% almost 2% higher than the level a year earlier. A 5% year-on-year increase in throughputs on the US Gulf Coast was partly offset by declines on the East and West Coasts. Strong gasoil demand and low heating oil stocks continued to keep US throughputs close to full capacity, apart from unscheduled shutdowns on the US West Coast.

Japanese crude throughputs increased by 0.4 mb/d to almost 4.4 mb/d, as some refineries completed seasonal maintenance shutdowns. Total throughputs were 4.8% or almost 0.2 mb/d higher than a year earlier. In line with persistently weak refining margins, Singapore refiners reportedly maintained some of the cut in refinery throughputs introduced in June. However, throughputs increased to an estimated 1.07 mb/d, following the return of a crude distillation unit at Shell's Pulau Bukom refinery from a planned maintenance shutdown.

In September, refinery throughputs are thought to have decreased slightly in Europe and to a larger extent in Japan in line with further seasonal maintenance shutdowns. Weekly US statistics for the first three weeks of September suggest that throughput levels increased slightly. It is reported that some refiners discontinued earlier throughput cuts and Singapore's refinery throughput is expected to have reached just over 1.09 mb/d in September and is projected to increase to 1.14 mb/d in October.

### Refinery Maintenance Shutdowns

In the Asia-Pacific region (excluding China), more than 1.0 mb/d of refining capacity is planned to be shut down for maintenance during October. The majority of this turnaround activity will be in Japan. In the US, maintenance shutdowns are projected this autumn to be at the lowest level for more than five years. European refinery maintenance, which is expected to reach only half of last year's level during this autumn, may in part be deferred as a result of strong gasoil demand and favourable refining margins. Major maintenance in the Arabian Gulf is planned for November.

Hess plans to take a 100 kb/d catalytic cracker out of operation at its St. Croix refinery in the Caribbean during October. The shutdown is planned in order to carry out regular maintenance and to increase the unit's throughput to 125 kb/d, and is reportedly expected to last some 40 days.

### Refinery Maintenance Shutdowns

(mb/d of Nameplate Capacity)

	October	November	December
Europe	0.40	0.30	0.05
US	0.29	0.28	0.14
Persian Gulf	-	0.31	0.11
Japan	0.77	0.18	0.06
Korea	0.15	0.05	-
Indonesia	0.12	0.08	-
New Zealand	-	0.04	-
Total Asia-Pacific*	1.04	0.35	0.06

IEA estimates (except for US: PIRA Energy Group, New York)  
\* Sum of five listed Asia-Pacific countries

### Industry Developments

US companies Ultramar Corporation and Diamond Shamrock Inc. announced in September that they have agreed to merge. The new combined company will have revenues of more than \$8 billion and an equity market value of over \$2.3 billion. The company will be named Ultramar Diamond Shamrock Corp and will be headquartered in San Antonio, Texas.

Mobil announced plans to return to Kenya after a 10-year absence. It has agreed to buy all of Exxon's assets, which include an import/export terminal, a lubes plant and an LPG plant, all located in the coastal city of Mombasa. Other assets include 80 retail outlets and refuelling facilities at Nairobi and Mombasa airports. Mobil's return to Kenya will give it a 12.5% market share in east Africa's largest market, with local demand of around 50 kb/d.

In Australia, independent oil companies are raising gasoline imports, increasing competition with the major oil companies in the retail market. Until recently, the lack of available storage facilities inhibited independent companies from importing gasoline for their retail stations in Australia. Burmah Fuels, Australia's largest wholesaler, imported its first gasoline cargo in September into leased space in Van Ommeren's new storage terminal in Sydney. Australian Petroleum, the Ampol-Caltex joint-venture, hopes to sell six terminals by the end of the year, allowing more independent companies to import.

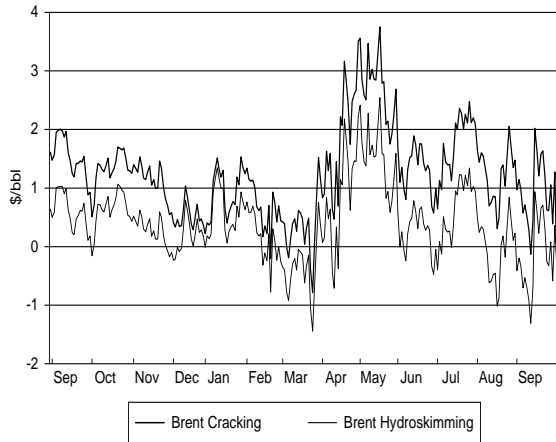
A major US engineering company announced that it has begun a project to modernise and upgrade the Yaroslavl oil refinery, 200 miles north of Moscow. The project, which is projected to take about two years and cost \$60 million, is financed by the export-import bank of the US under the oil and gas framework agreement between the US and Russia. Plans include the upgrading of the refinery's cracking unit, which

should increase production of gasoline, diesel and aviation kerosene fuels (Yaroslavl refinery started up in 1961 and has recently changed from being a state-operated company to an open joint-stock company. The refinery's crude oil capacity is 17 million tons per year).

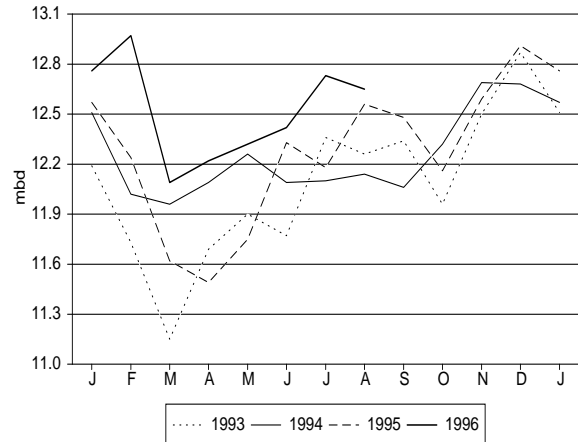
Italy has announced plans to reduce the maximum benzene content of leaded and unleaded gasoline sold in the country from 3% to 1.4% beginning 1 July 1997.

BP Australia has increased crude distillation capacity at its Bulwer Island refinery near Brisbane by 18 kb/d to 73 kb/d as from September.

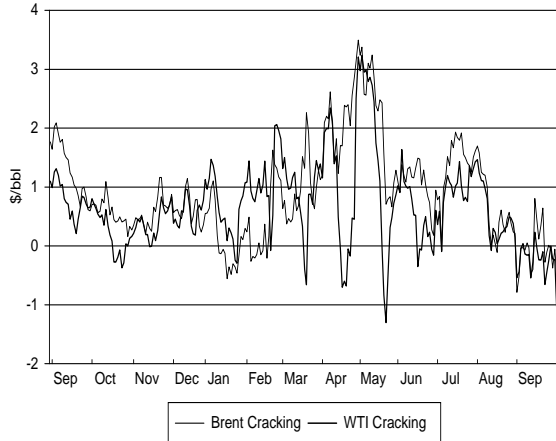
**Rotterdam Refining Margins**



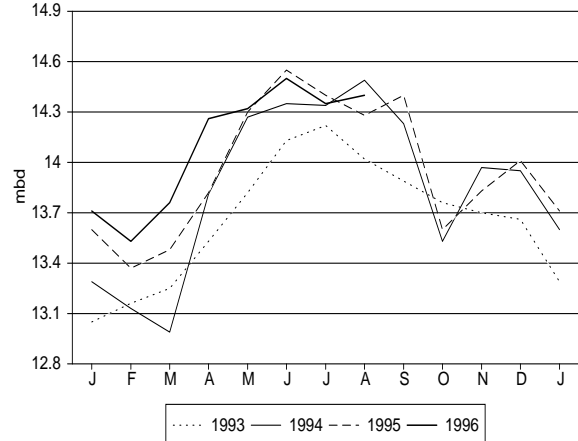
**OECD Europe Crude Throughputs**



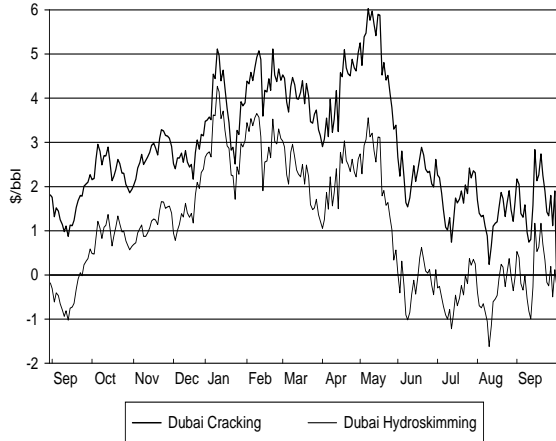
**US Gulf Refining Margins**



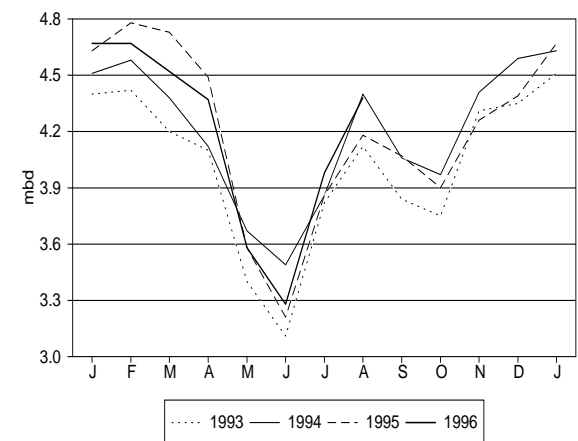
**US Crude Throughputs**



**Singapore Refining Margins**



**Japan Crude Throughputs**



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

	1993	1994	1Q95	2Q95	3Q95	4Q95	1995	1Q96	2Q96	3Q96	4Q96	1996	1Q97	2Q97	3Q97	4Q97	1997
<b>DEMAND</b>																	
OECD																	
North America	19.2	19.8	19.7	19.5	19.8	20.1	19.8	20.4	20.0	20.3	20.4	20.3	20.5	20.1	20.7	20.8	20.5
Europe	13.6	13.6	14.0	13.5	13.6	14.3	13.8	14.3	13.5	13.9	14.5	14.1	14.5	13.8	14.1	14.7	14.3
Pacific	6.3	6.6	7.3	6.2	6.3	6.9	6.7	7.4	6.2	6.4	7.0	6.8	7.6	6.3	6.5	7.1	6.9
<b>TOTAL OECD</b>	<b>39.0</b>	<b>40.0</b>	<b>41.0</b>	<b>39.2</b>	<b>39.7</b>	<b>41.3</b>	<b>40.3</b>	<b>42.1</b>	<b>39.6</b>	<b>40.7</b>	<b>41.9</b>	<b>41.1</b>	<b>42.5</b>	<b>40.3</b>	<b>41.3</b>	<b>42.7</b>	<b>41.7</b>
NON-OECD																	
FSU <sup>1</sup>	5.7	4.9	5.1	4.5	4.5	4.9	4.7	4.6	4.1	4.3	4.8	4.5	4.7	4.2	4.3	4.8	4.5
Europe	1.3	1.3	1.4	1.3	1.3	1.4	1.3	1.5	1.4	1.3	1.4	1.4	1.6	1.5	1.4	1.5	1.5
China <sup>2</sup>	3.0	3.1	3.2	3.3	3.4	3.4	3.3	3.4	3.6	3.6	3.7	3.6	3.6	3.8	3.8	3.9	3.8
Other Asia	6.9	7.4	8.1	7.9	7.6	8.5	8.0	8.7	8.3	8.1	9.0	8.6	9.3	9.0	8.7	9.7	9.2
Latin America	5.7	6.0	6.2	6.0	6.1	6.2	6.1	6.2	6.3	6.4	6.4	6.3	6.5	6.5	6.6	6.6	6.6
Middle East	3.9	4.0	4.0	4.0	4.1	4.1	4.1	4.1	4.0	4.2	4.2	4.1	4.2	4.1	4.3	4.3	4.2
Africa	2.1	2.1	2.2	2.2	2.1	2.2	2.2	2.2	2.2	2.1	2.2	2.2	2.3	2.3	2.2	2.3	2.3
<b>TOTAL NON-OECD</b>	<b>28.5</b>	<b>28.9</b>	<b>30.2</b>	<b>29.1</b>	<b>29.0</b>	<b>30.6</b>	<b>29.8</b>	<b>30.8</b>	<b>30.0</b>	<b>30.0</b>	<b>31.8</b>	<b>30.7</b>	<b>32.2</b>	<b>31.4</b>	<b>31.2</b>	<b>33.1</b>	<b>32.0</b>
<b>TOTAL DEMAND<sup>3</sup></b>	<b>67.6</b>	<b>68.9</b>	<b>71.3</b>	<b>68.3</b>	<b>68.8</b>	<b>72.0</b>	<b>70.1</b>	<b>72.9</b>	<b>69.7</b>	<b>70.6</b>	<b>73.7</b>	<b>71.8</b>	<b>74.7</b>	<b>71.7</b>	<b>72.5</b>	<b>75.7</b>	<b>73.6</b>
<b>SUPPLY</b>																	
OECD																	
North America	11.0	10.9	11.1	11.0	10.9	11.0	11.0	11.0	11.0	11.0	11.2	11.0	11.1	10.9	10.9	11.2	11.0
Europe	5.1	6.0	6.4	6.0	6.2	6.7	6.3	6.6	6.6	6.6	7.4	6.8	7.5	7.2	7.1	8.2	7.5
Pacific	0.7	0.7	0.7	0.7	0.7	0.6	0.7	0.7	0.7	0.8	0.8	0.8	0.8	0.8	0.9	0.8	0.8
<b>TOTAL OECD</b>	<b>16.8</b>	<b>17.6</b>	<b>18.1</b>	<b>17.7</b>	<b>17.7</b>	<b>18.4</b>	<b>18.0</b>	<b>18.3</b>	<b>18.3</b>	<b>18.4</b>	<b>19.5</b>	<b>18.6</b>	<b>19.5</b>	<b>18.9</b>	<b>18.9</b>	<b>20.2</b>	<b>19.3</b>
NON-OECD																	
FSU	7.9	7.3	7.1	7.1	7.1	7.1	7.1	7.0	7.0	7.1	7.1	7.0	7.2	7.1	7.2	7.4	7.2
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	2.9	2.8	3.0	2.9	3.0	3.0	3.0	3.1	3.1	3.1	3.2	3.1	3.2	3.2	3.2	3.2	3.2
Other Asia	1.8	1.9	2.0	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.0
Latin America	5.8	5.9	6.1	6.0	6.3	5.9	6.1	6.5	6.5	6.5	6.7	6.5	6.7	6.8	7.1	7.2	6.9
Middle East	1.6	1.8	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.0
Africa	2.3	2.4	2.5	2.6	2.6	2.6	2.6	2.6	2.7	2.7	2.9	2.7	2.9	2.9	3.0	3.0	3.0
Processing Gains <sup>4</sup>	1.4	1.4	1.5	1.4	1.4	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.6	1.6	1.6	1.6	1.6
<b>TOTAL NON-OPEC</b>	<b>40.8</b>	<b>41.6</b>	<b>42.4</b>	<b>42.0</b>	<b>42.4</b>	<b>42.7</b>	<b>42.4</b>	<b>43.2</b>	<b>43.2</b>	<b>43.5</b>	<b>45.0</b>	<b>43.7</b>	<b>45.3</b>	<b>44.8</b>	<b>45.1</b>	<b>46.9</b>	<b>45.5</b>
OPEC																	
Crude	24.4	24.7	24.8	24.9	25.2	25.3	25.1	25.7	25.6	25.9							
NGLs	2.3	2.4	2.4	2.4	2.4	2.5	2.4	2.5	2.6	2.7	2.8	2.6	2.7	2.8	2.8	2.9	2.8
<b>TOTAL OPEC</b>	<b>26.6</b>	<b>27.0</b>	<b>27.2</b>	<b>27.3</b>	<b>27.6</b>	<b>27.8</b>	<b>27.5</b>	<b>28.2</b>	<b>28.2</b>	<b>28.6</b>							
<b>TOTAL SUPPLY<sup>5</sup></b>	<b>67.5</b>	<b>68.6</b>	<b>69.6</b>	<b>69.3</b>	<b>70.1</b>	<b>70.5</b>	<b>69.9</b>	<b>71.4</b>	<b>71.4</b>	<b>72.1</b>							
<b>STOCK CHANGES AND MISCELLANEOUS</b>																	
REPORTED OECD																	
Industry	0.1	0.1	-1.3	0.7	0.4	-1.2	-0.3	-1.2	1.1	0.9							
Government	0.1	0.1	0.1	-0.1	0.1	0.1	0.0	0.0	-0.1	-0.1							
<b>TOTAL OECD</b>	<b>0.2</b>	<b>0.2</b>	<b>-1.2</b>	<b>0.7</b>	<b>0.5</b>	<b>-1.2</b>	<b>-0.3</b>	<b>-1.2</b>	<b>1.0</b>	<b>0.8</b>							
Floating Storage/Oil in Transit	0.1	-0.1	-0.3	0.1	0.2	0.3	0.1	-0.3	0.1	0.0							
Miscellaneous to balance <sup>6</sup>	-0.4	-0.4	-0.1	0.2	0.6	-0.6	0.0	-0.1	0.6	0.6							
<b>TOTAL STOCK CH. &amp; MISC.</b>	<b>-0.1</b>	<b>-0.3</b>	<b>-1.6</b>	<b>1.0</b>	<b>1.3</b>	<b>-1.4</b>	<b>-0.2</b>	<b>-1.6</b>	<b>1.7</b>	<b>1.4</b>							
Memo items:																	
FSU Net Exports	2.2	2.4	2.0	2.7	2.6	2.2	2.4	2.4	2.9	2.8	2.3	2.6	2.5	2.9	2.9	2.5	2.7
Call on OPEC crude + Stock ch. <sup>7</sup>	24.5	24.9	26.5	23.9	23.9	26.7	25.3	27.2	23.9	24.5	25.9	25.4	26.7	24.1	24.5	26.0	25.3
Total Demand ex. FSU	61.8	64.0	66.2	63.8	64.2	67.1	65.3	68.3	65.5	66.4	68.9	67.3	70.0	67.5	68.2	70.9	69.2
Total demand exc. FSU (% ch) <sup>8</sup>	2.6	3.5	2.5	2.5	1.4	2.1	2.1	3.2	2.6	3.3	2.7	3.0	2.5	3.0	2.7	3.0	2.8

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)

	1993	1994	1Q95	2Q95	3Q95	4Q95	1995	1Q96	2Q96	3Q96	4Q96	1996	1Q97	2Q97	3Q97	4Q97	1997
<b>DEMAND</b>																	
OECD																	
North America	-	-	-	-	-0.1	-	-	-	-	-0.1	-	-	-	-	-	-	-
Europe	-	-	-	-	-	-	-	-	-0.1	-	-	-	-	-0.1	0.1	-	-
Pacific	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>TOTAL OECD</b>	-	-	-	0.1	-	-	-	-	-0.1	-	-	-	-	-	0.1	0.1	-
NON-OECD																	
FSU	-	0.1	-	-	-	-0.1	-0.1	-0.1	-0.1	-	-0.1	-	-0.1	-	-	-	-
Europe	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
China	-	-	-	-	-	-	-	-	0.1	-	0.1	0.1	-	0.1	-	-	0.1
Other Asia	-	-	-	-	-	-	-	-	-0.1	-	-	-	-	-0.1	0.1	-	-
Latin America	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.1
Middle East	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Africa	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>TOTAL NON-OECD</b>	-	0.1	-	-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	-	-0.1	-	0.1	-	-
<b>SUPPLY</b>																	
OECD																	
North America	-	-	-	-	-	-	-	-	0.1	0.1	-	-	-	-	-	-	-
Europe	-	-	-	-	-	-	-	-	-	-0.1	-0.1	-0.1	-	-	-	-	-
Pacific	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.1	-	-
<b>TOTAL OECD</b>	-	-	-	-	-	-	-	-	0.1	-	-	-	-	-	0.1	-	-
NON-OECD																	
FSU	-	0.1	-	-0.1	-	-0.1	-0.1	-0.1	-0.1	-	-0.1	-0.1	-0.2	-0.1	-0.1	-	-0.1
Europe	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
China	-	-	-	-	-	-	-	-	-	-0.1	-	-0.1	-	-	-	-	-
Other Asia	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Latin America	-	-	-	-	-	-	-	-	-	0.1	0.1	-	-	-	-	-	-
Middle East	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Africa	-	-	-	-	-	-	-	-	-	-0.1	-	-	-	-	-	-0.1	-
Processing Gains	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>TOTAL NON-OPEC</b>	-	0.1	-0.1	-0.1	-	-0.2	-0.1	-0.1	-	-0.2	-0.2	-0.2	-0.1	-0.1	-0.1	-	-0.1
OPEC																	
Crude	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
NGLs	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>TOTAL OPEC</b>	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>TOTAL SUPPLY</b>	-	-	-0.1	-0.1	-	-0.2	-	-0.1	-	-	-	-	-	-	-	-	-
<b>STOCK CHANGES AND MISCELLANEOUS</b>																	
REPORTED OECD																	
Industry	-	-	-	-	-	0.1	-	-	-0.1	-	-	-	-	-	-	-	-
Government	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>TOTAL OECD</b>	-	-	-	0.1	-	-	-	-0.1	-0.1	-	-	-	-	-	-	-	-
Floating Storage/Oil in Transit	-	-	-	-	-0.3	-	-	-	-	-	-	-	-	-	-	-	-
Miscellaneous to balance	-	-0.1	-0.1	-0.2	0.2	-0.2	-	-	0.2	-	-	-	-	-	-	-	-
<b>TOTAL STOCK CH. &amp; MISC.</b>	-	-0.1	-0.1	-0.1	-0.1	-0.1	-	-0.1	0.1	-	-	-	-	-	-	-	-
Memo items:																	
FSU Net Exports	-	-	-	-	-	-	-	-	0.1	-	-	-	-0.1	-0.1	-0.1	-0.1	-0.1
Call on OPEC crude + Stock ch.	-	-	0.2	-	-	-	0.1	-	-0.1	0.3	0.3	0.1	-	0.1	0.1	0.1	0.1
Total Demand ex. FSU	-	-	-	0.1	-	-	-	-0.1	-0.2	-	0.1	-	0.1	0.2	0.1	0.1	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)

	First Quarter			April			May			June			Second Quarter		
	1995	1996	%	1995	1996	%	1995	1996	%	1995	1996	%	1995	1996	%
<b>North America</b>															
LPG	2.35	2.51	6.8	2.09	2.14	2.5	1.99	2.14	7.7	1.95	2.07	6.2	2.01	2.12	5.4
Naphtha	0.28	0.33	18.3	0.28	0.28	-0.5	0.28	0.28	-2.1	0.25	0.29	12.1	0.27	0.28	2.8
Motor Gasoline	8.11	8.14	0.4	8.26	8.52	3.1	8.59	8.69	1.2	8.93	8.79	-1.5	8.59	8.67	0.9
Jet/Kerosene	1.70	1.83	7.8	1.55	1.66	7.1	1.64	1.60	-2.6	1.54	1.72	11.8	1.58	1.66	5.2
Gasoil	3.97	4.16	4.8	3.53	3.83	8.7	3.37	3.61	6.9	3.70	3.64	-1.7	3.53	3.69	4.5
Residual Fuel Oil	1.10	1.16	5.0	0.99	0.91	-8.2	0.94	1.01	7.1	1.07	0.94	-12.3	1.00	0.95	-4.7
Other Products	2.20	2.28	3.5	2.31	2.46	6.5	2.55	2.63	2.9	2.74	2.74	0.2	2.53	2.61	3.0
<b>Total</b>	<b>19.70</b>	<b>20.41</b>	<b>3.6</b>	<b>19.02</b>	<b>19.81</b>	<b>4.2</b>	<b>19.37</b>	<b>19.95</b>	<b>3.0</b>	<b>20.18</b>	<b>20.18</b>	<b>0.0</b>	<b>19.52</b>	<b>19.98</b>	<b>2.4</b>
<b>Europe</b>															
LPG	0.97	1.01	4.4	0.94	0.88	-5.9	0.82	0.81	-0.7	0.78	0.76	-3.1	0.85	0.82	-3.3
Naphtha	1.23	1.16	-6.4	1.14	0.94	-18.0	1.13	1.11	-1.5	1.08	1.00	-7.5	1.12	1.02	-9.0
Motor Gasoline	2.78	2.77	-0.5	2.94	3.09	5.0	3.03	3.03	0.1	3.12	2.98	-4.6	3.03	3.03	0.0
Jet/Kerosene	0.77	0.82	7.6	0.80	0.84	5.1	0.83	0.89	7.6	0.86	0.88	3.2	0.83	0.87	5.3
Gasoil	5.12	5.36	4.7	4.60	4.72	2.6	4.44	4.48	0.7	4.59	4.47	-2.7	4.54	4.55	0.2
Residual Fuel Oil	2.25	2.31	3.0	2.14	2.08	-2.8	1.97	1.95	-1.1	1.98	1.97	-0.4	2.03	2.00	-1.4
Other Products	0.88	0.89	1.1	1.00	1.05	4.8	1.09	1.14	4.4	1.23	1.32	6.9	1.11	1.17	5.4
<b>Total</b>	<b>14.00</b>	<b>14.32</b>	<b>2.3</b>	<b>13.56</b>	<b>13.59</b>	<b>0.3</b>	<b>13.30</b>	<b>13.40</b>	<b>0.8</b>	<b>13.65</b>	<b>13.38</b>	<b>-2.0</b>	<b>13.50</b>	<b>13.46</b>	<b>-0.3</b>
<b>Pacific</b>															
LPG	0.78	0.80	2.2	0.76	0.76	-0.1	0.70	0.66	-6.1	0.66	0.65	-0.8	0.71	0.69	-2.3
Naphtha	0.82	0.78	-5.0	0.75	0.77	3.6	0.74	0.72	-3.2	0.72	0.68	-5.8	0.74	0.72	-1.8
Motor Gasoline	1.17	1.20	2.3	1.16	1.25	7.3	1.21	1.24	1.8	1.21	1.21	0.0	1.19	1.23	3.0
Jet/Kerosene	1.15	1.19	3.6	0.68	0.81	18.7	0.53	0.58	10.3	0.52	0.54	4.8	0.57	0.64	11.9
Gasoil	1.59	1.64	3.6	1.43	1.54	7.7	1.37	1.42	3.6	1.43	1.40	-2.1	1.41	1.45	3.1
Residual Fuel Oil	0.95	0.92	-2.8	0.87	0.77	-11.2	0.77	0.70	-9.5	0.77	0.72	-6.3	0.80	0.73	-9.1
Other Products	0.87	0.85	-2.4	0.84	0.69	-17.3	0.69	0.69	-0.6	0.65	0.71	10.4	0.73	0.70	-3.7
<b>Total</b>	<b>7.32</b>	<b>7.37</b>	<b>0.7</b>	<b>6.49</b>	<b>6.59</b>	<b>1.6</b>	<b>6.03</b>	<b>6.01</b>	<b>-0.3</b>	<b>5.96</b>	<b>5.92</b>	<b>-0.6</b>	<b>6.16</b>	<b>6.17</b>	<b>0.3</b>
<b>OECD</b>															
LPG	4.10	4.32	5.4	3.79	3.79	-0.1	3.51	3.61	3.0	3.38	3.48	2.7	3.56	3.63	1.8
Naphtha	2.33	2.26	-3.0	2.17	1.99	-8.3	2.15	2.11	-2.2	2.06	1.97	-4.5	2.13	2.02	-5.0
Motor Gasoline	12.06	12.11	0.4	12.37	12.86	4.0	12.83	12.96	1.0	13.26	12.98	-2.1	12.82	12.93	0.9
Jet/Kerosene	3.61	3.84	6.4	3.03	3.31	9.2	2.99	3.07	2.5	2.92	3.15	8.0	2.98	3.17	6.5
Gasoil	10.67	11.16	4.6	9.55	10.09	5.6	9.19	9.51	3.4	9.73	9.51	-2.2	9.49	9.70	2.2
Residual Fuel Oil	4.30	4.39	2.3	4.00	3.76	-6.0	3.69	3.66	-0.7	3.82	3.63	-4.9	3.83	3.68	-3.9
Other Products	3.96	4.02	1.7	4.15	4.20	1.3	4.33	4.45	2.8	4.62	4.77	3.4	4.36	4.47	2.5
<b>Total</b>	<b>41.02</b>	<b>42.10</b>	<b>2.6</b>	<b>39.06</b>	<b>40.00</b>	<b>2.4</b>	<b>38.70</b>	<b>39.36</b>	<b>1.7</b>	<b>39.78</b>	<b>39.49</b>	<b>-0.7</b>	<b>39.17</b>	<b>39.61</b>	<b>1.1</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)

	April			May			June			Second Quarter			July		
	1995	1996	%	1995	1996	%	1995	1996	%	1995	1996	%	1995	1996	%
<b>United States</b>															
LPG	1.84	1.88	2.0	1.71	1.85	8.3	1.71	1.77	3.9	1.75	1.83	4.7	1.58	1.80	14.1
Naphtha	0.20	0.21	6.2	0.21	0.20	-3.7	0.18	0.21	19.8	0.20	0.21	6.6	0.22	0.21	-0.9
Motor Gasoline	7.65	7.87	2.8	7.89	8.00	1.3	8.22	8.09	-1.6	7.92	7.99	0.8	7.89	8.14	3.1
Jet/Kerosene	1.44	1.54	6.9	1.53	1.48	-2.9	1.42	1.58	11.4	1.47	1.54	4.9	1.49	1.59	6.5
Gasoil	3.11	3.38	9.0	2.90	3.12	7.6	3.27	3.19	-2.2	3.09	3.23	4.6	2.73	3.05	11.5
Residual Fuel Oil	0.81	0.75	-8.0	0.76	0.83	8.3	0.90	0.74	-17.5	0.82	0.77	-6.3	0.76	0.90	18.8
Other Products	2.09	2.20	5.5	2.29	2.38	3.8	2.44	2.46	0.6	2.27	2.35	3.2	2.48	2.46	-1.0
<b>Total</b>	<b>17.14</b>	<b>17.84</b>	<b>4.1</b>	<b>17.29</b>	<b>17.86</b>	<b>3.3</b>	<b>18.13</b>	<b>18.05</b>	<b>-0.4</b>	<b>17.52</b>	<b>17.91</b>	<b>2.2</b>	<b>17.15</b>	<b>18.14</b>	<b>5.8</b>
<b>Japan</b>															
LPG	0.67	0.68	1.9	0.62	0.58	-6.3	0.57	0.58	1.4	0.62	0.61	-1.1	0.52	0.56	7.6
Naphtha	0.74	0.77	3.7	0.74	0.71	-3.3	0.72	0.68	-5.9	0.73	0.72	-1.8	0.69	0.78	12.7
Motor Gasoline	0.82	0.89	8.3	0.86	0.88	1.9	0.84	0.86	2.2	0.84	0.88	4.1	0.94	0.97	2.9
Jet/Kerosene	0.58	0.70	20.4	0.43	0.48	11.7	0.42	0.44	4.7	0.48	0.54	13.2	0.42	0.45	8.5
Diesel*	0.72	0.79	9.1	0.70	0.75	7.5	0.74	0.73	-0.9	0.72	0.75	5.2	0.75	0.79	5.3
Other Gasoil*	0.49	0.51	2.7	0.43	0.42	-3.7	0.46	0.42	-8.4	0.46	0.45	-3.0	0.44	0.46	4.5
Residual Fuel Oil	0.82	0.72	-11.4	0.70	0.65	-7.8	0.70	0.68	-3.7	0.74	0.68	-7.8	0.77	0.75	-3.6
Direct use of Crude Oil	0.28	0.20	-29.4	0.24	0.20	-18.8	0.23	0.26	10.1	0.25	0.22	-13.9	0.23	0.31	38.1
Other Products	0.42	0.36	-13.3	0.30	0.37	21.8	0.28	0.35	26.4	0.33	0.36	8.5	0.32	0.32	-0.7
<b>Total</b>	<b>5.55</b>	<b>5.62</b>	<b>1.3</b>	<b>5.02</b>	<b>5.03</b>	<b>0.1</b>	<b>4.97</b>	<b>4.99</b>	<b>0.6</b>	<b>5.18</b>	<b>5.21</b>	<b>0.7</b>	<b>5.08</b>	<b>5.40</b>	<b>6.2</b>
<b>Germany</b>															
LPG	0.13	0.10	-21.0	0.12	0.11	-10.9	0.12	0.09	-25.6	0.12	0.10	-19.2	0.11	0.11	2.5
Naphtha	0.34	0.34	0.3	0.34	0.33	-3.5	0.33	0.28	-14.5	0.34	0.32	-5.8	0.30	0.31	5.4
Motor Gasoline	0.69	0.72	3.6	0.73	0.72	-1.7	0.73	0.69	-5.7	0.72	0.71	-1.4	0.71	0.73	1.9
Jet/Kerosene	0.12	0.12	-3.2	0.13	0.13	4.0	0.14	0.14	-0.4	0.13	0.13	0.2	0.14	0.15	0.7
Diesel	0.43	0.45	4.8	0.46	0.44	-5.9	0.45	0.43	-4.9	0.45	0.44	-2.2	0.44	0.45	3.1
Other Gasoil	0.83	0.70	-15.7	0.79	0.80	1.6	0.76	0.84	10.3	0.79	0.78	-1.6	0.77	0.85	10.7
Residual Fuel Oil	0.19	0.18	-3.6	0.19	0.17	-10.7	0.17	0.17	-3.6	0.18	0.17	-6.1	0.20	0.18	-11.6
Other Products	0.15	0.14	-5.6	0.18	0.17	-5.8	0.18	0.20	10.1	0.17	0.17	-0.2	0.17	0.19	12.9
<b>Total</b>	<b>2.88</b>	<b>2.75</b>	<b>-4.5</b>	<b>2.95</b>	<b>2.87</b>	<b>-2.6</b>	<b>2.88</b>	<b>2.83</b>	<b>-1.8</b>	<b>2.90</b>	<b>2.82</b>	<b>-3.0</b>	<b>2.84</b>	<b>2.97</b>	<b>4.5</b>
<b>Italy</b>															
LPG	0.10	0.10	2.0	0.08	0.08	-6.7	0.08	0.08	-7.7	0.09	0.09	-3.8	0.08	0.09	20.1
Naphtha	0.14	0.13	-5.8	0.12	0.13	2.3	0.14	0.13	-7.1	0.13	0.13	-3.7	0.12	0.13	14.1
Motor Gasoline	0.41	0.44	7.3	0.42	0.43	2.9	0.44	0.41	-6.4	0.42	0.43	1.1	0.43	0.46	7.5
Jet/Kerosene	0.06	0.06	8.2	0.08	0.08	5.9	0.06	0.06	-1.3	0.07	0.07	4.4	0.07	0.08	14.9
Diesel	0.30	0.32	8.9	0.32	0.32	-1.3	0.33	0.32	-4.7	0.32	0.32	0.7	0.31	0.33	4.8
Other Gasoil	0.13	0.12	-12.5	0.11	0.10	-5.3	0.12	0.09	-27.3	0.12	0.10	-15.3	0.13	0.14	5.5
Residual Fuel Oil	0.56	0.54	-4.0	0.55	0.50	-9.5	0.54	0.53	-2.5	0.55	0.52	-5.4	0.55	0.63	15.3
Other Products	0.10	0.10	-8.5	0.12	0.10	-11.2	0.12	0.14	12.5	0.11	0.11	-2.0	0.13	0.14	1.7
<b>Total</b>	<b>1.80</b>	<b>1.81</b>	<b>0.4</b>	<b>1.80</b>	<b>1.73</b>	<b>-3.4</b>	<b>1.85</b>	<b>1.76</b>	<b>-5.0</b>	<b>1.82</b>	<b>1.77</b>	<b>-2.7</b>	<b>1.83</b>	<b>2.01</b>	<b>10.1</b>
<b>France</b>															
LPG	0.11	0.11	-1.4	0.10	0.09	-9.2	0.09	0.08	-17.5	0.10	0.09	-8.9	0.08	0.09	1.3
Naphtha	0.25	0.13	-47.6	0.23	0.22	-3.8	0.16	0.16	-3.1	0.21	0.17	-20.3	0.24	0.17	-31.5
Motor Gasoline	0.36	0.37	0.9	0.37	0.36	-3.9	0.39	0.35	-9.4	0.37	0.36	-4.2	0.40	0.39	-2.0
Jet/Kerosene	0.09	0.11	11.4	0.10	0.11	5.8	0.10	0.11	8.1	0.10	0.11	8.3	0.12	0.12	6.0
Diesel	0.46	0.49	8.2	0.46	0.47	2.2	0.49	0.48	-2.4	0.47	0.48	2.5	0.46	0.51	10.3
Other Gasoil	0.32	0.35	10.7	0.27	0.27	-0.3	0.35	0.28	-22.0	0.31	0.30	-4.6	0.38	0.37	-0.1
Residual Fuel Oil	0.14	0.17	22.2	0.12	0.14	13.8	0.11	0.13	19.9	0.12	0.15	18.7	0.13	0.11	-11.8
Other Products	0.13	0.20	49.8	0.14	0.16	19.6	0.18	0.25	38.7	0.15	0.20	36.0	0.15	0.22	45.3
<b>Total</b>	<b>1.87</b>	<b>1.93</b>	<b>3.4</b>	<b>1.79</b>	<b>1.82</b>	<b>1.4</b>	<b>1.88</b>	<b>1.83</b>	<b>-2.6</b>	<b>1.85</b>	<b>1.86</b>	<b>0.8</b>	<b>1.96</b>	<b>1.99</b>	<b>1.3</b>
<b>United Kingdom</b>															
LPG	0.18	0.19	1.2	0.17	0.17	3.4	0.14	0.17	25.8	0.16	0.18	8.8	0.17	0.17	-3.0
Naphtha	0.07	0.07	11.2	0.06	0.07	14.7	0.08	0.05	-35.1	0.07	0.07	-5.5	0.05	0.06	12.1
Motor Gasoline	0.50	0.52	4.5	0.51	0.53	3.7	0.51	0.51	0.4	0.51	0.52	2.9	0.49	0.53	7.8
Jet/Kerosene	0.21	0.23	11.4	0.22	0.24	10.9	0.22	0.23	2.2	0.22	0.23	8.1	0.22	0.24	9.0
Diesel	0.26	0.29	11.1	0.27	0.30	9.0	0.28	0.29	2.8	0.27	0.29	7.6	0.26	0.30	15.9
Other Gasoil	0.18	0.19	2.6	0.18	0.18	0.5	0.17	0.17	-2.5	0.18	0.18	0.3	0.16	0.18	11.1
Residual Fuel Oil	0.18	0.16	-8.7	0.16	0.17	4.6	0.17	0.16	-6.2	0.17	0.16	-3.6	0.16	0.15	-7.5
Other Products	0.19	0.20	5.9	0.19	0.19	-1.9	0.21	0.16	-21.3	0.20	0.18	-6.3	0.19	0.21	10.3
<b>Total</b>	<b>1.77</b>	<b>1.85</b>	<b>4.8</b>	<b>1.76</b>	<b>1.84</b>	<b>4.9</b>	<b>1.78</b>	<b>1.75</b>	<b>-2.1</b>	<b>1.77</b>	<b>1.81</b>	<b>2.6</b>	<b>1.71</b>	<b>1.84</b>	<b>7.4</b>
<b>Canada</b>															
LPG	0.24	0.26	6.6	0.27	0.28	3.8	0.23	0.28	22.7	0.25	0.27	10.5	0.25	0.12	-51.0
Naphtha	0.08	0.07	-16.7	0.07	0.08	2.6	0.08	0.07	-5.0	0.08	0.07	-6.7	0.08	0.08	8.7
Motor Gasoline	0.55	0.59	7.8	0.62	0.62	0.1	0.64	0.63	-2.6	0.60	0.61	1.5	0.63	0.64	1.6
Jet/Kerosene	0.08	0.09	13.2	0.08	0.08	3.3	0.09	0.10	14.4	0.08	0.09	10.4	0.09	0.11	14.4
Diesel	0.12	0.12	0.0	0.16	0.16	0.0	0.16	0.16	0.0	0.15	0.15	0.0	0.15	0.15	3.3
Other Gasoil	0.26	0.28	10.7	0.27	0.28	4.8	0.24	0.24	1.1	0.26	0.27	5.6	0.22	0.25	11.8
Residual Fuel Oil	0.11	0.09	-15.5	0.10	0.10	4.3	0.10	0.11	13.4	0.10	0.10	0.3	0.10	0.12	20.7
Other Products	0.19	0.22	18.6	0.23	0.21	-5.6	0.26	0.25	-6.1	0.23	0.23	0.9	0.28	0.27	-2.1
<b>Total</b>	<b>1.62</b>	<b>1.72</b>	<b>6.2</b>	<b>1.80</b>	<b>1.82</b>	<b>1.1</b>	<b>1.80</b>	<b>1.85</b>	<b>2.5</b>	<b>1.74</b>	<b>1.80</b>	<b>3.1</b>	<b>1.79</b>	<b>1.74</b>	<b>-3.0</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)

	1993	1994	1995	3Q95	4Q95	1Q96	2Q96	3Q96	Jul96	Aug96*	Sep96*
<b>OPEC<sup>1</sup></b>											
Crude Oil											
Saudi Arabia	7.96	7.90	7.94	8.01	7.92	7.95	7.84	7.93	7.95	7.90	7.95
Iran	3.65	3.61	3.65	3.65	3.68	3.69	3.62	3.71	3.72	3.75	3.67
Iraq	0.48	0.53	0.55	0.55	0.55	0.55	0.55	0.55	0.55	0.55	0.55
UAE	2.17	2.22	2.19	2.19	2.16	2.19	2.19	2.18	2.19	2.17	2.19
Kuwait	1.69	1.84	1.84	1.84	1.84	1.84	1.79	1.80	1.79	1.81	1.80
Neutral Zone	0.36	0.39	0.43	0.44	0.43	0.46	0.47	0.48	0.49	0.45	0.51
Qatar	0.42	0.41	0.45	0.45	0.46	0.47	0.48	0.49	0.48	0.49	0.51
Nigeria	1.91	1.90	1.93	1.93	2.01	2.09	2.13	2.08	2.10	2.10	2.05
Libya	1.37	1.38	1.41	1.41	1.40	1.38	1.39	1.40	1.39	1.40	1.41
Algeria	0.74	0.75	0.76	0.76	0.79	0.78	0.81	0.83	0.83	0.83	0.84
Venezuela	2.31	2.44	2.58	2.64	2.71	2.89	2.94	3.02	3.00	3.02	3.03
Indonesia	1.34	1.32	1.34	1.34	1.34	1.38	1.41	1.39	1.41	1.37	1.38
<b>Total Crude Oil</b>	<b>24.40</b>	<b>24.67</b>	<b>25.06</b>	<b>25.21</b>	<b>25.30</b>	<b>25.67</b>	<b>25.61</b>	<b>25.85</b>	<b>25.88</b>	<b>25.80</b>	<b>25.88</b>
NGLs <sup>2</sup>	2.25	2.38	2.42	2.41	2.48	2.52	2.57	2.71	2.68	2.72	2.73
<b>TOTAL OPEC</b>	<b>26.65</b>	<b>27.05</b>	<b>27.48</b>	<b>27.62</b>	<b>27.78</b>	<b>28.19</b>	<b>28.17</b>	<b>28.57</b>	<b>28.56</b>	<b>28.52</b>	<b>28.61</b>
<b>NON-OPEC<sup>1,3</sup></b>											
<b>OECD</b>											
North America	10.99	10.92	11.00	10.87	10.99	10.99	10.96	10.96	10.85	10.95	11.08
United States	8.82	8.64	8.61	8.50	8.57	8.54	8.59	8.47	8.41	8.45	8.55
Canada	2.18	2.28	2.39	2.37	2.43	2.45	2.37	2.49	2.44	2.50	2.53
Europe	5.12	6.03	6.30	6.17	6.73	6.65	6.56	6.64	6.71	6.39	6.84
UK	2.14	2.71	2.79	2.74	2.93	2.83	2.73	2.75	2.77	2.61	2.88
Norway	2.38	2.69	2.91	2.83	3.19	3.22	3.22	3.27	3.33	3.15	3.32
Others	0.60	0.63	0.61	0.59	0.61	0.61	0.61	0.63	0.61	0.63	0.64
Pacific	0.65	0.69	0.67	0.70	0.64	0.68	0.73	0.81	0.76	0.84	0.82
Australia	0.56	0.60	0.58	0.59	0.54	0.58	0.62	0.69	0.66	0.73	0.70
Others	0.09	0.09	0.10	0.11	0.10	0.10	0.11	0.11	0.11	0.12	0.12
<b>Total OECD</b>	<b>16.76</b>	<b>17.64</b>	<b>17.98</b>	<b>17.74</b>	<b>18.36</b>	<b>18.32</b>	<b>18.26</b>	<b>18.41</b>	<b>18.32</b>	<b>18.18</b>	<b>18.73</b>
<b>Non-OECD</b>											
Former USSR	7.95	7.27	7.12	7.13	7.09	7.02	6.99	7.08	7.05	7.09	7.09
Russia	6.95	6.33	6.15	6.16	6.07	6.01	5.99	6.05	6.06	6.07	6.04
Others	0.99	0.94	0.97	0.97	1.02	1.01	0.99	1.02	0.99	1.03	1.05
Asia	4.69	4.78	5.06	5.09	5.14	5.10	5.10	5.13	5.13	5.07	5.17
China	2.91	2.84	2.99	3.00	3.03	3.10	3.14	3.15	3.16	3.09	3.18
Malaysia	0.63	0.69	0.76	0.76	0.81	0.72	0.71	0.72	0.72	0.73	0.72
India	0.54	0.63	0.70	0.71	0.69	0.68	0.64	0.64	0.63	0.64	0.66
Others	0.60	0.62	0.61	0.62	0.62	0.60	0.61	0.62	0.62	0.62	0.62
Europe	0.28	0.28	0.27	0.26	0.27	0.28	0.28	0.28	0.28	0.28	0.28
Latin America	5.77	5.94	6.06	6.29	5.90	6.47	6.52	6.45	6.51	6.36	6.48
Mexico	3.14	3.14	3.07	3.19	2.84	3.31	3.35	3.23	3.31	3.17	3.21
Brazil	0.88	0.92	0.91	0.97	0.96	1.00	0.99	1.00	0.98	0.99	1.05
Argentina	0.63	0.71	0.76	0.76	0.78	0.80	0.82	0.84	0.84	0.84	0.84
Colombia	0.46	0.47	0.59	0.64	0.61	0.63	0.63	0.65	0.65	0.64	0.65
Ecuador	0.34	0.37	0.38	0.38	0.38	0.39	0.39	0.38	0.39	0.38	0.38
Others	0.33	0.34	0.35	0.35	0.35	0.34	0.34	0.35	0.35	0.35	0.36
Middle East <sup>4</sup>	1.63	1.79	1.87	1.88	1.88	1.87	1.88	1.90	1.90	1.90	1.90
Oman	0.79	0.82	0.86	0.87	0.87	0.87	0.88	0.89	0.89	0.89	0.90
Syria	0.56	0.57	0.59	0.59	0.59	0.60	0.60	0.60	0.60	0.60	0.60
Yemen	0.22	0.35	0.37	0.37	0.37	0.35	0.35	0.36	0.35	0.36	0.36
Africa	2.34	2.43	2.59	2.60	2.62	2.63	2.69	2.75	2.73	2.74	2.77
Egypt	0.96	0.92	0.95	0.94	0.95	0.94	0.93	0.92	0.92	0.91	0.92
Angola	0.50	0.53	0.65	0.67	0.67	0.67	0.72	0.72	0.72	0.73	0.73
Gabon	0.30	0.32	0.35	0.35	0.35	0.36	0.36	0.35	0.36	0.35	0.35
Others	0.58	0.66	0.65	0.65	0.66	0.66	0.68	0.75	0.74	0.75	0.77
<b>Total Non-OECD</b>	<b>22.66</b>	<b>22.49</b>	<b>22.97</b>	<b>23.25</b>	<b>22.90</b>	<b>23.36</b>	<b>23.45</b>	<b>23.58</b>	<b>23.60</b>	<b>23.44</b>	<b>23.69</b>
Processing Gains <sup>5</sup>	1.39	1.43	1.46	1.44	1.49	1.52	1.50	1.50	1.50	1.50	1.50
<b>TOTAL NON-OPEC</b>	<b>40.80</b>	<b>41.56</b>	<b>42.40</b>	<b>42.43</b>	<b>42.75</b>	<b>43.20</b>	<b>43.21</b>	<b>43.49</b>	<b>43.43</b>	<b>43.12</b>	<b>43.92</b>
<b>TOTAL SUPPLY</b>	<b>67.45</b>	<b>68.61</b>	<b>69.88</b>	<b>70.05</b>	<b>70.53</b>	<b>71.38</b>	<b>71.38</b>	<b>72.05</b>	<b>71.99</b>	<b>71.64</b>	<b>72.53</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.

\* Preliminary

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

	July		August		September		3rd Quarter 96		4th Quarter 96f		1997f	
	Level	Change <sup>2</sup>	Level	Change	Level	Change	Level	Change	Level	Change	Level	Change
<b>United States</b>												
Alaska	1320	-102	1326	6	1395	69	1347	-31	1475	128	1392	-24
California (inc. offshore)	942	-0	951	9	949	-2	947	4	948	0	909	-41
Texas	1435	-25	1438	3	1420	-18	1431	-47	1410	-21	1323	-131
Offshore Gulf of Mexico	1181	36	1188	7	1211	23	1193	83	1292	99	1436	278
Other US Lower 48	1505	-28	1524	19	1512	-12	1514	-44	1403	-111	1331	-175
NGLs <sup>3</sup>	1756	-80	1750	-6	1765	15	1757	-70	1852	95	1824	37
Other Hydrocarbons	271	15	275	4	295	20	280	-13	305	25	313	14
<b>Total</b>	<b>8410</b>	<b>-184</b>	<b>8452</b>	<b>42</b>	<b>8547</b>	<b>94</b>	<b>8469</b>	<b>-118</b>	<b>8684</b>	<b>215</b>	<b>8527</b>	<b>-43</b>
<b>Canada</b>												
Alberta Light & Medium	695	43	715	20	730	15	713	45	730	17	689	-13
Alberta Heavy	249	-13	244	-5	250	6	248	-10	245	-2	254	3
Alberta Bitumen	149	-9	150	1	152	2	150	4	152	2	151	1
Saskatchewan	357	24	355	-2	365	10	359	31	349	-10	351	7
Other Conventional	116	21	115	-1	110	-5	114	11	110	-4	122	16
NGLs	581	2	601	20	602	1	595	-13	647	53	630	10
Syncrudes	297	-11	315	18	325	10	312	51	324	12	305	10
<b>Total</b>	<b>2444</b>	<b>57</b>	<b>2496</b>	<b>51</b>	<b>2534</b>	<b>39</b>	<b>2491</b>	<b>118</b>	<b>2558</b>	<b>67</b>	<b>2501</b>	<b>34</b>
<b>United Kingdom<sup>4</sup></b>												
Brent Fields	462	33	480	18	448	-32	464	1	521	58	457	-31
Forties Fields	859	-23	868	9	916	48	881	-2	1035	154	1029	100
Ninian Fields	326	11	238	-88	324	86	296	-17	326	30	315	1
Flotta Fields	237	5	191	-46	246	56	224	10	242	18	243	12
Other Offshore Fields	512	39	490	-21	565	75	522	22	727	205	863	310
NGLs	260	23	228	-32	263	35	250	-0	347	97	322	43
<b>Total</b>	<b>2655</b>	<b>87</b>	<b>2494</b>	<b>-161</b>	<b>2763</b>	<b>268</b>	<b>2636</b>	<b>13</b>	<b>3198</b>	<b>562</b>	<b>3230</b>	<b>435</b>
<b>Norway<sup>4</sup></b>												
Ekofisk/Ula Area	499	-17	507	9	535	28	514	7	557	43	534	19
Oseberg Area	938	38	909	-30	961	52	936	38	968	33	937	11
Staffjord-Gullfaks-Snorre	1253	-22	1104	-148	1244	140	1200	-32	1237	37	1147	-76
Haltenbanken	372	20	382	10	285	-97	347	1	375	28	460	108
Sleipner/Frigg	122	43	119	-3	142	23	127	20	155	28	235	108
Plant Condensate (as NGLs)	9	0	7	-1	9	2	8	0	10	2	7	-1
Lighter NGLs	133	23	124	-10	141	18	133	7	147	15	138	2
<b>Total</b>	<b>3325</b>	<b>86</b>	<b>3152</b>	<b>-173</b>	<b>3317</b>	<b>165</b>	<b>3264</b>	<b>40</b>	<b>3450</b>	<b>186</b>	<b>3459</b>	<b>170</b>
<b>Other OECD Europe</b>												
Other North Sea	252	37	254	2	261	7	255	22	265	10	269	21
Onshore U.K.	113	4	113	0	113	0	113	4	114	1	115	5
Italy	98	-2	105	7	105	0	103	4	117	14	130	27
Turkey	65	-4	65	0	66	1	66	-4	67	1	64	-3
Other	147	-2	151	4	150	-1	149	-0	154	5	144	-5
NGLs	27	-1	25	-3	34	9	28	-7	41	13	47	9
Non-Conventional Oils	24	2	27	3	29	2	27	5	31	4	29	4
<b>Total</b>	<b>726</b>	<b>35</b>	<b>739</b>	<b>13</b>	<b>757</b>	<b>18</b>	<b>741</b>	<b>25</b>	<b>788</b>	<b>47</b>	<b>798</b>	<b>58</b>
<b>Australia</b>												
Gippsland Basin	206	12	211	5	210	-1	209	8	214	6	198	-9
Cooper/Eromanga	36	-1	34	-2	32	-1	34	-1	34	-0	34	-0
Carnarvon Basin	316	0	380	64	366	-14	354	71	352	-2	395	83
Bonaparte Basin	28	1	29	1	23	-6	27	0	18	-9	27	4
Other Fields	6	0	5	-1	5	0	6	-0	5	-0	6	-0
NGLs	66	-11	66	1	63	-3	65	-4	60	-5	61	-3
<b>Total</b>	<b>657</b>	<b>2</b>	<b>725</b>	<b>68</b>	<b>700</b>	<b>-25</b>	<b>694</b>	<b>74</b>	<b>684</b>	<b>-10</b>	<b>719</b>	<b>74</b>
<b>Other OECD Pacific</b>												
New Zealand	32	-8	42	10	36	-5	37	2	34	-3	36	2
Japan	9	-1	11	2	11	0	10	-0	11	1	11	0
NGLs	10	-3	9	-1	10	1	10	-1	13	3	14	2
Synthetic Fuels	55	0	56	1	58	2	56	1	55	-2	51	-2
<b>Total</b>	<b>106</b>	<b>-12</b>	<b>118</b>	<b>12</b>	<b>116</b>	<b>-2</b>	<b>113</b>	<b>1</b>	<b>113</b>	<b>-0</b>	<b>111</b>	<b>2</b>
<b>OECD</b>												
Crude Oil	14836	110	14694	-141	15140	445	14887	197	15642	755	15605	606
NGLs	2841	-46	2809	-32	2886	77	2845	-89	3117	272	3043	98
Non-Conventional Oils	647	6	673	26	707	34	675	44	715	40	698	27
<b>Total</b>	<b>18324</b>	<b>70</b>	<b>18177</b>	<b>-147</b>	<b>18733</b>	<b>556</b>	<b>18408</b>	<b>152</b>	<b>19473</b>	<b>1066</b>	<b>19345</b>	<b>731</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			
	Apr96	May96	Jun96*	Jul96*	Aug96*	Aug93	Aug94	Aug95	Q395	Q495	Q196	Q296
<b>North America</b>												
Crude	372	373	378	374	378	401	394	373	-0.42	-0.05	-0.02	0.13
Gasoline	225	224	224	221	216	220	221	213	-0.06	0.03	0.05	-0.04
Middle Distillate	150	157	167	174	180	201	214	203	0.23	-0.04	-0.57	0.19
Residual Fuel Oil	43	43	44	44	44	53	49	47	0.05	-0.04	-0.05	0.04
Total Products <sup>3</sup>	552	565	584	592	600	664	656	644	0.33	-0.38	-0.80	0.43
Total <sup>4</sup>	1070	1086	1113	1121	1130	1252	1229	1187	-0.03	-0.74	-0.87	0.72
<b>Europe</b>												
Crude	332	329	322	340	329	307	314	297	-0.05	0.22	0.06	0.09
Gasoline	131	131	134	131	127	127	127	126	-0.05	0.06	0.09	-0.07
Middle Distillate	229	229	227	231	234	248	263	261	0.30	-0.33	-0.23	0.16
Residual Fuel Oil	87	94	93	95	100	107	102	108	0.08	-0.05	-0.15	0.07
Total Products <sup>3</sup>	532	537	539	540	544	568	578	584	0.38	-0.33	-0.35	0.14
Total <sup>4</sup>	922	923	916	939	932	935	951	937	0.28	-0.08	-0.31	0.24
<b>Pacific</b>												
Crude	158	169	170	154	164	161	150	164	-0.06	-0.09	0.10	-0.01
Gasoline	22	22	20	20	21	21	22	22	0.00	-0.01	0.01	-0.02
Middle Distillate	45	49	50	57	67	68	71	67	0.14	-0.17	-0.12	0.09
Residual Fuel Oil	16	16	15	16	16	19	15	16	-0.03	-0.01	0.00	0.01
Total Products <sup>3</sup>	134	141	141	151	162	163	166	163	0.20	-0.21	-0.16	0.14
Total <sup>4</sup>	372	390	389	387	413	414	395	412	0.15	-0.42	-0.03	0.14
<b>Total</b>												
Crude	862	871	869	867	871	870	858	834	-0.53	0.07	0.14	0.21
Gasoline	379	377	378	372	364	368	368	361	-0.11	0.07	0.15	-0.12
Middle Distillate	425	434	444	462	481	517	547	530	0.67	-0.53	-0.92	0.44
Residual Fuel Oil	145	152	153	155	160	179	166	171	0.10	-0.10	-0.20	0.11
Total Products <sup>3</sup>	1219	1243	1263	1284	1306	1396	1400	1391	0.91	-0.92	-1.31	0.70
Total <sup>4</sup>	2363	2399	2418	2447	2474	2601	2575	2536	0.40	-1.24	-1.21	1.10

**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			
	Apr96	May96	Jun96*	Jul96*	Aug96*	Aug93	Aug94	Aug95	Q395	Q495	Q196	Q296
<b>North America</b>												
Crude	586	586	584	583	578	584	592	592	0.00	0.00	-0.03	-0.05
<b>Europe</b>												
Crude	134	134	133	134	134	135	134	134	0.00	0.00	0.00	-0.01
Products	163	162	162	163	163	168	165	162	0.01	-0.01	0.04	-0.02
<b>Pacific</b>												
Crude	299	299	299	299	299	247	265	290	0.10	0.07	0.01	0.00
<b>Total</b>												
Crude	1020	1019	1017	1016	1012	966	991	1015	0.10	0.07	-0.02	-0.06
Products	163	162	162	163	163	168	165	162	0.01	-0.01	0.04	-0.02
Total <sup>4</sup>	1183	1181	1180	1179	1175	1134	1156	1177	0.11	0.06	0.02	-0.08

\* 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)

	March			April			May			June			July		
	1995	1996	%	1995	1996	%	1995	1996	%	1995	1996	%	1995	1996	%
<b>United States</b>															
Crude	339.5	299.6	-11.7	336.4	303.0	-9.9	332.4	304.8	-8.3	327.9	314.3	-4.2	315.6	309.6	-1.9
Motor Gasoline	211.1	203.2	-3.7	207.8	203.0	-2.3	208.0	205.1	-1.4	204.6	204.6	0.0	207.1	201.5	-2.7
Middle Distillate	160.3	126.9	-20.8	158.4	128.4	-18.9	160.5	135.3	-15.7	158.6	143.2	-9.7	170.4	148.4	-12.9
Residual Fuel Oil	37.8	31.7	-16.1	37.1	33.7	-9.2	38.6	34.3	-11.1	36.0	34.9	-2.9	36.8	34.8	-5.5
Other Products	125.2	108.8	-13.1	134.7	116.1	-13.8	140.6	121.9	-13.3	147.9	130.9	-11.5	159.0	136.4	-14.2
Total Products	534.3	470.6	-11.9	538.0	481.1	-10.6	547.7	496.7	-9.3	547.1	513.6	-6.1	573.3	521.1	-9.1
Other <sup>2</sup>	135.6	122.6	-9.5	135.3	130.6	-3.4	140.0	132.1	-5.6	142.2	133.2	-6.4	143.8	136.2	-5.3
<b>Total</b>	<b>1009.3</b>	<b>892.8</b>	<b>-11.5</b>	<b>1009.7</b>	<b>914.7</b>	<b>-9.4</b>	<b>1020.0</b>	<b>933.6</b>	<b>-8.5</b>	<b>1017.3</b>	<b>961.1</b>	<b>-5.5</b>	<b>1032.8</b>	<b>966.9</b>	<b>-6.4</b>
<b>Japan</b>															
Crude	138.9	152.3	9.7	135.4	140.0	3.4	143.2	151.2	5.5	159.4	152.7	-4.2	163.0	136.4	-16.3
Motor Gasoline	14.7	14.0	-4.9	15.5	13.7	-11.5	14.9	13.9	-7.3	13.4	11.6	-13.7	12.3	11.7	-4.8
Middle Distillate	40.0	33.4	-16.6	45.4	37.0	-18.4	48.5	40.5	-16.5	46.9	42.3	-9.7	51.5	47.9	-7.0
Residual Fuel Oil	14.3	12.1	-15.2	14.7	13.0	-11.9	14.2	12.7	-10.5	14.3	12.6	-12.0	14.8	12.9	-12.7
Other Products	47.8	45.7	-4.4	48.6	46.3	-4.8	48.1	49.7	3.4	44.9	49.7	10.8	46.4	52.8	13.7
Total Products	116.8	105.2	-10.0	124.2	110.0	-11.5	125.7	116.8	-7.1	119.5	116.3	-2.7	125.1	125.3	0.2
Other <sup>2</sup>	79.6	69.7	-12.4	82.3	72.2	-12.2	82.4	73.3	-11.0	77.4	71.9	-7.1	79.1	75.6	-4.4
<b>Total</b>	<b>335.3</b>	<b>327.2</b>	<b>-2.4</b>	<b>341.9</b>	<b>322.1</b>	<b>-5.8</b>	<b>351.3</b>	<b>341.2</b>	<b>-2.9</b>	<b>356.3</b>	<b>340.8</b>	<b>-4.3</b>	<b>367.2</b>	<b>337.4</b>	<b>-8.1</b>
<b>Germany</b>															
Crude	24.4	22.2	-8.8	22.9	21.2	-7.6	22.8	20.9	-8.3	20.7	21.2	2.2	23.1	19.1	-17.5
Motor Gasoline	12.9	11.8	-9.0	11.1	9.6	-13.4	10.0	9.7	-3.4	10.8	11.4	5.6	11.0	11.2	1.9
Middle Distillate	12.6	12.4	-1.9	16.7	17.8	6.4	17.5	15.6	-11.0	17.0	15.3	-10.4	17.4	18.5	6.0
Residual Fuel Oil	7.9	8.2	3.9	8.9	8.4	-5.3	9.5	8.9	-6.2	10.1	8.3	-17.8	10.5	8.3	-21.2
Other Products	11.6	11.9	2.8	12.8	11.6	-9.0	12.6	11.2	-10.7	11.8	11.9	1.2	12.0	11.6	-3.7
Total Products	45.0	44.3	-1.7	49.5	47.5	-4.1	49.6	45.4	-8.5	49.7	46.9	-5.7	50.9	49.5	-2.8
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>69.4</b>	<b>66.5</b>	<b>-4.2</b>	<b>72.4</b>	<b>68.7</b>	<b>-5.2</b>	<b>72.3</b>	<b>66.2</b>	<b>-8.4</b>	<b>70.4</b>	<b>68.1</b>	<b>-3.4</b>	<b>74.0</b>	<b>68.6</b>	<b>-7.4</b>
<b>Italy</b>															
Crude	38.2	34.1	-10.7	41.9	35.2	-15.9	42.6	39.5	-7.3	42.7	39.6	-7.2	45.8	37.5	-18.0
Motor Gasoline	23.2	23.7	2.0	22.4	21.1	-5.8	23.1	21.2	-8.0	22.2	21.0	-5.5	21.5	21.6	0.6
Middle Distillate	35.3	34.0	-3.8	33.3	35.3	6.0	34.7	35.1	1.0	36.0	34.9	-3.0	35.2	33.4	-4.9
Residual Fuel Oil	25.1	22.6	-10.0	22.7	20.0	-11.6	22.3	23.0	3.0	24.3	24.9	2.1	24.4	25.2	3.2
Other Products	8.3	9.8	17.7	8.5	8.9	4.0	7.7	9.9	28.5	7.4	9.4	28.0	8.7	8.5	-2.3
Total Products	91.9	90.0	-2.1	86.9	85.3	-1.8	87.8	89.1	1.5	89.9	90.2	0.3	89.8	88.8	-1.1
Other <sup>2</sup>	4.5	5.8	26.8	5.1	5.8	13.0	5.2	4.7	-9.2	5.6	4.5	-19.1	5.4	5.2	-3.9
<b>Total</b>	<b>134.6</b>	<b>129.8</b>	<b>-3.6</b>	<b>134.0</b>	<b>126.3</b>	<b>-5.7</b>	<b>135.6</b>	<b>133.3</b>	<b>-1.7</b>	<b>138.1</b>	<b>134.3</b>	<b>-2.8</b>	<b>141.0</b>	<b>131.5</b>	<b>-6.7</b>
<b>France</b>															
Crude	38.7	38.6	-0.4	42.2	45.5	7.8	37.2	40.3	8.3	41.0	37.6	-8.4	47.2	43.4	-8.0
Motor Gasoline	23.7	27.5	16.1	23.8	25.7	7.7	23.8	26.0	9.3	26.8	26.4	-1.5	21.4	25.3	18.3
Middle Distillate	50.4	52.5	4.2	51.4	54.3	5.7	53.8	57.1	6.2	57.8	56.5	-2.2	52.1	54.1	4.0
Residual Fuel Oil	7.1	7.7	7.4	7.1	8.4	19.0	8.1	8.9	11.0	7.8	8.2	4.9	8.4	8.2	-2.4
Other Products	9.5	8.6	-8.6	9.7	9.2	-5.4	8.1	8.5	5.0	8.9	8.5	-5.2	8.5	8.4	-0.4
Total Products	90.7	96.4	6.2	92.0	97.6	6.1	93.7	100.6	7.3	101.2	99.5	-1.7	90.3	96.1	6.4
Other <sup>2</sup>	12.5	12.3	-1.2	12.0	12.1	0.2	12.2	12.6	3.2	13.4	13.5	0.5	13.3	13.0	-2.2
<b>Total</b>	<b>141.9</b>	<b>147.3</b>	<b>3.8</b>	<b>146.2</b>	<b>155.1</b>	<b>6.1</b>	<b>143.1</b>	<b>153.5</b>	<b>7.2</b>	<b>155.7</b>	<b>150.5</b>	<b>-3.3</b>	<b>150.8</b>	<b>152.5</b>	<b>1.1</b>
<b>United Kingdom</b>															
Crude	29.9	35.8	19.6	33.3	35.4	6.4	33.5	32.8	-2.2	26.5	32.6	22.9	33.7	36.1	7.2
Motor Gasoline	17.2	15.4	-10.5	16.3	15.1	-7.4	15.9	14.7	-7.4	15.1	15.2	0.1	15.1	14.2	-6.1
Middle Distillate	18.5	16.9	-8.5	17.8	18.1	1.7	18.8	18.4	-2.3	18.1	18.8	3.8	18.6	18.2	-2.2
Residual Fuel Oil	6.3	6.8	7.2	7.6	7.0	-6.8	8.8	7.3	-16.7	8.5	6.5	-23.6	9.2	7.0	-23.8
Other Products	12.1	11.9	-1.4	12.6	11.9	-6.0	12.8	11.7	-9.2	12.1	12.4	2.6	12.8	11.7	-8.0
Total Products	54.2	51.1	-5.7	54.3	52.1	-4.0	56.3	52.0	-7.6	53.8	52.8	-1.8	55.7	51.1	-8.2
Other <sup>2</sup>	16.1	15.1	-6.1	15.1	17.0	12.7	17.4	16.6	-4.6	17.1	15.2	-11.6	15.8	13.9	-12.5
<b>Total</b>	<b>100.1</b>	<b>101.9</b>	<b>1.8</b>	<b>102.7</b>	<b>104.6</b>	<b>1.8</b>	<b>107.2</b>	<b>101.4</b>	<b>-5.4</b>	<b>97.5</b>	<b>100.6</b>	<b>3.2</b>	<b>105.2</b>	<b>101.1</b>	<b>-3.9</b>
<b>Canada</b>															
Crude	60.3	57.8	-4.3	60.2	60.3	0.3	62.4	59.5	-4.6	75.4	54.7	-27.4	74.6	55.9	-25.0
Motor Gasoline	24.2	22.6	-6.8	24.3	20.9	-14.2	21.1	17.2	-18.4	19.7	17.7	-10.2	20.4	17.7	-13.4
Middle Distillate	24.6	19.3	-21.5	23.2	18.6	-19.8	20.4	18.0	-11.9	21.9	20.3	-7.1	22.9	22.2	-3.1
Residual Fuel Oil	4.4	4.9	11.3	4.5	5.1	13.7	4.0	4.6	15.6	4.7	5.0	6.5	5.2	5.0	-5.1
Other Products	21.1	16.9	-19.9	19.4	15.9	-18.1	19.5	17.6	-9.8	18.6	16.7	-10.0	18.3	15.7	-14.2
Total Products	74.4	63.7	-14.3	71.4	60.5	-15.3	65.1	57.5	-11.7	65.0	59.9	-7.9	66.8	60.5	-9.4
Other <sup>2</sup>	12.5	9.6	-23.7	13.9	10.5	-24.2	14.4	11.4	-20.6	16.2	13.7	-15.4	16.6	13.7	-17.8
<b>Total</b>	<b>147.2</b>	<b>131.0</b>	<b>-11.0</b>	<b>145.5</b>	<b>131.3</b>	<b>-9.7</b>	<b>141.8</b>	<b>128.4</b>	<b>-9.5</b>	<b>156.5</b>	<b>128.2</b>	<b>-18.0</b>	<b>158.0</b>	<b>130.1</b>	<b>-17.7</b>

1 Stocks are primary national territory stocks on land (excluding utility stocks and including pipeline and entropot 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 Other includes NGLs, refinery feedstocks, additives/oxygenates and other hydrocarbons.

**Table 7**  
**TOTAL STOCKS ON LAND IN OECD COUNTRIES**

(millions of barrels<sup>1</sup> and 'days'<sup>2</sup>)

	End June 1995		End September 1995		End December 1995		End March 1996 <sup>4</sup>		End June 1996 <sup>3</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	156.5	84	142.9	75	131.6	70	131.0	73	128.2	-
United States	1609.0	91	1619.7	90	1562.9	85	1481.9	83	1545.5	-
<b>NORTH AMERICA</b>	<b>1789.1</b>	<b>90</b>	<b>1786.3</b>	<b>89</b>	<b>1718.2</b>	<b>84</b>	<b>1636.7</b>	<b>82</b>	<b>1697.5</b>	<b>84</b>
Australia	38.1	47	42.7	52	39.1	49	40.1	48	39.0	-
Japan	639.8	120	657.7	110	630.5	98	626.5	120	640.2	-
New Zealand	8.9	55	9.4	57	7.8	51	8.6	66	9.0	-
<b>PACIFIC</b>	<b>686.9</b>	<b>109</b>	<b>709.8</b>	<b>102</b>	<b>677.3</b>	<b>92</b>	<b>675.3</b>	<b>109</b>	<b>688.2</b>	<b>107</b>
Austria	18.2	81	16.9	71	16.9	69	16.9	75	16.9	-
Belgium	26.7	58	29.7	56	28.5	46	24.9	49	26.9	-
Denmark	25.7	119	27.4	116	26.2	108	19.4	84	19.2	-
Finland	20.8	113	21.7	109	28.5	167	28.5	175	28.5	-
France	161.2	85	157.6	79	155.3	75	153.0	82	156.2	-
Germany	303.2	104	303.5	108	302.3	103	299.2	106	298.9	-
Greece	24.1	70	22.6	56	21.7	57	20.3	59	20.9	-
Ireland	6.7	61	7.8	64	7.3	58	6.2	51	7.2	-
Italy	144.0	79	139.4	67	141.5	69	135.7	77	140.1	-
Luxembourg	0.9	26	0.8	22	0.7	18	0.7	19	0.8	-
Netherlands	106.8	135	116.5	146	107.0	138	97.1	125	105.1	-
Norway	42.2	220	45.1	236	48.6	234	56.4	277	58.6	-
Portugal	18.7	60	18.7	64	18.8	74	19.3	72	18.2	-
Spain	86.2	79	92.3	74	94.2	84	89.7	81	89.7	-
Sweden	31.7	99	32.8	85	31.9	73	32.2	83	31.3	-
Switzerland	46.8	182	47.4	183	45.0	188	44.4	187	45.1	-
Turkey	38.3	59	42.0	68	42.9	73	46.7	80	47.8	-
United Kingdom	97.5	55	104.4	57	101.1	55	101.9	56	100.6	-
<b>EUROPE<sup>5</sup></b>	<b>1199.6</b>	<b>88</b>	<b>1226.4</b>	<b>86</b>	<b>1218.4</b>	<b>85</b>	<b>1192.4</b>	<b>89</b>	<b>1211.9</b>	<b>87</b>
<b>Total</b>	<b>3675.7</b>	<b>93</b>	<b>3722.6</b>	<b>90</b>	<b>3613.9</b>	<b>86</b>	<b>3504.3</b>	<b>88</b>	<b>3597.6</b>	<b>88</b>
<b>DAYS OF IEA NET IMPORTS<sup>6</sup></b>	<b>-</b>	<b>130</b>	<b>-</b>	<b>132</b>	<b>-</b>	<b>128</b>	<b>-</b>	<b>122</b>	<b>-</b>	<b>125</b>

1 Stocks are primary national territory stocks on land (excluding utility stocks and including pipeline and entreport 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 1996 stock level based on preliminary data.

4 End March and end June 1996 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		Industry	Total	Government <sup>1</sup> controlled	
		Millions of Barrels				Days of Fwd. Demand <sup>2</sup>	
Q293	3650	1133	2518	95	29	65	
Q393	3720	1136	2585	95	28	64	
Q493	3652	1145	2508	92	28	62	
Q194	3537	1153	2384	90	30	62	
Q294	3659	1155	2504	91	29	63	
Q394	3754	1158	2596	92	28	64	
Q494	3724	1169	2556	92	28	62	
Q195	3608	1176	2433	91	30	62	
Q295	3676	1170	2506	92	29	63	
Q395	3723	1179	2543	93	29	62	
Q495	3614	1185	2429	90	28	58	
Q196	3504	1187	2317	86	30	59	
Q296	3598	1180	2418	88	29	59	

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 1996 (when latest forecasts are used).

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

	1993	1994	1995	3Q95	4Q95	1Q96	2Q96	3Q96	Apr96	May96	Jun96	Jul96	Aug96	Sep96
<b>Crude Oil Prices</b>														
IEA CIF Average Import	16.37	15.65	17.19	16.41	16.90	18.59	19.78	20.80*	20.73	19.76	18.82	19.49	20.50*	22.40*
FOB Spot														
Brent (Dated)	17.00	15.80	17.02	16.18	16.92	18.54	19.51	20.96	20.98	19.13	18.43	19.58	20.60	22.69
WTI (1st month)	18.44	17.19	18.41	17.83	18.12	19.64	21.80	22.43	23.59	21.35	20.45	21.31	21.96	24.01
Urals (Del. Med.)	15.39	15.23	16.62	15.50	16.50	18.52	18.66	20.10	20.32	18.41	17.25	18.55	19.86	21.90
Dubai (1st month)	14.93	14.75	16.10	15.31	15.83	16.43	17.26	18.96	17.66	16.87	17.25	17.74	18.66	20.47
OPEC Basket	16.32	15.53	16.88	15.98	16.70	18.44	19.18	20.32	20.24	18.92	18.37	19.29	19.98	21.69*
<b>Product Prices<sup>1</sup></b>														
Rotterdam, Barges FOB														
Premium 0.15 g/l	22.45	20.18	21.25	20.81	20.50	21.18	25.52	24.83	26.37	27.04	23.16	24.45	24.49	25.56
Regular Unleaded	20.70	18.65	19.75	19.38	19.14	19.76	23.86	23.31	24.83	25.14	21.61	22.94	23.09	23.91
Naphtha	18.47	17.30	18.15	17.43	17.14	19.02	20.85	21.90	22.06	21.12	19.38	20.99	21.43	23.27
Jet/Kerosene	23.37	20.95	21.60	21.57	22.38	25.07	23.78	27.48	25.51	23.13	22.69	25.01	26.21	31.21
Gasoil	22.28	19.80	20.47	20.49	21.04	23.97	23.16	26.41	24.94	22.48	22.05	24.16	24.93	30.14
Fuel Oil 1.0%S	13.50	14.00	15.76	13.69	15.39	17.20	16.90	16.35	18.17	17.41	15.13	15.91	15.82	17.33
Fuel Oil 3.5%S	10.22	13.01	14.82	12.97	14.16	15.66	15.41	15.57	17.60	15.13	13.48	13.80	15.27	17.65
Gross Product Worth <sup>2</sup>	19.80	18.45	19.55	18.75	18.99	20.49	22.67	23.35	24.00	23.10	20.91	22.44	22.93	24.68
Brent Cracking Margin	1.70	1.60	1.42	1.43	0.98	0.65	1.97	1.30	1.85	2.74	1.33	1.77	1.23	0.90
Mediterranean - Basis Italy, Cargoes FOB														
Premium 0.15 g/l	22.35	20.23	20.99	20.59	20.71	21.09	25.86	24.80	26.93	26.99	23.66	24.66	24.70	25.02
Naphtha	17.17	15.71	16.35	15.61	15.20	17.07	18.91	20.13	20.07	19.21	17.46	19.15	19.82	21.42
Jet/Kerosene	21.74	19.26	19.94	19.74	21.17	23.48	22.38	26.00	23.76	21.93	21.45	23.45	24.76	29.79
Gasoil	21.51	18.71	19.39	19.15	20.53	22.27	22.42	25.06	24.51	21.94	20.82	22.56	23.88	28.74
Fuel Oil 1.0%S	13.72	13.93	15.48	13.42	15.65	17.32	17.33	16.44	19.10	17.39	15.49	16.24	15.42	17.66
Fuel Oil 3.5%S	9.43	11.98	13.95	11.80	14.03	15.14	13.70	14.51	15.94	14.63	10.51	13.22	13.76	16.55
Gross Product Worth <sup>3</sup>	18.87	17.46	18.39	17.63	18.70	20.04	21.24	22.23	22.92	21.50	19.32	20.87	21.49	24.31
Urals Cracking Margin	3.14	1.89	1.44	1.80	1.87	1.19	2.26	1.81	2.28	2.76	1.73	2.00	1.31	2.10
NY Harbour, Barges														
Premium Unleaded 93	23.69	23.65	24.81	24.73	23.78	24.35	28.17	28.00	28.58	29.40	26.52	28.48	27.41	28.12
Regular Unleaded 87	21.58	20.54	22.57	22.38	21.29	22.65	26.34	25.88	27.44	27.24	24.33	25.89	25.64	26.10
Jet/Kerosene	23.33	22.20	21.76	21.78	23.37	26.27	26.01	27.13	29.78	24.93	23.32	24.45	27.03	29.90
No.2 (Heating Oil)	22.04	20.68	20.72	20.41	22.08	25.21	24.45	25.69	27.89	23.87	21.60	23.35	25.35	28.37
Fuel Oil 1.0%S (Cargo)	14.63	15.05	16.06	14.71	16.24	19.36	18.23	17.93	19.95	17.77	16.96	17.90	17.35	18.54
Fuel Oil 3.0%S (Cargo)	11.21	12.25	14.47	12.82	13.85	14.94	15.17	15.49	15.82	15.14	14.55	14.99	15.21	16.28
Gross Product Worth <sup>4</sup>	20.17	19.54	20.33	19.80	19.60	21.96	22.39	22.03	22.94	23.11	21.11	21.07	21.51	23.50
WTI Cracking Margin	0.63	1.24	0.82	0.87	0.38	0.89	0.99	0.41	1.02	1.42	0.53	0.95	0.50	(0.23)
Singapore, Cargoes														
Gasoline <sup>5</sup>	24.01	21.10	22.11	22.30	21.47	21.61	25.01	22.32	25.14	26.30	23.60	22.55	21.59	22.83
Naphtha	17.22	16.34	17.54	16.69	16.26	17.51	19.53	20.22	20.39	19.46	18.75	19.61	20.01	21.04
Jet/Kerosene	24.42	21.74	22.72	21.13	25.10	28.68	25.32	27.75	26.19	25.93	23.83	25.34	28.10	29.82
Gasoil	24.02	20.87	21.60	20.63	22.08	25.87	25.47	25.86	25.56	26.52	24.32	24.40	25.32	27.86
LSWR (0.3%) <sup>7</sup>	14.90	13.58	14.74	13.80	15.64	16.21	17.86	17.57	17.31	18.74	17.53	16.68	17.43	18.59
HSFO (3.5%S 180cst)	11.83	13.17	14.98	13.14	15.18	17.15	15.63	15.89	17.37	15.44	14.08	14.46	15.39	17.82
HSFO (3.5%S 380cst)	10.81	12.37	14.30	12.49	14.50	15.93	14.64	15.21	16.30	14.47	13.14	13.73	14.67	17.21
Gross Product Worth <sup>6</sup>	20.22	18.76	19.74	18.87	19.79	21.96	22.39	22.03	22.94	23.11	21.11	21.07	21.51	23.50
Dubai Cracking Margin	4.13	2.97	2.35	2.15	2.62	4.09	3.79	1.58	4.10	4.97	2.29	1.74	1.32	1.69

\* = 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>**  
**September 1996**

	National Currency						US Dollars					
	Price	Tax	% ch Prev. Month		% ch Year Ago		Price	Excl. Tax	% ch Prev. Month		% ch Year Ago	
			Price	Excl. Tax	Price	Excl. Tax			Price	Excl. Tax	Price	Excl. Tax
<b>GASOLINE<sup>2</sup> Price per Litre</b>												
France	6.270	5.060	1.3	6.1	6.5	18.6	1.224	0.236	0.0	4.8	4.8	16.8
Germany	1.599	1.189	1.5	5.1	4.3	16.1	1.065	0.273	0.2	3.9	1.6	13.1
Italy	1890	1413	0.1	0.2	1.9	6.6	1.243	0.314	-0.1	0.0	8.3	13.2
Spain	117.8	81.0	0.1	0.3	4.6	6.4	0.931	0.290	-0.6	-0.4	3.6	5.5
UK	0.622	0.484	2.0	7.8	5.6	-1.4	0.972	0.216	3.6	9.5	5.8	-1.3
Japan	104	57	0.0	0.0	-2.8	-6.0	0.950	0.429	-1.6	-1.6	-10.8	-13.7
Canada	0.571	0.285	0.4	1.1	5.9	10.4	0.417	0.209	0.4	1.1	4.4	8.8
USA <sup>3</sup>	0.340	0.101	-0.9	-1.2	12.2	18.3	0.340	0.239	-0.9	-1.2	12.2	18.3
<b>AUTOMOTIVE DIESEL<sup>4</sup> Price per Litre</b>												
France	3.622	2.292	4.9	14.7	12.6	25.5	0.707	0.260	3.6	13.2	10.8	23.5
Germany	1.083	0.620	4.9	12.4	9.4	25.1	0.722	0.308	3.7	11.0	6.6	21.9
Italy	1218.49	747.47	4.3	12.0	5.8	16.6	0.802	0.310	4.1	11.8	12.5	23.9
Spain	80.53	43.20	6.2	14.5	13.0	26.3	0.636	0.295	5.5	13.7	12.0	25.2
UK	0.493	0.343	1.0	3.4	9.1	7.9	0.770	0.234	2.6	5.1	9.2	8.1
Japan	78	34	0.0	0.0	10.3	19.8	0.715	0.404	-1.6	-1.6	1.2	9.9
Canada	0.531	0.213	1.3	2.3	4.5	7.4	0.388	0.232	1.3	2.3	3.0	5.9
USA	..	..	..	..	..	..	..	..	..	..	..	..
<b>DOMESTIC HEATING OIL Price per 1000 Litres</b>												
France	2260.3	890.3	9.3	13.2	10.9	14.7	441.2	267.4	8.0	11.8	9.2	12.9
Germany	507.2	146.2	6.2	7.7	22.1	28.4	337.9	240.5	5.0	6.4	19.0	25.1
Italy	1413000	973080	5.6	16.7	8.7	27.5	929.6	289.4	5.4	16.5	15.5	35.5
Spain	47642	19171	9.8	14.7	19.8	29.0	376.3	224.9	9.0	13.9	18.8	27.9
UK	163.20	35.39	3.6	4.2	22.2	25.0	255.0	199.7	5.2	5.9	22.4	25.2
Japan <sup>5</sup>	45732	1332	0.2	0.2	15.3	15.3	417.6	405.5	-1.3	-1.3	5.8	5.8
Canada	..	..	..	..	..	..	..	..	..	..	..	..
USA <sup>6</sup>	246.7	..	-0.1	..	6.2	..	246.7	..	-0.1	..	6.2	..
<b>HFO FOR INDUSTRY<sup>4,7</sup> Price per Metric Ton</b>												
France	811.0	156.9	16.7	21.6	19.4	24.6	158.3	127.7	15.26	20.07	17.58	22.67
Germany	225.0	30.0	6.6	7.7	15.4	18.2	149.9	129.9	5.36	6.44	12.44	15.11
Italy	287270	45000	5.3	6.4	14.5	17.6	189.0	159.4	5.12	6.17	21.60	24.96
Spain	22580	2150	11.5	12.9	23.0	25.5	178.4	161.4	10.71	12.06	21.96	24.45
UK	94.02	18.20	7.7	9.7	11.7	12.4	146.9	118.5	9.37	11.42	11.92	12.60
Japan	19516	568	0.0	0.0	12.5	12.5	178.2	173.0	-1.55	-1.55	3.26	3.26
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

### Demand

Gareth Lewis-Davies  
(+33 1) 45 24 99 78  
gareth.lewis-davies@iea.org

### Supply

David Knapp  
(+33 1) 45 24 97 08  
david.knapp@iea.org

### Stocks (and Editor)

Philip Starling  
(+33 1) 45 24 98 87  
philip.starling@iea.org

### Oil Prices and Refinery Activity

Roberto Sieber  
(+33 1) 45 24 98 95  
roberto.sieber@iea.org

### Oil Trade

Koji Nakui  
(+33 1) 45 24 17 03  
koji.nakui@iea.org

Fax: (+33 1) 45 24 19 76/45 24 75 89

### Editorial Enquiries

Oil Industry and Markets Division  
International Energy Agency (IEA)  
2 rue André Pascal  
75775 PARIS Cedex 16, FRANCE

### 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

### Fax Service

Xpedite Systems

Alain Teboul  
Tel. (+44 (0)171) 929 0718  
Fax. (+44 (0)171) 929 0717

## 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.).

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